Vitaliy Koshelenko



50 Shades of Liferay

Part 1 - Liferay Introduction

About Book

This book is recommended for Java-developers, which want to start development with Liferay, and also for web-developers and portal administrators.

Required skills:

- Java (Core, EE)
- Database MySQL
- Application server Apache Tomcat
- Build tools Ant/Maven
- Frontend (HTML/CSS/JS)
- IDE Intellij IDEA
- OS Windows7/Ubuntu

Although those skills are not required, they're desirable. The mentioned above tools will be used in book as examples.

Roadmap

First chapter of book explains how to download, install and configure Liferay. It also explains how to configure development environment in Intellij IDEA IDE.

Main concepts of Liferay portal are covered in the second chapter. This is theoretical chapter, explaining how Liferay works without deeping inside development process. But this information is required to know before you start development with Liferay.

Chapters 3-6 are practical ones, they have instructions how to create your first portlet, theme, layout and hook.

Chapters 7-9 are dedicated to themes development.

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50 shades of Liferay

Greetings



Hi!

My name is Vitaliy Koshelenko, I'm a Liferay developer at AimProSoft company.

I have been working with Liferay for almost 5 years already, including portlets development, hooks, themes, layouts development, Liferay customization, migration from previous versions and integration with external services.

When I started working with Liferay, it seemed quite difficult and incomprehensible for me. Even small tasks took too much time, especially those ones, which required modifications in Liferay's internal code. Most of time was spend for searching required information - due to lack of Liferay-specific knowledge and experience in Liferay development. Although there is official Liferay documentation

(https://dev.liferay.com) as well as specifications of portlet technology (https://jcp.org/en/ jsr/detail?id=286), it's quite hard to find what you need. In most cases you just become drown inside endless Liferay forum threads, Wiki pages, tutorials instead of finding the solution you need.

There is no either good practical guide for beginners with step-by-step instructions for creation first portlet, theme, etc., or theoretical tutorial explaining in a few words how Liferay actually works.

So, I decided to write this book to help new developers quickly understand main concepts of Liferay structure, see how it works with simple examples and begin development with Liferay. I'll try to make it easy and understandable, but at the same time practical and useful.

Hope, my efforts will not be wasted, and this book will help you in understanding Liferay.

It is my **contact** info:

Skype: vitaliy.koshelenko E-mail: v.koshelenko@aimprosoft.com Profile at Liferay community: https://www.liferay.com/web/vet.kosh/profile Profile at Liferay JIRA: https://issues.liferay.com/secure/ViewProfile.jspa? name=v.koshelenko

You may contact me, if you have some questions, suggestions, recommendations.

Introduction

Nothing better in the world, Than implementing Liferay code...

Why "50 shades"?

Because when you start Liferay development, it seems perversion and masochism for you, but once you get used to it, things become better.

Why Liferay?

Before you start development of new site, you ask yourself - which tool to use for this? You can either create new site from scratch, or use some ready solutions (CMS).

If you create site from scratch, you spend time for implementing things, which have already been actually implemented: authentication, roles/permissions mechanism, content management, etc. They are already integrated into existing CMS, tested and are being successfully used by many companies. In this case, you "re-invent a bicycle" yourself.

If you're using CMS, you have less freedom and you're forced to use some conventions that are being used there, but at the same you have a lot of built-in functionality, which you may use in your project.

Personally I prefer 2nd way, especially for large systems development. But making choice which CMS to use should be also responsible, and project requirements should be taken into account.

After analyzing some existing CMS on Java (Liferay Portal, Magnolia, OpenCMS, Apache Lenya), we decided, that Liferay is the best option for enterprise portal development.

It provides developers the following features:

• authentication (with ability to configure LDAP/Facebook sign-in, etc.);

- content aggregation (web-page is generated from separate independent parts socalled 'portlets', which are assembled together into a single page);
- · roles and permissions management;
- **personalization** due to content aggregation and roles/permissions management one and the same page can be shown differently for different users;
- dynamic content management portlets can be added to a page on-the-fly, dropped or moved without code changes and server restarts;
- **content separation** content in Liferay belongs to some site inside a portal, which restricts access to it for site members only;
- a lot of ready-for-use portlets like Web Content, Wiki, Blog, Document Library, Message Boards, Asset Publisher, etc.;
- powerful administration tools.

Chapter 1. Installation and Configuration

At the moment of writing this book the latest stable Liferay version is **6.2-ce-ga4**. Installation and configuration issues are described in this section.

Download Liferay

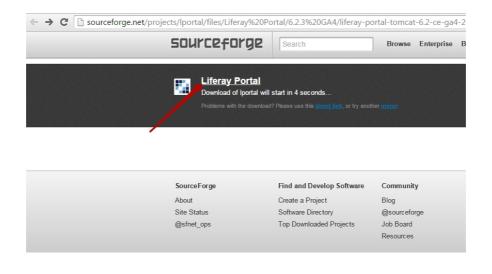
*

To download Liferay visit Liferay's official site: https://www.liferay.com. Click Download, then choose Bundled with Tomcat, click Download again:

LIFERAY.			Products For Business 💌	Developers \bullet About Us Q \equiv
	DEVELOPERS Downloads Liferay Portal	Liferay Porta	al Downloads	
	Liferay Social Office Liferay Sync Liferay Projects	Community	Enterprise	
	Documentation Community Marketplace			
	See 6.2 in Action!	Core Liferay Portal platform Community-supported features Good for smaller, less cristal deployments Used for contributing to Lifeay development Bundled with Tomcat See our list of <u>third party software</u>	Stable releases with bug-fixes Good for business-critical deployments Used to develop project going to production Part of the Lifesty Enterprise Subscription	

After clicking **Download** the latest stable Liferay version will be downloaded automatically (after 5 seconds).

To choose the version you need, and also to download sources and documentation, you may click on Liferay Portal link (without waiting for automatic downloading):



then click Files link:

← → C 🗋 sourceforge.net/proje	ects/lportal/						
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	Overview						
	The world's leading of Read More	oen source portal		Liferav Porta	l Web Site »		
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then click Liferay Portal link:

← → C 🗋 sourceforge.net/projects/	portal/files/?source=navbar			
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	Liferay IDE	2015-08-04	48,45	4 🚺
	Liferay Plugins	2014-03-15	14	7
	Liferay Alloy	2013-02-05		3
	Liferay Social Office	2009-08-22		5
	Totals: 5 Items			

Now choose the Liferay version (the latest stable one is 6.2-ce-ga4 at the moment):

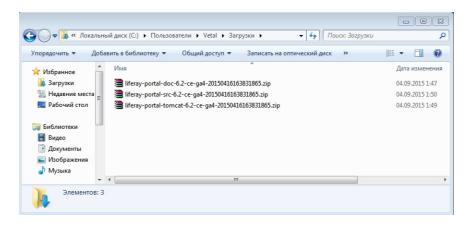
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6.2.3 GA4	2015-04-17	4,931 🚺
■ 7.0.0 M4	2015-03-02	2
■ 6.2.2 GA3	2015-01-23	197 🛄
7.0.0 M3	2014-12-17	2
■ 7.0.0 M2	2014-10-18	6 🛄
m 7.0.0 M1	2014-08-20	23

You'll be redirected to this page http://sourceforge.net/projects/lportal/files/Liferay Portal/ 6.2.3 GA4/.

Now you need to download **Liferay** (1), **Liferay sources** (2) and **Liferay documentation** (3) from here:

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	iferay-portal-jboss-6.2-ce-ga4-20150	2015-04-17	394.4 MB	280		6
	iferay-portal-glassfish-6.2-ce-ga4-20	2015-04-17	306.0 MB	79		6
	iferay-portal-geronimo-6.2-ce-ga4-20	2015-04-17	308.6 MB	5		6
	iferay-portal-doc-6.2-ce-ga4-201504	2015-04-17	199.5 MB	231		6
	iferay-portal-dependencies-6.2-ce-g	2015-04-17	8.3 MB	113		6
	iferay-portal-db-upgrade-6.2-ce-ga4	2015-04-17	249.9 MB	35		6
	iferay-portal-client-6.2-ce-ga4-20150	2015-04-17	4.7 MB	17		6
	iferay-portal-6.2-ce-ga4-2015041616	2015-04-17	210.4 MB	144		6
	iferay-plugins-sdk-6.2-ce-ga4-20150	2015-04-17	3.7 MB	507		6

You'll get the following files in **Downloads**:



Copy those files to your Liferay's directory (D:/Work/Liferay/[Project-name] on Windows, / home/{user}/Work/Liferay/[Project-name] on Linux), and unpack Liferay (liferay-portal-tomcat-6.2-ce-ga4-20150416163831865.zip).

Now you have all required Liferay files and you're ready to start it.

First Startup

We have already downloaded Liferay files, now we are starting it.

Go to tomcat/bin folder inside unpacked Liferay (liferay-portal-6.2-ce-ga4/tomcat-7.0.42/ bin).

To start Liferay on Windows just run 'startup.bat' file, and see logs in console output.

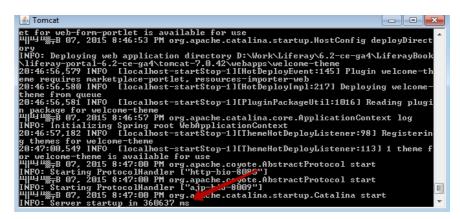
To start Liferay on Linux, run from console:

./startup.sh

then go to tomcat-7.0.42/logs directory and watch logs:

tail -f catalina.out

After normal startup the following message should appear in logs: **INFO: Server startup in** [...] ms



After starting server open this URL in browser: http://localhost:8080 (if it has not opened automatically). You'll be prompted to configure Liferay portal:

Basic Configuration *		4 ▼ C][9, Search	÷ † ★ û ≠ • 0 0 Ξ
	🔛 Liferay	Basic Configuration	
	Portal	Administrator User	
	Portal Name	First Name	
	Liferay For example, Liferay.	Test	
	Default Language	Last Name	
	English (United States) Change	Test	
	Stand Sample Data	Email (Required)	
		test@liferay.com	
	Database		
	Default Database (Hypersonic) This database is useful for development and demo'ing purp	uses, but it is not recommended for production use. (Change)	
	Finish Configuration		
		Powered By Liferay	

Leave everything as default here, remove **Add Sample Data** flag to speed-up configuration process, press **Finish Configuration**. After this click **Go to My Portal**, agree with **Terms of Use**, create new password for user, answer reminder question, and you'll be redirected to Liferay home page:

← →	C localhost:8080						
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	You are signed in as Test Test.		-				
		$\mathbf{\mathbf{\hat{v}}}$	Start Review our Quick Start Guide for an overview of Liferay's features.				
		\bigcirc	Learn Read the official Liferay User Guide for detailed information about setting up	and configur	ing Liferay.		
			Engage Visit the Liferay Community to post questions, find answers, and contribute				
		*	Develop Explore our Developer Resources to develop apps and more for Liferay Po	rtal.			

Now you're done, Liferay is started up and configured. You may use it.

Liferay Configuration

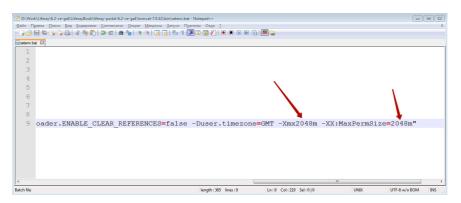
We have already started up Liferay with the default configuration settings. However, this configuration has the following disadvantages for the real projects:

- not enough allocated memory;
- working with built-in database (Hypersonic).

Now we'll fix it.

Adding allocated memory

Liferay is quite resource-consuming portal, that's why we need to add allocated memory size. To do this edit **setenv.bat** file on Windows (or **setenv.sh** on Linux) and change values for **-Xmx** and **-XX:MaxPermSize** parameters:



If you have enough RAM, it's recommended to set those values to **4096m**, otherwise - to **2048m**. Less values are not recommended.

Configuring database

Liferay works with built-in Hypersonic database by default. It's normally to use it for demo projects, but it's not recommended to use it on production. To change database settings - edit Liferay's config file **liferay-portal-6.2-ce-ga4/portal-setup-wizard.properties**, and add the following properties:

jdbc.default.driverClassName=com.mysql.jdbc.Driver

jdbc.default.url=jdbc:mysql://localhost:3306/[DB_NAME]

jdbc.default.username=root

jdbc.default.password=[PASSWORD]

where [DB_NAME] - database name, [PASSWORD] - MySQL password.

Your config file will be like this:



NOTE:

Make sure, you have specified correct values for **database name** (1) and **MySQL password** (2).

Restart Liferay to apply those changes.

IDE Configuration

We have already started Liferay and made some configuration enhancements for it. But we were starting it from console. And it's not good for the development process, as you actually need to debug your code. So, we'll need to configure our Liferay in **IDE** and run it from inside **IDE** in **Debug mode**. This section explains how to do this.

You may use different IDEs for Liferay development.

Some people prefer Liferay IDE, based on **Eclipse** (https://www.liferay.com/downloads/ liferay-projects/liferay-ide). It simplifies Liferay development and deployment process, and has special plugins for portlets/themes development, etc. But I don't use it, as I don't like Eclipse products at all.

Other people use **NetBeans** or some other IDEs.

Personally I prefer using **Intellij IDEA** (https://www.jetbrains.com/idea/). Although it's not Liferay-specific, development process is pretty clean and simple inside it.

Now I'll explain how to configure Liferay in Intellij IDEA IDE.

Download IDEA

If you still don't have IDEA installed, download it from here: https://www.jetbrains.com/idea/ download/ (the latest version is **14.1** at this moment). Download **Ultimate Edition** (as **Community Edition** doesn't have enough features for development):



Keep in mind, that it's paid product.

Create new project

Welcome to IntelliJ IDEA				
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Start IntelliJ IDEA and create new project in it:

Click Next, specify project name, and click Finish:

New Project	[<u></u>
Project name: Demo	
Project location D:\Work\Projects\Demo	
•	
	Q
More Settings	
	Previous Einish Cancel Help

You're done, new project has been created.

Run/Debug Configurations		x
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Gradle		
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31 items more (irrelevant) 🦧 Remote		

Create new Application Server in 'Settings' menu

Now we'll create new application server for our Liferay in IDEA. Press **Settings** button (1) in Toolbar, and create new Tomcat server, as illustrated here:

Run/Debug Configurations	8
+ - □ ♀ ↑ ↓ □ ↓ ^a ▼ ≪ Tomcat Server	Name: Liferay-Demo Share
iferay-Demo ▶ ♀ Defaults	Application gerver: Liferay-Demo
	Open browser
U	http://localhost.8080/
	VM options:
2	On ' <u>U</u> pdate' action: Restart server 🔽 🗹 Show <u>d</u> ialog
•	Use alternative JRE:
	Tomcat Server Settings
	HTTP port: 8080 Deploy applications configured in Tomcat instance
	HTTPs port: Preserve sessions across restarts and redeploys
	JMX port: 1099
	AJP port:
	Warning: No artifacts configured Fix
	OK Cancel Apply Help

Now choose tomcat folder inside Downloaded Liferay:

۵.		Build, Execution, Dep	ployment > Application Servers	Res
Appearance & Behavior		+ -	Name: Liferay-Demo	
Menus and Toolbars		Liferay-Demo	Juncat Home: D:\Work\Liferay\Demo\liferay-portal-6.2-ce-ga4\tomcat-7.0.42	
System Settings			Tomcat Version: 7.0.42	
File Colors	G			
Scopes	G		Tomcat base directory: D:\Work\Liferay\Demo\liferay-portal-6.2-ce-ga4\tomcat-	7.0.42
Notifications		•		
Quick Lists			Libraries	
Keymap			+ + + + + -	
Editor			▼ ↓ the Classes	
Plugins			D:\Work\Liferay\Demo\liferay-portal-6.2-ce-ga4\tomcat-7.0.42\lib\jsp-	
Version Control				
Build, Execution, Deploym	ent		D:\Work\Liferay\Demo\liferay-portal-6.2-ce-ga4\tomcat-7.0.42\lib\serv	et-apı.jar
▶ Build Tools	G			
▶ Compiler	G			
Application Servers				
▶ Deployment	R			

I Run/Debug Configurations			_
+ — 🗊 🌮 ↑ ∔ 🖿 ↓2	Name: Liferay-Demo		Share
 Tomcat Server Kliferay-Demo 	Server Deployment Logs Code	Coverage Startup/Connection	
Period Period	▶ Run		
	Debug K Coverage		
	Startup script: Liferay\Demo\I	iferay-portal-6.2-ce-ga4\tomcat-7.0.42\bin\catalina.bat run	🗄 🗹 Use default
	Shutdown script: Liferay\Demo\lif	feray-portal-6.2-ce-ga4\tomcat-7.0.42\bin\catalina.bat stop	🚡 🗹 Use default
	Environment Variables		
	Pass environment variables		3
	Name	Value	+
	_	:jdwp=transport=dt_socket,address=127.0.0.1:57062,suspend=y Liferay\Demo\liferay-portal-6.2-ce-ga4\tomcat-7.0.42	
		1	lî »
	Transport: O Sha	red <u>m</u> emory	
	Port: 57062 ≑	5 Debugger Settings	
	Warning: No artifacts configured		P Fix
		6 OK Cancel	<u>A</u> pply Help

Specify name fow newly created application server (based on project name), and press **Ok**:

Application server should have been created after these steps.

Configure Server in 'Run/Debug Configurations' menu

Now we'll configure our Liferay server in IDEA. Go to **Run -> Edit Configuration...** menu (or press appropriate icon in Toolbar), and add new Tomcat server:

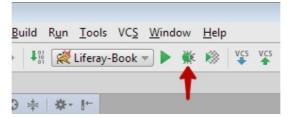
Specify server name (based on project name), and choose **Application server** (created on previous step):

On **Startup/Connection** tab (1) add (3) **CATALINA_BASE** (4) Environment variable with path to Liferay's tomcat folder (5) for **Run and Debug**(2). Then press **Ok** (6):

Basic Liferay configuration in IDEA is finished at this point, and you're ready to start it.

Startup Liferay from IDEA

Start Liferay in Debug mode from IDEA. Press **Debug** button for this (or press **Shift+F9** hotkey):



19

Watch logs in **Output** window in IDEA, make sure everything is Ok, and start development with Liferay.

Chapter 2. Liferay Basics

We have already reviewed Liferay installation/configuration issues and starting it from inside Intellij IDEA. Now we'll go through the main concepts of Liferay structure, without delving into internal implementation details.

What is Liferay?

Liferay is a platform written on Java, intended for web-development, and which provides a lot of ready-for-use solutions for sites creation. It is a web-portal with capabilities for users management, roles and permissions management, and also pages/content, applications management.

Liferay has a lot of built-in applications (portlets) - such as, **Blogs**, **Message Boards**, **Wiki**, **Calendar**, etc. In most case Liferay development is development of separate applications (**portlets**, **themes**, **layouts**) and their composition into a single site (portal). In some cases (when you need to modify/extend Liferay's default behavior) **Liferay-hooks** are developed.

All these questions are described in more details later in this book.

Liferay's Page Structure

After starting Liferay server and going to it's home page, you see, that it has the following page structure:

[If Edit View Hillow Bookmarks Tools Help Welcome-Uteray Image: State S		4 • c) 9, Search 1 √ Komn ★ My	
Versioner Versioner	Wel	come To Liferay Portal	de web content display
.1		Start Review our Quick Start Guide for an overview of Liferay's features.	
4>	\bigcirc	Learn Read the official Literay User Guide for detailed information about setting up and configuring Literay.	
		Engage Visit the Liferay Community to post questions, find answers, and contribute.	
	*	Develop Explore our Developer Resources to develop apps and more for Liferay Portal.	
		Evaluate Learn more about partners, support, training and other enterprise level options available for Liferay.	
	📓 Edit 🕢	Download this page as a PDF Edit Template 🐵 Select Web Content 🎧 Add	
			Powered By Literay

As you see from here, Liferay page consists from the following parts:

1) **DockBar** - contains menu for Liferay administration, site navigation menu, notifications menu, profile management menu.

2) **MenuBar** - menu for content management. Provides capabilities for adding/editing pages, and also applying different themes/layouts for pages, adding portlets to pages, page permissions management, etc.

3) **NavigationBar** - navigation menu. It contains pages and sub-pages (only 1st level by default) for the current site. Only those pages are displayed in this menu, which are not marked as 'hidden', and on which current user has sufficient permissions.

4) **Portlets** - separate functional modules in Liferay, which may be added to a page, and which represent a part of portal's page view. Each portlet may have different permissions settings, so users with different roles may see different portlets on the same portal pages.

Liferay Pages

We have just reviewed Liferay's page structure. Now we'll discuss Liferay pages in more details.

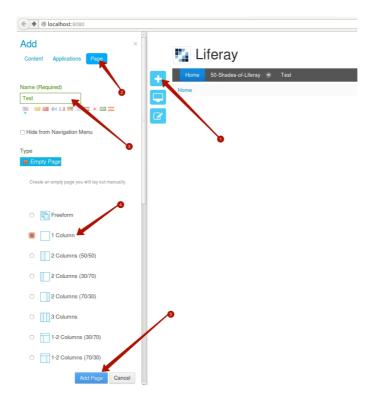
What is Liferay Page?

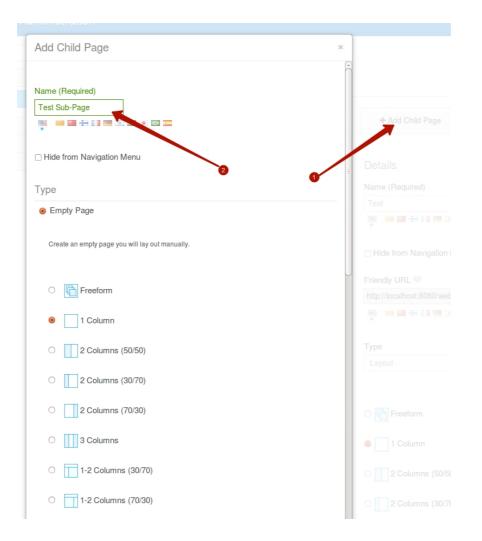
Liferay page (also called **'layout**') is a separate portal page, which has it's own URL, set of portlets on it, theme, layout, permissions settings, etc. Each page in Liferay belongs to some site, has it's owner, permissions set, and displays information rendered by portlets on this page.

Page Management

To create a new Liferay page, you need to either use **MenuBar** for this, or to do it from inside **Site Pages** menu (**'Admin' -> 'Site Administration' -> 'Pages'** from **Dockbar**).

Here is example of adding page from MenuBar:





Click on **+** icon (1), **Page** tab (2), specify page name (3), choose layout for page (4), and press **Add Page** (5) button. New page will be created.

For advanced page management go to Admin -> Site Administration -> Pages from Dockbar. You'll see the following:

Here you can perform page management. You can do the following:

- change page order using drag-and-drop
- add new pages
- add child pages for current page
- delete page (to delete some page you need to be currently on some other page)
- modify permissions on page
- specify page name and URL for a page
- make page hidden to hide it from navigation menu

		Admin My Sie Open last link est rest
Site Pages Public Pages Private Pages		Copy last link Help Write developers Quit
 - □ Public Pages + □ 50-Shades-of-Liferay 	+ Add Child Page	
B Home B Test	Details	Details SEO
	Name (Required) Test	Look and Feel JavaScript
	Hide from Navigation Menu	Custom Fields Advanced Mobile Device Rules
	Friendly URL thtp://localhost:8080/web/guest /test	Customization Settings
		Save Cancel
	Type Layout	
	이 📑 Freeform	
	I Column	

• change page type and layout

I

• specify custom settings for a page (custom fields, SEO settings, etc.)

For example, to add child page for some already existing page - select this page in the pages list at the left, click **Add Child Page** button (1), specify page name (2), and click **Add Page**:

If you go back to site home page, you'll see that subpage is displayed in the navigation menu:



If you edit this subpage, and mark **Hide** from **Navigation Menu** flag, you'll see, that page will no longer be displayed in the navigation.

Page Types

Liferay has different types of pages. The default one is **Layout** - it's standard, empty by default page, which is displayed in navigation menu. Portlets may be added to such page, themes and layouts may be also applied to this type of page. In most cases this page type is used.

But there are different page types, here are they:

- Link to a Page of This Site as the name says, this is a link to some page within site.
 Page of this type doesn't have it's own content, it's used to redirect to some other page within the same site by clicking on this page in navigation menu;
- Link to URL this is similar to previous type, but may refer to a page of some other site within portal, or even to some external URL;
- Panel this type of page is used to work with different portlets on one and the same page. When you set page type to Panel in Site Pages menu, you can specify which applications (portlets) will be available on this panel page:

Туре	
Panel -	
Description	
Select the applications that will be available in the panel.	
– 🖿 🗆 Application	
– 左 🗆 Collaboration	
🗅 🗹 Blogs	
🗅 🗆 Blogs Aggregator	
🗅 🗹 Calendar	
🗅 🗆 Message Boards	
🗅 🗆 Recent Bloggers	
🗅 🖾 Wiki	
– 陸 🗆 Community	
🕒 🗆 Bookmarks	
🗅 🗹 Friends Directory	
🗅 🗆 Invitation	
🗅 🗆 My Sites	
🗅 🗹 My Sites Directory	

When you go to panel page, you'll see, that it contains two parts: list of available applications in the left section, and selected application in the right one:

€ €	ocalhost:8080/web/guest/test	t-panel?p_aut	th=UPKdnv0a&p_p_id=36&p_p_lifecycle=1&p_p_state=maximized&p_p_mode=view	4 ▼ C'
	🋂 Liferay			
+	50-Shades-of-Liferay	Home	Test 💿 Test-Panel	
	Test-Panel			
Ø	Collaboration	\odot	Wiki	
	Blogs Calendar Wiki		FrontPage Recent Changes All Pages Orphan Pages Draft Pages	
	Community	0	FrontPage	
	Friends Directory My Sites Directory		This page is empty. Edit it to add some text.	
	Wiki	\odot	This page is empty. Euli it to aud some text.	
	Wiki			

This type of page may be used, if you need to work with different portlets. In this case you don't need to create pages and add portlets you need to those pages - all the portlet you need are already on panel page. Panel page type doesn't allow to select page layout and to add applications to a page.

• **Embedded** - it's a Liferay page, which contains **IFrame**, which displays content from specified URL. When you select *Embedded* page type, you may specify URL to display:

	A	Admin	 My Site 		0	🕐 Test Test 🗟
Site Pages [®]						
Public Pages Private Pages						
– 🗅 Public Pages	A Permissions 🗙 Delete 🛛 🖾 Copy Applications					
D Welcome + D Home - S Link-To-Page S Link-Page S Link-To-Url D Panel S Embedded	Details Name (Required) Embedded		Details SEO Look and Fo JavaScript Custom Fiel Advanced Mobile Devi	ds	5	
	Type Embedded • URL					

When you go to embeded page, you'll see that this URL is displayed withing **IFrame** on this page:



Adding portlets to embedded page and changing it's layout is also not allowed (as with panel pages).

Public and Private pages

In Site Pages menu we see, that there are Public Pages and Private Pages:

← → C □ localhost:8080/gro	up/control_panel/m	hanage?p_p_auth=IWb5p9Ey&p_p_id=156&p_p_
S Liferay	inistration	
		Site Pages [®]
Pages	•	Public Pages Private Pages
📾 Site Pages		
Content	•	– 🗅 Private Pages
Users	>	
Configuration	>	

Here is the difference between them:

Public Pages	Private Pages
Accessible by all users by default	Accessible only by site members
(regardless of their membership in site)	

Have the following URL structure:	Have the following URL structure:
http://{host}:{port}/web/{site-name}/	http://{host}:{port}/group/{site-name}/
{page-friendly-url}	{page-friendly-url}

Page management for private pages is the same as for public pages (which was covered earlier). If you create private page, you'll see, that it's **Friendly URL** contains /**group**/ in it's URL instead of /**web**/ (as it was for public pages):

Public Pages	Private Pages		
– 🗅 Private 🗅 Test	Pages	+ Add Child Page	Copy Applications
		Details	
		Name (Required)	
		Test	
		Hide from Navigation Menu	
		Friendly URL @	
		http://localhost:808 <mark>0/group/r</mark> uest /test	

NOTE:

Those private/public friendly URLs settings are configured in **portal.properties**:

layout.friendly.url.private.group.servlet.mapping=/group

layout.friendly.url.public.servlet.mapping=/web

and may be changed in portal-setup-wizard.properties file.

If you try to access some private page being not logged in (for example, /group/guest/), you'll be redirected to the default public page in the same site (/web/guest/ for the default Liferay site) with full-screened (in maximized mode) Sign In portlet on it (1). Once you sign in, you'll be redirected back to the private page which you originally requested (it's URL is stored in redirect parameter (2) in the URL):

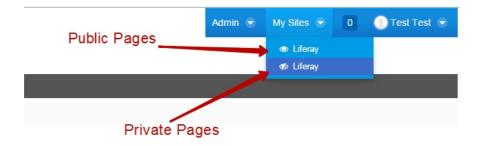
Wekome 50 Shades of Liferay 💌		
Velcome		
ign In		🔿 Return b
mail Address lest@liferay.com		
cagneray.com		
assword		

but only in case when you're a member of the site and have sufficient permissions to view this page. Otherwise, if you can not see this page - **'Not Found'** exception will be shown to you:

(+) 	localhost:8080/web/test/home			? • C
+	Velcome Test Test / Welcome			
	Language	•	Blogs Add Blog Entry Permissions	
The re	ot Found equested resource was not found.			
« Bac	k			

(the same exception is shown if page really doesn't exist).

You can quickly navigate to public/private pages of your sites from the Dockbar menu:



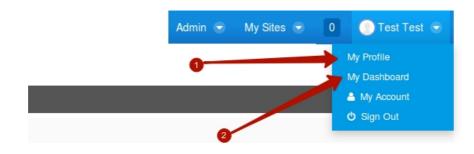
User's pages

Each user in Liferay can have his own personal site - a set of public pages (called '**My Profile**') and set of private pages (called '**My Dashboard**').

My Profile	My Dashboard
Accessible by all users	Accessible only by owner (and portal administrator)
Have the following URL structure:	Have the following URL structure:
http://{host}:{port}/web/{screen-name}/	http://{host}:{port}/user/{screen-name}/
{page-friendly-url}	{page-friendly-url}

It's similar to site public/private pages, but here user's screen name is used in URL instead of site group friendly URL, and */user/* prefix is used for private pages (instead of */group/*).

My Profile (1) and My Dashboard (2) are accessible from Dockbar:



My Profile pages:

My Dashboard pages:

()	ocalhost:8080/user/test/home						4 - C
	🋂 Test Test						
+	Welcome						
	Test Test / Welcome						
Ø	Language			*	My Sites		
	i i i i i i i i i i i i i i i i i i i	•			My Sites	Available Sites	
	Dictionary			\$			
4		Dictionary	▼ Find				
					Name	-	Members
	Portal Directory			*	Liferay		1
	Users Organizations Us	er Groups					

As with site pages, page management for **My Profile** and **My Dashboard** is available from 'Admin' -> 'Site Administration' -> 'Pages' menu in **Dockbar**

• Iocalhost:8080/group/control_panel?refererPlid=	2064	6&doAsGroupId=20202&controlPanelCategory=current_site
S Test Test		
		Site Pages®
Pages	۲	My Profile My Dashboard
🖬 Site Pages		
Content	•	– 🗅 My Profile 🗅 Welcome
Configuration	۶	0

Here you can manage pages for **My Profile** (1) and **My Dashboard** (2) in the same way, as you do this for site public/private pages.

When you create new user - both public (profile) and private (dashboard) pages are created for him automatically in the default Liferay configuration. To disable automatic creation of public/private pages for user, the following properties may be used in **'portal-setup-wizard.properties**':

layout.user.public.layouts.auto.create=false

layout.user.private.layouts.auto.create=false

To disable public/private pages at all, you may use:

layout.user.public.layouts.enabled=false

layout.user.private.layouts.enabled=false

You may also specify your custom structure of created public/private page for user by overwriting those properties:

7
Set the name of the private layout.
#
default.user.private.layout.name=Welcome
#
" # Set the layout template id of the private layout.
#
default.user.private.layout.template.id=2_columns_ii
#
Set the portlet ids for the columns specified in the layout template.
#
default.user.private.layout.column-1=82,23,11
default.user.private.layout.column-2=29
default.user.private.layout.column-3=
default.user.private.layout.column-4=
derautt, user (private, tayout, cotumi-4-
4
#
Set the friendly url of the private layout.
*
default.user.private.layout.friendly.url=/home

If you need to create more than one page for user - you may also specify which LAR to use:

default.user.private.layouts.lar=\${liferay.home}/{path-to-lar-file}/{lar-file}.lar

Export/Import pages

Liferay provides capability to import/export site pages with a help of **LAR files (Layout ARchives)**. If you need to copy your site pages to some other Liferay instance - you may create **.LAR** file by exporting pages from your site, and then import this file to target Liferay instance.

To create **LAR** file, you need to press **Export** button from inside **Site Pages** (if you need to export private pages - click on **Private Pages** tab before):

Site Pages [®]	
Public Pages Private Pages	
 Public Pages 50-Shades-of-Liferay 	☐ View Pages
 Part-I-Liferay-Introduction Part-II-Liferay-Customization 	Look and Feel
	Current Theme

Export popup will be opened, where you can specify export settings - name of exported **LAR** file, choose which pages and which content to export.

Here I specify which pages to include into the LAR file being created:

Pages
9
− □ □ 50-Shades-of-Liferay B ♥ Part-I-Liferay-Introduction □ □ Part-II-Liferay-Customization
Site Pages Settings
V Theme Settings
@ Logo
OK Cancel

(this feature will appeared in 6.2 only)

After LAR has been created, you may download it:

Create Date Completion Date Download
Create Date Completion Date Download
3 Seconds Ago 1 Second Ago 🛞 Public_Pages-201510111540.lar(191k) 🗶 Clear
3 Seconds Ago 1 Second Ago 💮 Public_Pages-201510111540.lar(191k)

To import **LAR** file, click on **Import** button (assuming, you're already inside **Site Pages** menu for the site you need):

Site Pages [®]	
Public Pages Private Pages	
– 🗅 Private Pages	+ Add Page ↓ Export ↑ Import
	Look and Feel
	Current Theme

Upload **LAR** file in the opened **Import** popup:

ew Import Process Current and Previous	
	Drop a LAR File to Import
	or
	Select File
blic_Pages-201510111540.lar	
ontinue	

Click on **Continue**, select import options, click on **Import**:

Import	×
New Import Process Current and Previous	(
Update Data	
Mirror	
○ Mirror with overwriting ♥	
⊖ Copy as New ♥	=
Authorship of the Content	
○ Use the Current User as Author ♥	
Back Import	
	Mo

Make sure, that import process has finished successfully:

Import				×
New Import Process	Current and Previous			
User Name	Status	Create Date	Completion Date \$	
Test Test	Successful	3 Seconds Ago	1 Second Ago	🗙 Clear

After this all pages and content from the **LAR** file should be available in the site where you uploaded this **LAR** file.

Layout Templates

Layout Templates (layouts) define the displaying of the portlets on the page. By default Liferay contains ten layouts.

To change the page layout we should click on **Edit** in the **MenuBar**, select the desired layout and click on **Save**.

Edit Page	×
Permissions X Delete Copy Applications	
Details	•
Name (Required)	
Home	
□ Hide from Navigation Menu 🥯	=
Friendly URL 🥬	
http://localhost:8080/group/guest /home	_
Type Layout	
C 📑 Freeform	
O 1 Column	
e 2 Columns (50/50)	
O 2 Columns (30/70)	
O 2 Columns (70/30)	
O 3 Columns	
Site Administration S	ave

After applying the layout to the page the portlets can be moved in it according to the structure of the selected layout.

In most cases it is enough for developing the layouts, that are provided by default. But in some cases the portlets should be placed in certain layout, but the acceptable layout is hasn't included in the set. To do this, you can write a custom layout (or download the ready from MarketPlace).

Sometimes, instead of a custom layout we can use the portlet **Nested portlets**.

More about the Layout Templates read in this book later.

Liferay Themes

Liferay Themes (themes) - are liferay applications, that allow us to define the structure and look-and-feel for Liferey pages. If layouts define only the structure for portlet layout, then the themes allow us to determine the structure of the entire portal page (including dockbar, header, content, footer, etc.), as well as css-rules for it.By default, there are two themes in Liferay (**Welcome** and **Classic**). You can change the theme for a page through the **MenuBar (Edit** \rightarrow **Look and Feel**)

Edit Page	×
Details	•
SEO	•
Look and Feel	
 Use the same look and feel of the Private Pages . Define a specific look and feel for this page. 	
Classic	
Description Portiets, themes, and layout templates included with Literay Portal. Author Literay, Inc.	
Color Schemes (3)	

In the menu **Site Pages** we can specify the theme as for the entire site (for all **private** or all **public** pages), as well for specific pages.

More about the Liferay Themes development read in this book later.

Liferay Sites

What is Liferay site?

Liferay Site (in earlier Liferay versions called **Community**) is one of the fundamental term in Liferay. From the page management point of view it's a set of public and private pages (see previous section). Except pages, site has also proper content (Web Content articles, Document and Media documents, Wiki pages, etc.), and own members (user, user groups or organizations).

Default sites in Liferay

There are two pre-defined sites in Liferay by default. When we were working with page management in previous section - we were working with Liferay's default site - **'Liferay'**. There is also another site **'Global'**. When you go to **'Sites'** menu inside **Control Panel**, you'll see them:

Blocalhost:8080/group/control_panel?refererPlid=20176&p_p_id=134 4 ▼ C										俞	☆
Co	ntrol Panel	<u> </u> Users	Sites	奋 Apps	🔅 Configuration						M
Sit	es Site Templa	ates Page T	emplates								
				•							
	+ Add -									Q	Keyw
De	lete										
	Name	-	Туре	Me	embers	Active	Pending Requests	Tags			
	Global		System	0		Yes			- 🤞	Action	ns
	🗐 Liferay		Open	1 U	Jser	Yes			- 6	Action	ns

Here are differences between them:

Liferay site	Global Site
It has own pages and members of the site	It doesn't have pages and members
Site content is accessible only within this	Site content is global, i.e. accessible from
site	any other site

Default Liferay site may be used in portals, which don't have content/pages separation

between different parts of portal (sites). So, if your portal will have only one site - you may use the pre-defined **Liferay** site.

🔶 🕲 la	ocalhost:8080/group/template-11640/1
	🛐 CalendarPage
+	CalendarPage
	CalendarPage
	Configure this application and place it where desired on the page.

Global site is used to store shared content. Content in Liferay (web content, documents, blogs, etc.) belongs to some site inside portal. By default this content is accessible only inside this site. If you want to make some content shared between different sites - you may upload it to **Global** site, and then refer to it from other sites.

Sites management

Sites can be created: + for **organization** - herewith a site can have a set of public/private pages and content + for **user** or **user group** - in this case it is a set of public/private pages only (without content and members) + **separately** - in this case a site can have a set of public/private pages, content and members of a site (users/organizations/user groups)

The site can be created as blank one (Add \rightarrow Blank Site) or via Site Template.

Site Template consists of Page Templates.

We will create a page template: **Page Template** \rightarrow **Add**. We will point a name as **CalendarPage**. Then go **Action** \rightarrow **Edit** for created page template and select **Open Page Template**:

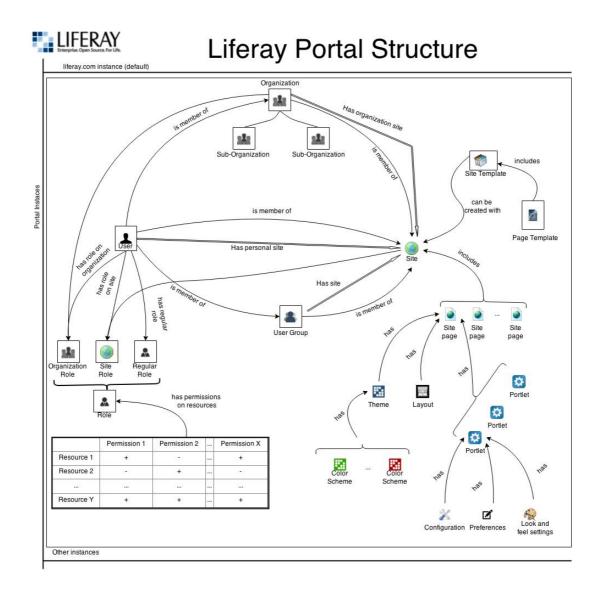
We will add a portlet to the **Calendar** page and select **1-coloumn** layout, as a result we will get:

Contro	l Panel	<u> </u> Users	🔇 Sites	斺 Apps	🌞 Configuration
Sites	Site Templa	tes Page Te	mplates		
+ Add	d				
😌 Cale	endarPage				
Name (Red	quired)				
CalendarF	Page				
•					
Descriptior	n				
CalendarF	Page				
Active					
Configurati	ion				
open Pa	age Template				
Save	Cancel				

After that we will create **SiteTemplate** (**Site Templates** \rightarrow **Add**). We will assign a name as **CalendarSite**, we will get as a result:

S Control Panel 🥂 Users 🔇 Sit	es 🎰 Apps 🔹 Configuration
Sites Site Templates Page Templates	
CleandarSite ▼ Visit: Site Pages	
	Site Template Settings
Pages Content	Name (Required)
	CleandarSite ■ <
🔅 Site Template Settings	
Application Display Templates	Description
Mobile Device Families	Gleandar Site
	✓ Active
	${old S}$ Allow Site Administrators to Modify the Pages Associated with This Site Template ${}^{\oslash}$
	Save Cancel

We will add a new page to the section **Pages**, selecting herewith the created earlier **Page Template**:



50 shades of Liferay

Add Page	×	
⊖ MyPageTemplate		
MyPageTemplate		
CalendarPage		
CalendarPage		P
Automatically apply changes done to the page template.		
⊖ Panel		
Create a page with predefined applications and n		
⊖ Embedded		
Show content from another website.		
Link to URL		
Link to another website.		
○ Link to a Page of This Site		
Link to another page in the current site.		-
○ Copy of a Page of This Site		
Copy an existing page from this site.		
Add Page Cancel		
Add Tage Oander		
Dots		Te

Then we will create a new layout, using created **Site Template**: Sites \rightarrow Add \rightarrow Calendar Site.

The configuration of pages/portlets, that is specified in **Site Temaplate** will be applied to the created site.

C	lea	nda	arS	ite										
Calendar														
CleandarSite	e / Caler	ndar												
Calendar														
Calendar	Reso	urces												
•		м	arch 20	015		►	Add Event	Today < 🕽	March 22 - 28, 2015				Day V	/eek Month Ag
Su	Мо	Tu	We	Th	Fr	Sa		22 sun	23 Mon	24 Tue	25 Wed	26 Thu	27 Fri	28 sat
1	2	3	4	5	6	7	All Day							
8	9	10	11	12	13	14	12am							
15	16	17	18	19	20	21	12am							
22	23	24	25	26	27	28	1am							
29	30	31												
							2am							
							3am							
 My Cale 	endars					-								
Test	Test						4am							
 Current 	Site Ca	lendare					5am							
📕 Clea	ndarSite					*	6am							
	Calendar	s												
 Other C 							7am							

When creating a site template you can specify the pages (**public** or **private**), to which the template will be applied, and whether the template changes will change automatically the created site.

To add the site members it is necessary to select **Site Membership** in the **Users** section, then select **Users**, click on **Assign Users**,

\delta Control Panel 🕺 🕺 🗴	Users 🔇 Sites	🚔 Apps 🛛 🏠 Configurat	ion		My Site
Sites Site Templates Page	Templates				
O CleandarSite ▼ Visit: Site Pages					
		Site Membershi	os		
ages	۲				
ontent	>	+ Add Members -	+ Add Site Roles to -		
sers	•	Summary Users O	rganizations User Groups		
Site Memberships		Summary Osers O	ganizations Oser Groups		
🖧 Site Teams		Q- Keywords	Search		
Configuration	>				
		Name	Screen Name	Site Roles and Teams	
		Test Test	test	Site Owner	- 🖉 Actions

then select the users you need, click on Save:

Control Panel	👥 Users 🔇 Sites	🚔 Apps 🛛 🔅 Configuration	
Sites Site Templates	Page Templates		
G CleandarSite ▼ Visit: Site Pages			
		Site Memberships	
Pages	>		
Content	۲	S Add Members: Users	
Users		Q- Keywords Search	
🖧 Site Memberships			
🖧 Site Teams		Service Name	Screen Name
Configuration	>	Vitaliy Koshelenko	vetal
		g Test Test	test
		Save	

Similarly, the organization and user groups can be specified as site members.

LIFERAY PORTAL structure

LIFERAY configuration

The facilities for configuration / administration Liferay are located on the **'Configuration'** tab in the **Control Panel**:

0	Control Panel	<u> </u> Users	🔇 Sites	🏫 Apps	🔅 Config	uration			My Sites 💿	0	🕘 Test Test
	Portal Settings	Custom Fields	Server Administ	ration Por	rtal Instances	Workflow					
	Main Configurat Name (Required) Liferay	ion				CDN Host HTTP		52			
	Mail Domain (Require	d)				CDN Host HTTPS		Liferay CONFIGURATION General			
	Virtual Host (Required)				CDN Dynamic Resources Enabled		Authentication Users Mail Host Names			
	Navigation							Email Notifications Content Sharing			
	Home URL 🥯					Default Landing Page 🥯		Addresses Phone Numbers			
						Default Logout Page 🧇		Additional Email Addresses Websites			
	Additional Inforn	nation						MISCELLANEOUS Display Settings Analytics			
	Legal Name					SIC Code		Google Apps			
	Legal ID					Ticker Symbol		Save Cancel			

Liferay Applications Management

By default Liferay contains a large number of applications (portlets) for different purposes (for example, **Wiki**, **Blog**, **Message Boards**, **WebContent**, etc.).

To add a portlet to the page you need select **Applications** from the **MenuBar**, and then select the appropriate portlet. After clicking **Add** the portlet will be embedded to the page.

Portlets can be **instanceable** (can be added to a page several times) and **notinstanceable** (can be added only once). Each portlet has its own unique ID.

For instanceable portlets for providing their uniqueness, **portlet namespace** is written additionally to **ID** (for each portlet on the page the unique **portlet namespace** is generated).

After adding a portlet to a page, you can assign it the configuration settings and right of the access (**permissions**). Here, for example, the form for specifying permissions for **Calendar** portlet.

Role	Access in Control Panel	Add to Page	Configuration	View	Permissions
, Owner	8	8			
Portal Content Reviewer					
Power User		8			
Site Content Reviewer	0				
Site Member					
User					

To display/hide this portlet for certain role it is necessary to check/uncheck the flag **View** (opposite the role). The visual settings for portlet displaying it is possible to specify in **'Look and Feel'** menu. You can specify a custom title for the portlet, display/hide the borders, prescribe the custom **css** rules for portlet:

	Look and Feel	×
31	Portlet Configuration Text Styles Background Styles Border Styles Margin and Padding Advanced Styling	
	g Use Custom Title	
ł	My-Calindar English (United States)	
	Link Portlet URLs to Page Current Page	
2	Show Borders	
1	No -	
C 'e	Save Reset	

The portlets on a page can be moved by drag-and-drop (according to the selected layout).

The list of all installed applications can be viewed in Control Panel -> Apps

ile Edit View Higtory Bookmarks Tools Help ☑ Home-Liferay × ☑ Home-Liferay × ☑ App Manager-Life ☑ Iocalhost 8050/group/control panel?refererPiid=107538.controlPanelCateconv		♣ ☆ ☆ 白	* 0 9
3 Control Panel 🍂 Users 🔇 Sites 🔒 Apps 🔅	Configuration	My Stes 💿 🛛 0	
App Manager Store Purchased Plugins Configuration Licer	se Manager OpenSocial Gadget Publisher		
Manage Install			
cartoomes All Apps Ad Apps	Calenciar Portlet Usery's Calender app allevs users and organizations to create track, stars, and manage events, in addition, the Calender app supports notification Social Office, and starging. As user, you can create as many calenders as you need, As an administrator, you are able to manage the scheduling Resources such an create and projektors. All content for the test of Calender Portlet's advantability imported into the new global content and Calendar, consult the "Managing Guestian and Calendar Resources with Literary's Calendar Portlet' section of the Literary Use Social at https://literary.user.social and an advantability and advantability of the Calendar Portlet' section of the Literary Use Social at https://literary.user.social and advantability and content advantability of the Calendar Portlet' section of the Literary Use Social and a transmittery and combinementation.	f Calendar out how to use the	🕶 🥜 Actions
	> This app contains: 1 Portlet		
	Kaleo Workflow Web This top powder has fields Workflow register, for use with Literay Portal Is Greek, Kaleo mesen "abiled ones." which is appropriate for a workflow is users to participate in a process that has been designed for them. Kaleo workflow allows as user for derive any workflow is processes/workflow, and progent that allow the segment of them. Kaleo workflow allows as user for derive any workflow is a single into the other that allow the allow the through a port lifetion. These processes is there you can go use and users a single into the other that allow there to do is an eventile as single XAE. Consent: And it you're a Lifetioner, you jet is particular workflow can be consent of the other the workflow and the management mode of allow that any other to allow the Workflow're election of the Lifeting User Guales for administering this areas. The Lifeting User Guale can be found at http://fereg.conditioumentation.	don't have to write workflow designer, le more complex	• P Actions
	The app nature as a Livery service. There are no configurable plugms for this app.		
	Liferay Core Pugins bundled with Liferay Portal.		
	This app contains: 10 Layout Templates 98 Portlets 3 Themes Name Type		
	Name Type		

Here you can activate/deactivate or remove the desired application.

On the Install tab, you can set the desired application (via upload war/lpkg file or via URL).

To install an application from the Liferay MarketPlace is necessary to go to **Store** on the **Apps** tab and log in (if you don't have an account - register on liferay.com before).

After selecting the desired application click on **Purchase**. After that it should be displayed on the tab **'Purchased'**:

3	Control Panel	<u>"</u>	C Users	🔇 Sites	숨 Apps	🔅 Configuration				
	App Manager	Store	Purchased	Plugins	Configuration	License Manager	OpenSocial Gadget Pub	lisher		
					Purch	ased Apps	6			
					Owner Vitaliy Koshe	Category	÷	Title	Search	
					Product Info	rmation				
					- 	ocial Offic iferay, Inc. 大大大大大 41 Downloads				Install
						i <mark>feray, Inc.</mark> iferay, Inc. な女女女 889 Downloads				Install
					Tube	ouTube CE iferay, Inc. কৈ কাক ক 25 Downloads				Install
						i <mark>hat CE</mark> iferay, Inc. ★★☆☆				Install

Click on **Install**, and the application will be installed.

Developing own portlets is discussed in this book later.

Liferay Administration

For Liferay administering we sould go Admin → Control Panel.

Portal Instances

Portal instance (or company) - it is a separate instantiation of the portal. By default, one

3	Control Panel	📌 Users	🜔 Sites	🏠 Apps	🔅 Config	uration	
	Portal Settings	Custom Fields	Server Administra	ation Po	rtal Instances	Workflow	
	Add						
	Instance ID Web		eb ID		Virtual Host		Mail Domain
	10155	lifera	y.com loc		localhost		liferay.com

company liferay.com is created in Liferay:

They are used for differentiation of data (users, organizations, content, etc.) between different companies.

For this purpose, almost in the every liferay-table the field **companyld** exists, that determines the belonging to the company.

Control Panel	<u></u> Users	🕥 Sites 🛛 🏠 Apps	🔅 Configuration	
Users and Organization	ns User Groups	Roles Password	Policies Monitoring	
+ Add - Expo	ort Users			
AimProSoft				
Add Regular C	Organization			
Details				
Name (Required)	l			
Туре	1			
Regular Organization	•			
Parent Organizatio	on			
Name		Туре		
AimProSoft		Regular Organization		

Q Select

Mainly, single company is used (that is created by default).

Users and Organizations

Users and Organizations User Groups Roles	Password Policies Monitoring	
+ Add - Export Users		
Add User		
Details		USER INFORMATIC
creen Name (Required)	Birthday	Details (Modified
vetal	01/01/1970	Organizations
		Personal site
mail Address (Required)	Gender	
vet_kosh@mail.ru	Male -	Save Can
itle	Job Title	
Mr	developer	

In Liferay users are created in **Users** and **Organizations** → **Add** → **User**:

Users have the opportunities: + to login Liferay + to have their own website (set of **public** and/or **private** pages) + to be memebers of the organizations/websites/user groups + to have certain roles, which give them certain permissions (access rights)

Organization – is Liferay structural unit, uniting the users (users can be organization members).

The organization can have its own website (a set of **public** and/or **private** pages).

Organizations have a hierarchical structure (some organizations can be sub-organizations of the others).

Organizations can be of two types: **Regular Organization** (it is usual organization) and **Location** (it differs from the usual in that has the fields for entering a names of a country and a region).Organizations can be of two types: Regular Organization (it is usual organization) and Location (it differs from the usual in that has the fields for entering a names of a country and a region).

Example organization:

Control Panel 🕺 Users 🔇 Sites 🏠 Apps 🔅 Configuration	
Users and Organizations User Groups Roles Password Policies Monitoring	
+ Add - Export Users	
AimProSoft	
G Edit AimProSoft	
Details	Reference Aim ProSoft Organization information
Ame (Required) AmProsoft	Details
	Organization Site
Type In Change X Delete	Categorization
Regular Organization	IDENTIFICATION
	Addresses
Site ID 11145	Phone Numbers
0.00	Additional Email Addresses Websites
Parent Organization	Services
	MISCELLANEOUS
Q Select	Comments
	Reminder Queries
	Custom Fields
	Save Cancel

To add a user to the organization, we should go to **Actions** \rightarrow **Assign Users**, then go to the tab **Available** and select the required users and click on **Update Association**:

Со	ntrol Panel 🛛 🦻	Q Users	🕥 Sites	🏠 Apps	🄅 Co	nfiguration	
Use	ers and Organizations	User Groups	Roles	Password	Policies	Monitoring	
6	AimProSoft						
Cu	rrent Available						
Q+	Keywords	Search					
Upo	date Associations						
	Name						Screen Name
	Vitaliy Koshelenko						vetal
	Test Test						test

To add a subsidiary, we should press **Add Regular Organization** (or **Add Location**) of the current organization:

Website of the organization can have its own content (documents, web content, wiki pages, etc.):

🔇 Control Panel 📌 Users	🕥 Sites	🏫 Apps 🛛 🔾	Configuration	
Sites Site Templates Page Templates				
O AimProSoft ▼ Visit: Public Pages Private Pages				
		Docum	ents and Me	dia®
Pages	•			
Content	•	🕷 Home	•	□ Add ▼ Sort By ▼ Manage ▼
I Web Content		 Recent 		
Documents and Media		🐣 Mine		Home
Blogs		🗅 Browse	by Туре	
Message Boards				Access these files offline using Liferay Sync.
D Wiki				
📅 Dynamic Data Lists				
Bookmarks				
Polls				
🕞 Tags				
Categories				2
📅 Recycle Bin				
🔂 OpenSocial Gadget Editor				AimProSoft
Configuration	۲			

The User Groups

The user group – is also Liferay structural unit, uniting the users. Users can be user group members. **User group** can have a set of **public** and **private** pages.

Control Panel	🐧 Users 🛛 🌔 Si	ites 🔛 🔐 Apps	🛟 Cor	nfiguration	
Users and Organizations	User Groups	Roles Password	d Policies	Monitoring	
OeveloperGroup					
New Name (Required)					
DeveloperGroup					
Description					
DeveloperGroup					
··· · · · · · · · · · · · · · · · · ·					
User Group Site					
Public Pages					
🗟 Open Pages 🖾		1-1- C			
Enable propagation of cha	nges from the site temp	blate Community Site.			
Private Pages					
🗟 Open Pages 🖻					
Enable propagation of cha	nges from the site temp	plate Community Site			
Save Cancel					

But, unlike the organization, **user group** site can not have the content (documents, webcontent, etc.). User groups don't have a hierarchical structure.

Roles and Permissions

Roles in Liferay intended for determination of users permissions (access rights) to certain objects (content, pages, portlets, etc.). These roles can be assigned to users to provide them with requredaccess rights.

In Liferay 14 roles have already been created by default:

Control Panel 📃 Users 🔇	Sites 🔐 App	os 🔅 Configuration
Users and Organizations User Groups	Roles Passy	vord Policies Monitoring
Add 👻		
20 Items per Page Page 1 of 1 Showing	14 results.	
<u>Title</u>	<u>Type</u> \$	Description
Administrator	Regular	Administrators are super users who can do anything.
<u></u> Guest	Regular	Unauthenticated users always have this role.
Organization Administrator	Organization	Organization Administrators are super users of their organization but cannot make other users into Organization Administrators.
Organization Content Reviewer	Organization	Autogenerated role from workflow definition
In Organization Owner	Organization	Organization Owners are super users of their organization and can assign organization roles to users.
Market Organization User	Organization	All users who belong to an organization have this role within that organization.
L Owner	Regular	This is an implied role with respect to the objects users create.
Portal Content Reviewer	Regular	Autogenerated role from workflow definition
L Power User	Regular	Power Users have their own personal site.
Site Administrator	Site	Site Administrators are super users of their site but cannot make other users into Site Administrators.
Site Content Reviewer	Site	Autogenerated role from workflow definition
Site Member	Site	All users who belong to a site have this role within that site.
Site Owner	Site	Site Owners are super users of their site and can assign site roles to users.
L User	Regular	Authenticated users should be assigned this role.

If necessary, we can create our own custom roles.

The roles can be: + **Regular Role** (general role) – granted to user for entire portal + **Site Role** (role for site) – granted to user for the site + **Organization Role** (organizational role) – granted user for the entire organization

The same user can have different roles in different sites/organization. For example, theuser ca be admin in one organization, but at the same time he can be usual user in another one.

To add a role to a user, we should go to Edit User and select the required roles:

AimProSoft / Vitaliy Koshelenko				
C Edit User Vitaliy Koshelenko				
Regular Roles				Vitaliy Koshelenko
Title				USER INFORMATION
Power User		🐲 Remove		Password
CustomRegularRole		🐞 Remove		Organizations
				Sites
Q Select				User Groups
Inherited Regular Roles				Roles (Modified)
This user does not have any inherited regular roles.				Personal site
Organization Roles				Categorization
				IDENTIFICATION
Title	Organization			Addresses
🏰 CustomOrgRole	AimProSoft		🐝 Remove	Phone Numbers
Q Select				Additional Email Addresses
				Websites
Site Roles				Instant Messenger Social Network
Title	Site			SMS
CustomSiteRole	BlankSite		lemove	OpenID
Galomolehole	Blankolte	ا هرو		MISCELLANEOUS
Q Select				Announcements
Inherited Site Roles				Display Settings
This user does not have any inherited site roles.				Comments
The deer deep not nave any interned alle foles.				

To assign the permissions for the role, we should select **Actions** \rightarrow **Define Permissions** for this role, then select the required permissions and click on **Save**.

For example, for created role **Organization Publisher** we select the permissions, required for content management.

Control Panel 🕺 🕺 🕄 S	Sites 🕇	Apps	Configuration	My Sites 🕤	0	🕘 Test Te
Jsers and Organizations User Groups	Roles	Password I	ies Monitoring	My Bles		
OrganizationPublisher						
Edit Define Permissions						
Search		Web	ontent			
Summary		Gen	I Permissions 🥺			
			ion			
Users and Organizations Site Administration			cess in Site Administration			
▼ Pages			nfiguration			
Site Pages			missions			
▼ Content			w			
Recent Content Web Content Documents and Media Blogs			ce Permissions 🔍 ntent			
Message Boards Wiki			ction			
Dynamic Data Lists			dd Feed			
Bookmarks Polls		8	dd Folder			
Software Catalog			dd Structure			
Tags Categories		8	dd Template			
Recycle Bin		8	dd Web Content			
OpenSocial Gadget Editor			ermissions			

Users with this role will have the appropriate access rights.

Chapter 3. First Portlet

We got to know installation/startup Liferay in the previous chapters, and also basic principles of work with it. Now we write our first Liferay portlet.

Creating new module in IDEA

Create a new module 'hello-world' by using of Maven archetype.

To do it, go File \rightarrow New Module..., select Maven, check 'Create from archetype' and select 'liferay-portlet-archetype':

😣 🗊 New Module		
🖬 Java	☑ Create from <u>a</u> rchetype	Add Archetype
📠 Java Enterprise	com.googlecode.etl-unit:etlunit-project-archetype	
🕲 J2ME	com.googlecode.gwtquery:gquery-archetype	
🔍 Clouds	com.googlecode.gwtquery:gquery-plugin-archetype	
🥏 Spring	com.googlecode.jannocessor:jannocessor-sample-archetype	
🖉 IntelliJ Platform Plugin	com.googlecode.metridoc:metridoc-archetype	
🖶 Android	com.googlecode.playn:playn-archetype	
	com.hivemq:hivemq-plugin-archetype	
Gauge	com.ibm.sbt:sbt.sso.webapp-archetype	
m Maven	 com.jamcracker.adapter.jit:jit-adapter-archetype com.liferay.maven.archetypes:liferay-ext-archetype 	
📀 Gradle	 com.liferay.maven.archetypes:liferay-hook-archetype com.liferay.maven.archetypes:liferay-hook-archetype 	
	 commensymmetry in a ventar checypes in a symmetry in a ventar checype com.liferay.maven.archetypes:liferay-layouttpl-archetype 	
Groovy	com.liferay.maven.archetypes:liferay-portlet-archetype	
🎱 Griffon	com.liferay.maven.archetypes:liferay-portlet-icefaces-archetype	
😡 Grails	com.liferay.maven.archetypes:liferay-portlet-jsf-archetype	
😡 Static Web	com.liferay.maven.archetypes:liferay-portlet-liferay-faces-alloy-archetype	
🎝 Flash	com.liferay.maven.archetypes:liferay-portlet-primefaces-archetype	
	com.liferay.maven.archetypes:liferay-portlet-richfaces-archetype	
	com.liferay.maven.archetypes:liferay-servicebuilder-archetype	
	com.liferay.maven.archetypes:liferay-theme-archetype	
	 com.liferay.maven.archetypes:liferay-web-archetype com.lordofthejars.thymeleafarchetype:thymeleaf-spring-maven-archetype 	
	 com.monordorchegars.chymeteararchetype com.monordorchegars.chymeteararchetype com.monordorchegars.chymeteararchetype 	
	Provides an archetype to create Liferay portlets.	
	Previous <u>N</u> ext Ca	ancel Help

Click on Next, specify groupId and artifactId

50 shades of Liferay

😣 🗈 New	Module	
GroupId	com.aimprosoft	🛙 Inherit
ArtifactId	hello-world	
Version	1.0-SNAPSHOT	🗹 Inherit
	Previous <u>N</u> ext Cancel	Help

Click on **Next**, setup *Maven* (if it was not setup formerly):

😣 🗈 New Module		
Maven <u>h</u> ome directory:	/usr/share/maven2 M2_HOME is used by default	🗆 Override
User <u>s</u> ettings file:	/home/vitaliy/.m2/settings.xml	🗆 Override
Local <u>r</u> epository:	/home/vitaliy/.m2/repository	🗆 Override
Properties		
groupid	com.aimprosoft	+
artifactId	hello-world	
version	1.0-SNAPSHOT	
archetypeGroupId	com.liferay.maven.archetypes	
archetypeArtifactId	liferay-portlet-archetype	
archetypeVersion	7.0.0-m2	
	Previous <u>N</u> ext Cancel	Help

Click on **Next**, specify the way to the module and click on **Finish**.

Maven will create the structure of the project automatically.

After that, add Maven profile. To do it, create the file **settings.xml** in the folder **\$HOME\$/.m2**:

255CI	tings>
7	<profiles></profiles>
ģ.	<profile></profile>
	<id>50-shades-of-liferay</id>
Þ	<pre><pre>properties></pre></pre>
	
Þ	liferay.auto.deploy.dir>
	/home/ <u>vitaliy</u> /Work/ <u>Liferay</u> /6.2-ce-ga3/ <u>Liferay</u> Book/ <u>liferay</u> portal-6.2-ce-ga3/deploy
ê.	
Ż	liferay.app.server.dir>
	/home/ <u>vitaliy</u> /Work/ <u>Liferay</u> /6.2-ce-ga3/ <u>Liferay</u> Book/ <u>liferay</u> -portal-6.2-ce-ga3/tomcat-7.0.42
ê.	
į.	
	/home/ <u>vitaliy</u> /Work/ <u>Liferay</u> /6.2-ce-ga3/ <u>Liferay</u> Book/ <u>liferay</u> -portal-6.2-ce-ga3/tomcat-7.0.42/ <u>webapps</u>
2	
Þ	<liferay.app.server.lib.global.dir></liferay.app.server.lib.global.dir>
	/home/ <u>vitaliy</u> /Work/ <u>Liferay</u> 6.2-ce-ga3/ <u>Liferay</u> Book/ <u>liferay</u> portal-6.2-ce-ga3/tomcat-7.0.42/lib/ext
2	
7	<liferay.app.server.portal.dir></liferay.app.server.portal.dir>
	/home/ <u>vitaliy</u> /Work/ <u>Liferay</u> /6.2-ce-ga3/ <u>Liferay</u> Book/ <u>liferay</u> -portal-6.2-ce-ga3/tomcat-7.0.42/ <u>webapps</u> /RC
P .	
	<pre></pre>
	<pre>feray.plugin.version>6.2.1</pre>
	<pre><spring.version>3.1.2.RELEASE</spring.version></pre>
Ð.	

Select this created profile on the tab Maven in IDEA. After that Maven will pull up the necessary dependencies.

Sructure of the created module

After creating the module with using *Maven archetype*, we will have as a result the module *'hello-world'* with such structure:

🗊 Project 🔹 🔻	⊕ ≑ ♣- ⊩
🔻 🗖 hello-world	(~/Work/Projects/LiferayBook/hello-world)
🔻 🗖 src	
🔻 🗖 main	
🗖 java	3
📑 res	ources
🔻 🖻 wet	papp
- 🗖 🤆	:55
	🚈 main.css
- 🗖 j	5
	🖻 main.js
- 🗖 🗸	WEB-INF
	🕺 liferay-display.xml
	🔒 liferay-plugin-package.properties
	💁 liferay-portlet.xml
	🤷 portlet.xml
	🕏 web.xml
_	con.png
	/iew.jsp
J hello-wor	ld.iml
m pom.xml	
	ay-webapp] (~/Work/Liferay/6.2-ce-ga3/Life
JI LiferayBook	
🕨 🏥 External Lib	raries

Chapter 4. First Theme

Perform all nicely..

Now we will write our first Liferay theme.

Creating new module in IDEA

We will create the new module 'aimprosoft' with using of 'Maven archetype'. To do it, go File → New Module..., select Maven, check 'Create from archetype' and select 'liferay-themearchetype':

🔁 Java	✓ Create from <u>a</u> rchetype		Add Archetype
ធ Java Enterprise	com.jamcracker.adapter.jit:jit-adapter-archetype	,	
🗊 J2ME	com.liferay.maven.archetypes:liferay-ext-archetype		
🔍 Clouds	com.liferay.maven.archetypes:liferay-hook-archetype		
🥑 Spring	com.liferay.maven.archetypes:liferay-layouttpl-archetype		
Intellij Platform Plugin	com.liferay.maven.archetypes:liferay-portlet-archetype		
Android	com.liferay.maven.archetypes:liferay-portlet-icefaces-archetype		
	com.liferay.maven.archetypes:liferay.portlet-liferay.faces-alloy-archetype		
Gauge	 com.liferay.maven.archetypes:liferay-portlet-liferay-faces-alloy-archetype com.liferay.maven.archetypes:liferay-portlet-primefaces-archetype 		
m Maven	 com.liferay.maven.archetypes:liferay-portlet-richfaces-archetype com.liferay.maven.archetypes:liferay-portlet-richfaces-archetype 		
💿 Gradle	com.liferay.maven.archetypes:liferay-servicebuilder-archetype		
Groovy	com.liferay.maven.archetypes:liferay-theme-archetype		
Griffon	com.liferay.maven.archetypes:liferay-web-archetype		
Grails	com.lordofthejars.thymeleafarchetype:thymeleaf-spring-maven-archetype		
	com.manydesigns:portofino-war-archetype		
😡 Static Web	com.matthewjosephtaylor.archetypes:application-archetype		
🍞 Flash	com.mycodefu:executable-jar-archetype com.mysema.rdf:rdfbean-tapestry-quickstart		
	 com.mysema.rdf:rdfbean-tapestry-quickstart com.mysema.rdfbean:rdfbean-tapestry-quickstart 		
	 com.nitorcreations:dope-archetype 		
	Provides an archetype to create Liferay themes.		
		Previous <u>N</u> ext Car	icel Help

Specify groupId and artifactId:

🛛 🐵 🗉 🛛 New Module		
Add as module to		
Parent		
	<none></none>	
GroupId	com.aimprosoft	🗹 Inherit
ArtifactId	aimprosoft	
Version	1.0-SNAPSHOT	🗹 Inherit
	Previous <u>N</u> ext Cancel	Help

Check *Maven settings*, specify location of module with the theme.

Structure of the theme will be created automatically.

We will create a theme on the basis of standard *Liferay classic* theme. To do it, copy all files *.*vm* from *ROOT/html/themes/classic/templates*, and also copy *js*, *css*, *images* folders. We will get such structure:

¥	🗖 aimprosoft-theme (~/Work/Projects/LiferayBook/aimpr
	🔻 🗖 src
	🔻 🛅 main
	En resources
	🔻 🔯 webapp
	🕨 🗖 CSS
	🕨 🛅 images
	🔻 🛅 js
	📑 main.js
	🔻 🗖 templates
	역 init_custom.vm
	句 navigation.vm
	.¤ portal_normal.∨m
	₽ portal_pop_up.vm
	₽ portlet.vm
	VEB-INF
	iferay-plugin-package.properties
	🖻 web.xml
	target
	I aimprosoft-theme.iml
	m pom.xml
	hello-world (~/Work/Projects/LiferayBook/hello-world)
•	ROOT [liferay-webapp] (~/Work/Liferay/6.2-ce-ga3/Life
	J LiferayBook.iml
•	🏥 External Libraries

After compiling we get the ready theme, the same as the *classic* one.

We will change:

- layout in portal_normal.vm
- styles in custom.css
- images favicon.png and thumbnail.png
- of necessity *navigation.vm* (for changing of navigation)
- *portlet.vm* (for changing of portlets)

In *init_custom.vm* we can specify our own variables, which we will be able to use later in *portal_normal.vm*. List of all predefined variables is located in the file /ROOT/html/ themes/_unstyled/templates/init.vm.

After necessary changes we should recompile the theme and apply it to necessary pages.



Chapter 5. First Layout

Perform all straightly..

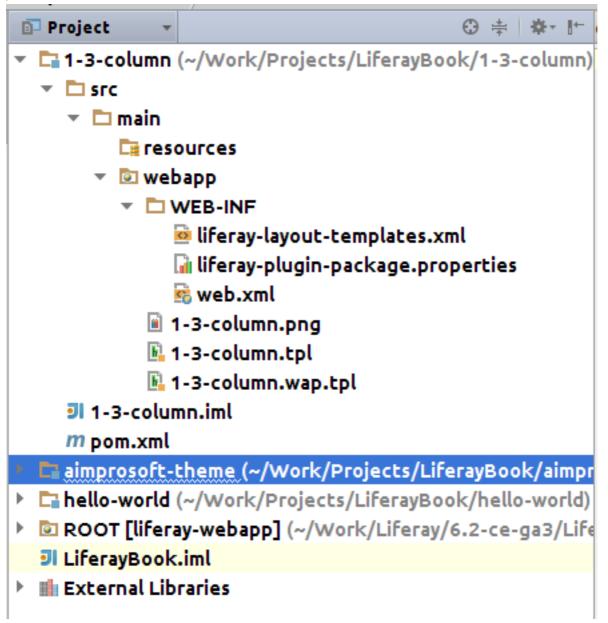
Now we will write our first Liferay theme.

Similar to portlet and theme, we will create a new module for layout:

😣 🗊 New Module		
📮 Java	✓ Create from <u>a</u> rchetype	A <u>d</u> d Archetype
🖬 Java Enterprise	com.googlecode.playn:playn-archetype	
🗊 J2ME	com.hivemq:hivemq-plugin-archetype	
🔍 Clouds	com.ibm.sbt:sbt.sso.webapp-archetype	
Spring	com.jamcracker.adapter.jit:jit-adapter-archetype	
Intellij Platform Plugir	com.liferay.maven.archetypes:liferay-ext-archetype	
Android	com.liferay.maven.archetypes:liferay-hook-archetype	
-#· Android	com.liferay.maven.archetypes:liferay-layouttpl-archetype	
Gauge	com.liferay.maven.archetypes:liferay-portlet-archetype	
m Maven	com.liferay.maven.archetypes:liferay-portlet-icefaces-archetype	
ⓒ Gradle	com.liferay.maven.archetypes:liferay.portlet-jsf-archetype	
	 com.liferay.maven.archetypes:liferay-portlet-liferay-faces-alloy-archetype com.liferay.maven.archetypes:liferay-portlet-primefaces-archetype 	
G Groovy	 com.liferay.maven.archetypes:liferay-portlet-richfaces-archetype com.liferay.maven.archetypes:liferay-portlet-richfaces-archetype 	
🧐 Griffon	 com.liferay.maven.archetypes:liferay.servicebuilder-archetype 	
😡 Grails	com.liferay.maven.archetypes:liferay-theme-archetype	
Static Web	com.liferav.maven.archetvpes:liferav-web-archetvpe	
	Provides an archetype to create Liferay layout templates.	
	Previous Next Ca	ncel Help

🛛 🐵 🗐 New Module	2	
Add as module to	com.aimprosoft:aimprosoft:1.0-SNAPSHOT	
Parent	com.aimprosoft:aimprosoft:1.0-SNAPSHOT	
GroupId	com.aimprosoft	🗹 Inherit
ArtifactId	1-3-column	
Version	1.0-SNAPSHOT	🗹 Inherit
	Previous <u>N</u> ext Cancel	Help

We get such module structure:



We will create 1-3-column layout, that has such structure:

We will do it on the basis of existing 1_2_columns_i layout (file/ROOT/layouttpl/custom/ 1_2_columns_i.tpl). Copy content of this file in 1-3-column.tpl. Change layout in oder to there in the buttom were three columns instead of two ones. Change layout so that in the buttom were three columns instead of two:

```
>>>>>>>>>>>>>>>>>>>
    <div class="portlet-layout row-fluid">
        <div class="portlet-column portlet-column-only span12" id="column-1">
1
           $processor.processColumn("column-1", "portlet-column-content portlet-column-content-only")
        </div>
    </div>
1
    <div class="portlet-layout row-fluid">
1
        <div class="portlet-column portlet-column-first span4" id="column-2">
J
           $processor.processColumn("column-2", "portlet-column-content portlet-column-content-first")
        </div>
        <div class="portlet-column portlet-column-first span4" id="column-3">
           $processor.processColumn("column-3", "portlet-column-content")
        </div>
        <div class="portlet-column portlet-column-last span4" id="column-4">
           $processor.processColumn("column-4", "portlet-column-content portlet-column-content-last")
        </div>
    </div>
]</div>
```

The same is done for the file 1-3-column.wap.tpl.

Recompile layout and apply to the required page:

			Admin 👻 My Sites 👻	0 💽 Test Test 👻
aimpro soft AimProSoft				
Home Wiki				
AimProSoft / Home				
Hello AimProSoft				0
Hello AimProSoft.				
Sign In 🗢	Hello AimProSoft	🔅 Hello AimProSoft		0
You are signed in as Test Test.	Hello AimProSoft.	Hello AimProSoft.		
				Powered By AmProSoft

Chapter 6. First Hook

My hands are doing hooks...

Hook is needed for changing the standart Liferay functionality.

Which hooks do exist?

Types of hooks:

- on portal.properties for redefinition properties of the portal (which are specified in / ROOT/WEB-INF/lib/portal-impl.jar!/portal.properties). Not all portal properties can be respecified via hook, it is possible only for described in /ROOT/dtd/liferay-hook_6_2_0.dtd properties;
- on language-properties for redefinition properties in Resource Bundle (/ROOT/WEB-INF/ lib/portal-impl.jar!/content/Language.properties);
- on indexer (indexer-post-processor);
- on service;
- on struts action;
- on servlet-filter;
- on jsp page (jsp-hook) it allows us to change Liferay jsp-page.

In this section we will create hook on jsp-page (out of login portlet).

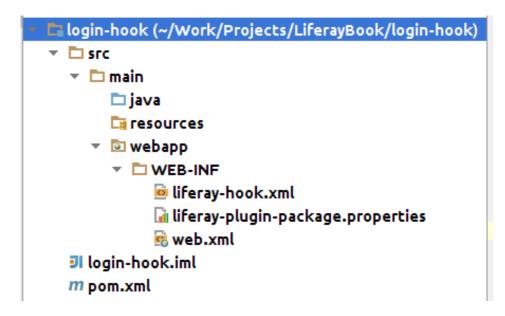
Creating module for hook

As previously, we create a new module via Maven archetype:

📑 Java	Create from <u>a</u> rchetype	Add Archetype
📠 Java Enterprise	com.googlecode.metridoc:metridoc-archetype	
🗊 J2ME	com.googlecode.playn:playn-archetype	
Clouds	com.hivemq:hivemq-plugin-archetype	
Spring	com.ibm.sbt:sbt.sso.webapp-archetype	
🖉 IntelliJ Platform Plugir	com.jamcracker.adapter.jit:jit-adapter-archetype	
	com.liferay.maven.archetypes:liferay-ext-archetype	
🖗 Android	com.liferay.maven.archetypes:liferay-hook-archetype	
Gauge	com.liferay.maven.archetypes:liferay-layouttpl-archetype	
	com.liferay.maven.archetypes:liferay-portlet-archetype	
m Maven	com.liferay.maven.archetypes:liferay-portlet-icefaces-archetype	
📀 Gradle	com.liferay.maven.archetypes:liferay-portlet-jsf-archetype	
6 Groovy	com.liferay.maven.archetypes:liferay-portlet-liferay-faces-alloy-archetype	
9 Griffon	com.liferay.maven.archetypes:liferay-portlet-primefaces-archetype	
	com.liferay.maven.archetypes:liferay-portlet-richfaces-archetype	
😡 Grails	com.liferay.maven.archetypes:liferay-servicebuilder-archetype	
😡 Static Web	com.liferav.maven.archetvpes:liferav-theme-archetvpe	
	Provides an archetype to create Liferay hooks.	

😵 🗊 New Module			
Add as module to	<none></none>		
Parent	<none></none>		
GroupId	com.aimprosoft	🗹 Inherit	
ArtifactId	login-hook		
Version	1.0-SNAPSHOT	🗹 Inherit	
	Previous Next Cancel	Help	

We will get such structure:



Formulation of the problem

Suppose, we should display in bold **'Login to AimProSoft'** in the 'Sign In' portlet, and then after login - **'Welcome to AimProSoft'**.

Defining JSP-page, for which hook should be installed

One of the main technology that is used in Liferay, is Struts.

Therefore, it is possible to define which *jsp* in which portlet is used via *struts action* (file / ROOT/WEB-INF/struts-config.xml).

To do it, go on *Login* portlet:

Email Address	
test@liferay.com	
Password	

□ Remember Me	
Sign In	
🗗 OpenID 🛛 🤱 Create Account	Forgot Password

In FireBug we examine URL forms.

As we see, one of the parameters in this URL is *struts_action=/login/login*.

We should find the appropriate action in *struts-config.xml*:

We examine path for forward:

path="portlet.login.login"

Using this *path* we should find the required *jsp* in file /ROOT/WEB-INF/tiles-defs.xml:

```
<definition name="portlet.login.login" extends="portlet.login">
```

That is, required *jsp* for hook - is /portlet/login/login.jsp.

Creating hook on JSP

One of the main technology that is used in Liferay, is Struts.

Therefore, it is possible to define which *jsp* in which portlet is used via *struts action* (file / ROOT/WEB-INF/struts-config.xml).

To do it, go on *Login* portlet:

Sign In			
Email Address			
test@liferay.com			
Password			

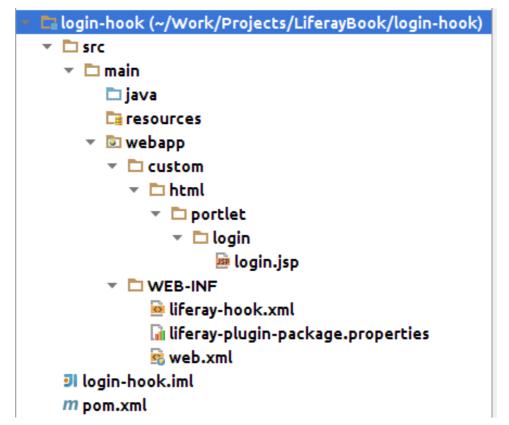
□ Remember Me			
Sign In			
🗗 OpenID 🛛 🚑 Create Account	Forgot Password		
In liferay-hook.xml we register custom-jsp-dir:			
xml version="1.0"? hook PUBLIC "-//Liferay//DTD Hook 6.2.0//EN" "http://www.liferay.com/dtd/liferay-hook 6 2 0.dtd"			

⊳<hook>

<custom-jsp-dir>/custom</custom-jsp-dir>

⊖</hook>

We create the folder *custom* inside of *webapp*, and put into it /ROOT/html/portlet/login/ login.jsp:



We change *jsp* according to requirements:

```
<c:choose>
    <c:when test="<%= themeDisplay.isSignedIn() %>">
        String signedInAs = HtmlUtil.escape(user.getFullName());
        if (themeDisplay.isShowMyAccountIcon() && (themeDisplay.getURLMyAccount() != null)) {
            String myAccountURL = String.valueOf(themeDisplay.getURLMyAccount());
            if (PropsValues.DOCKBAR ADMINISTRATIVE LINKS SHOW IN POP UP) {
                signedInAs = "<a class=\"signed-in\" href=\"javascript:Liferay.Util.openWindow({</pre>
            3
            else {
                myAccountURL = HttpUtil.setParameter(myAccountURL, "controlPanelCategory", Portl
                signedInAs = "<a class=\"signed-in\" href=\"" + HtmlUtil.escape(myAccountURL) +</pre>
            3
        %>
        <hl>Welcome to AimProSoft!!!</hl>
        <%= LanguageUtil.format(pageContext, "you-are-signed-in-as-x", signedInAs, false) %>
    </c:when>
    <c:otherwise>
        <hl>Login to AimProSoft</hl>
        a
        String redirect = ParamUtil.getString(request, "redirect");
        String login = LoginUtil.getLogin(request, "login", company);
        String password = StringPool.BLANK;
        boolean rememberMe = ParamUtil.getBoolean(request, "rememberHe");
```

Then we delpoy the hook via *Maven* and check what we have as result:

Sign In	
Login to Air	nProSoft
Email Address	
test@liferay.com	
Password	
<mark>☞</mark> Remember Me	
Sign In	
🗗 OpenID 🛛 🖧 Create Account	Forgot Password

Chapter 7. More about Themes

Perform all more nicely...

In the fourth chapter we created our first Liferay-theme. Now we consider the themes development more detail.

Themes structure

After creating the theme we have the structure:

```
🗖 aimprosoft-theme (~/Work/Projects/LiferayBook/aimpr
  🔹 🗖 src
    🔻 🗖 main
       End resources
       🔻 💿 webapp
         CSS
         Images
         🔻 🗖 js
              📑 main.js
         🔻 🛅 templates
              ₽ init_custom.vm
              🄄 navigation.vm
              ₽ portal_normal.vm
              🛱 portal_pop_up.vm
              portlet.vm
         WEB-INF
              liferay-plugin-package.properties
              🗟 web.xml
🕨 🕨 🗖 🕨 🕨
    aimprosoft-theme.iml
    m pom.xml
hello-world (~/Work/Projects/LiferayBook/hello-world)
ROOT [liferay-webapp] (~/Work/Liferay/6.2-ce-ga3/Life
  I LiferayBook.iml
```

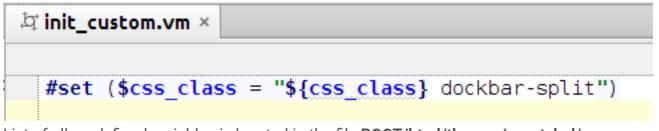
/css - css-files of the theme

/images - images, that are used in the theme

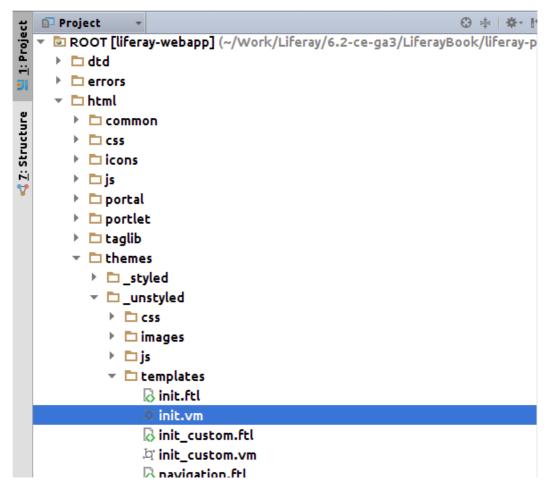
/js - js-files of the theme

/templates - folder with templates for theme consists of such files:

init_custom.vm - in this file custom velocity-variables are created, which then can be used in the theme template. Variables are specified via command #set (\$name = value). Usually a name of a variable begins with the sign '\$'. In the classic theme we see how the value of the variable \$css_class is changing:



List of all predefined variables is located in the file **ROOT/html/themes/_unstyled/** templates/init.vm:

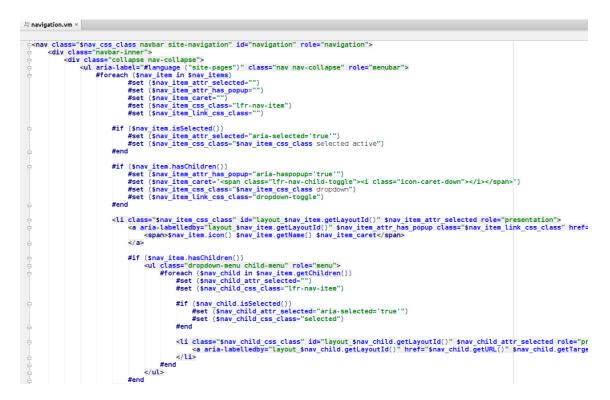


In this file we see the following:

```
석 init.vm ×
   ## ------ Common variables ----- ##
   #set ($theme_display = $themeDisplay)
#set ($portlet_display = $portletDisplay)
   #set ($theme_timestamp = $themeDisplay.getTheme().getTimestamp())
#set ($theme_settings = $themeDisplay.getThemeSettings())
   #set ($root_css_class = "aui " + $languageUtil.get($locale, "lang.dir"))
#set ($css_class = $htmlUtil.escape($theme_display.getColorScheme().getCssClass()) + " yui3-skin-sam")
   #set ($liferay_toggle_controls = $sessionClicks.get($request, "liferay_toggle_controls", "visible"))
 ⊨#if ($lavout)
         #set ($page group = $layout.getGroup())
 ė
         #if ($page_group.isStagingGroup())
        #set ($css_class = $css_class + " staging local-staging")
#elseif ($theme_display.isShowStagingIcon() && $page_group.hasStagingGroup())
#set ($css_class = $css_class + " live-view")
 ė
         #elseif ($theme_display.isShowStagingIcon() && $page_group.isStagedRemotely())
    #set ($css_class = $css_class + " staging remote-staging")
 Ġ
         #end
 ė
         #if ($page_group.isControlPanel())
               #set ($liferay_toggle_controls = "visible")
          #end
 . Å#end
```

All variables which are asserted in this file, you can use in your themes.

 navigation.vm - in this file is defined the template for menu of the navigation in the theme. In the classic theme has already been created the navigation for pages and subpages of first level.



It is possible to use this file as a basic for navigation development in our own themes.

• **portal_normal.vm** - in this file is created a template of the theme. If we open a template for classic theme, we will see that it has the following structure:



Dockbar is displayed above, then *wrapper* follows, consisting of header, content and footer. The logotype, site name and navigation are placed in the header (only for logged users). Breadcrumb and the portlets are displayed in the content. The standard caption **'Powered By Liferay'** is displayed in the footer.

- portal_pop_up.vm template for pop-up;
- portlet.vm template for portlet has such structure.

```
#set ($portlet display = $portletDisplay)
#set ($portlet_id = $htmlUtil.escapeAttribute($portlet_display.getId()))
#set ($portlet_title = $htmlUtil.escape($portlet_display.getTitle()))
#set ($portlet_back_url = $htmlUtil.escapeHREF($portlet_display.getURLBack()))
section class="portlet" id="portlet $portlet id">
     <header class="portlet-topper">
         <h1 class="portlet-title">
             $theme.portletIconPortlet() <span class="portlet-title-text">$portlet_title</span>
         </h1>
         <menu class="portlet-topper-toolbar" id="portlet-topper-toolbar $portlet id" type="toolbar">
             #if ($portlet_display.isShowBackIcon())
                  <a class="portlet-icon-back" href="$portlet_back_url">#language ("return-to-full-page")</a>
             #else
                  $theme.portletIconOptions()
             #end
         </menu>
     </header>
     <div class="portlet-content">
         $portlet_display.writeContent($writer)
     </div>
</section>
```

Portlets are displayed on the portal page according to this template.

/WEB-INF - folder with the configuration files

- liferay-plugin-package.properties description properties of the theme;
- web.xml deployment descriptor.

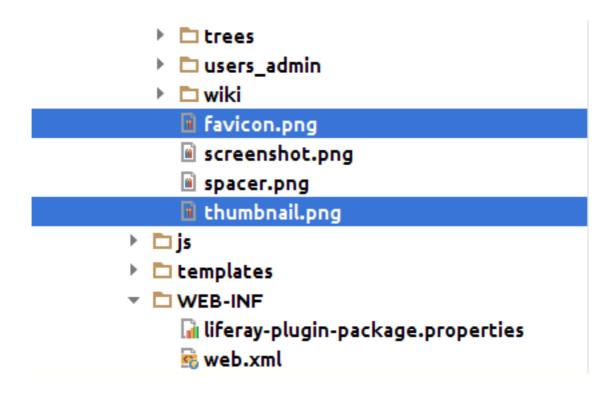
Creating own theme

After getting acquainted with theme structure, we create own theme **'aimprosoft-theme'** on basis of classic theme:

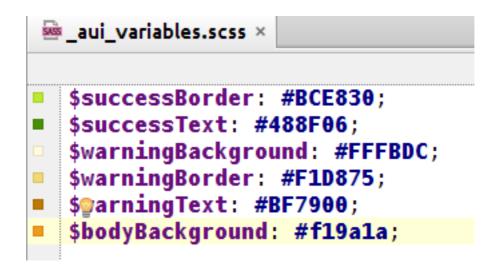
1) Change standard inscription 'Powered By Liferay' to 'Powered By

AimProSoft' in portal_normal.vm

2) Replace *favicon.png* and *thumbnail.png* files on logotype of our theme:



3) Change the color of the background. To do it, add the variable *\$bodyBackground: #f19a1a;* in the file css/_aui_variables.css:

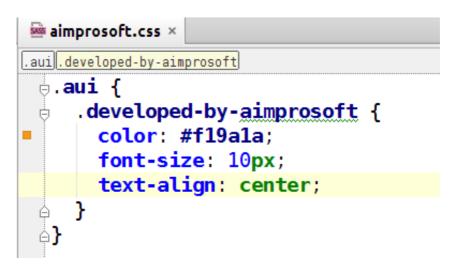


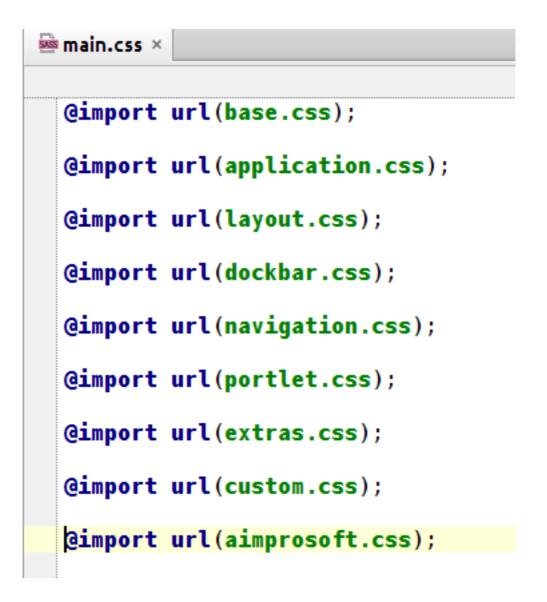
4) We do so that the inscription '**Developed by AimProSoft'** will be displayed in each portlet. To do that, we change the file *templates/portlet.vm*:

년 portl	et.vm ×
section#p	portlet \$portlet id.portlet <mark>div.portlet-content</mark>
l 👳	<menu class="portlet-topper-toolbar" href="\$portlet_back_url" id="portlet-topper-toolbar_\$portlet</th></tr><tr><td>U de la companya de l</td><td><pre>#if (\$portlet_display.isShowBackIcon())</pre></td></tr><tr><th></th><th>#language</menu>
U U	#else
	<pre>\$theme.portletIcon0ptions()</pre>
ļ ļ	#end
A A	
	
e la	<div class="portlet-content"></div>
	<pre>\$portlet_display.writeContent(\$writer)</pre>
e	<pre><h2 class="developed-by-aimprosoft">Developed by AimProSoft</h2></pre>
φ	
_ <td>ection></td>	ection>

5) Assign our own styles for the theme.

Add the new file *aimprosoft.css*:





Deploy the theme and look what is the result:

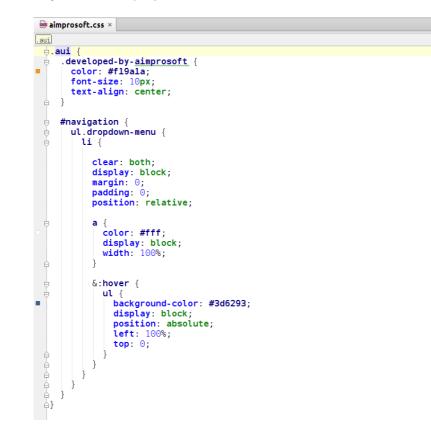
∠aimpro soft AimProSoft			
Home Wiki			
AimProSoft / Home			
Language			۰
		Developed by AimProSoft	
Sign In	0	Helio-AimProSoft 🌼	
Welocome to AimProSoft! You are signed in as Test Test.		Hallo-AimProSoft. Developed by AimProSoft	Welcome to Liferay Portal Community Edition 6.2 CE GA3 (Newton / Build 6202 / January 15, 2015). Developed by AlmProSoft
Developed by AlmPredict			Powered By MiniPostial

Changing navigation

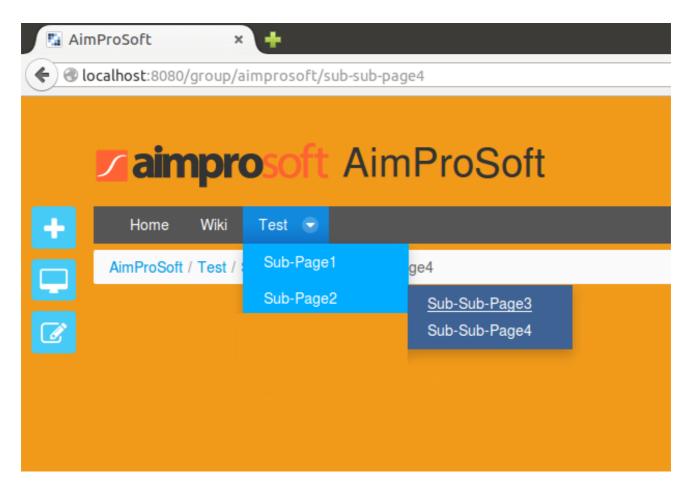
In the classic theme the navigation displays the pages and subpages of the first level. We do so, that the subpages of the second level will be dispalyed in the our theme. To do that, edit the file *navigation.vm* and add there the nested iteration for passing the subpages of the second level (similarly the iteration for passing the subpages of the first level):

.¤ navig	gation.vm ×
foreachli	flforeach
ė	<l< th=""></l<>
ě	<pre>#foreach (\$nav child in \$nav item.getChildren())</pre>
Ť	#set (\$nav_child_attr_selected="")
	#set (\$nav child css class="lfr-nav-item")
¢	<pre>#if (\$nav_child.isSelected())</pre>
	#set (\$nav_child_attr_selected="aria-selected='true'")
	<pre>#set (\$nav_child_css_class="selected")</pre>
<u>A</u>	#end
7	<pre><li \$nav_child_attr_selected="" class="\$nav_child_css_class" id="layout_\$nav_child.getLayoutId()" role="presentation"></pre>
	<pre><a aria-tabetteupy="tayout_shav_chitu.gettayouttu()" hret="shav_chitu.gettatgett)" rote="menuitem" shav_chitu.gettatgett)="">shav_chitu.gettatgett)</pre>
[m	#if (\$nav child.hasChildren())
Ŭ.	<pre></pre> (dlclass="dropdown-menu child-menu" role="menu">
Ă	<pre>#foreach (\$nav sub child in \$nav child.getChildren())</pre>
Ť	<pre>#set (\$nav sub child attr selected="")</pre>
	#set (\$nav sub child css class="lfr-nav-item")
	<pre>#if (\$nav sub child.isSelected())</pre>
	<pre>#set (\$nav_sub_child_attr_selected="aria-selected='true'")</pre>
	<pre>#set (\$nav_sub_child_css_class="selected")</pre>
ė.	#end
ė.	<pre>class="\$nav_sub_child_css_class" id="layout_\$nav_sub_child.getLayoutId()" \$nav_sub_child_attr_selected role="presentation"></pre>
₽	<pre><a <="" aria-labelledby="layout_\$nav_sub_child.getLayoutId()" href="\$nav_sub_child.getURL()" pre=""></pre>
<u>A</u>	<pre>\$nav_sub_child.getTarget() role="menuitem">\$nav_sub_child.getName()</pre>
9	
	#end
붓	s/us/
	FCIU
Å	
Â	#end
Ā	

Add also the css-styles for subpages of the second level:



Add some pages/subpages and see what we have as a result:



Embedding the portlets into the theme

The portlets can be added to a page in a conventional manner, or can be embedded into a theme. In this case, the portlet will be displayed on the pages of such theme by default.

The portlet is embedded into the theme via the command:

\$theme.runtime("PORTLET_ID"),

where *PORTLET_ID* – is **id** of the necessary portlet.

We add to our theme the *Language* portlet to be able to change the language (do it in *portal_normal.vm*):



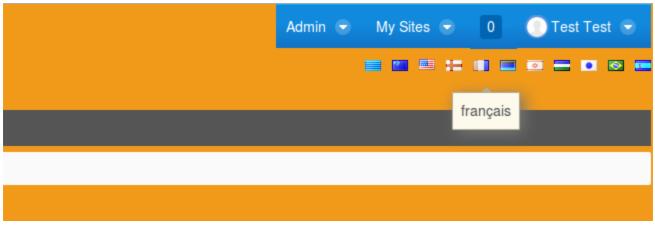
If we recompiling the theme, we will see that the *Language* portlet will be added to the header of the theme (but will be displayed with the title/borders and it is not beautifully). To fix this, remove the **portletSetupShowBorders** via **\$velocityPortletPreferences**:

```
<div class="aimprosoft-language-portlet">
    $velocityPortletPreferences.setValue("portletSetupShowBorders", "false")
    $theme.runtime("82", "", $velocityPortletPreferences.toString())
    $velocityPortletPreferences.reset()
</div>
```

Also assign the styles for this portlet:

<pre>.aui o.aui { .aimprosoft-language-portlet { display: inline-block;</pre>
<pre>.aimprosoft-language-portlet {</pre>
<pre>float: right; div { .portlet-borderless-container { min-height: auto; padding: 0; .portlet-borderless-bar { display: none; } }</pre>

After redeploying of the theme we will see that *Language* portlet is displayed normally on the right in the header:



Now on the pages of our theme we can easily change the language.

Similarly to this, you can add any other portlet. **ID** of required portlet can be defined in the interface *com.liferay.portal.util.PortletKeys*:

Ġ PortletKeys.java 🗵

```
package com.liferay.portal.util;
.
⊡/**
  * @author Brian Wing Shun Chan
白*/
 public class PortletKeys {
     public static final String ACTIVITIES = "116";
     public static final String ADMIN = "9";
     public static final String ADMIN_INSTANCE = "135";
     public static final String ADMIN_PLUGINS = "136";
     public static final String ADMIN_SERVER = "137";
     public static final String ALERTS = "83";
     public static final String ANNOUNCEMENTS = "84";
     public static final String ASSET_BROWSER = "172";
     public static final String ASSET_CATEGORIES_NAVIGATION = "122";
     public static final String ASSET_PUBLISHER = "101";
     public static final String ASSET_TAGS_NAVIGATION = "141";
     public static final String BACKGROUND TASK = "189";
     public static final String BLOGS = "33";
```

Using VELOCITY-macros

Now we consider the use of velocity-macros in the template of a theme.

What is the VELOCITY-macro?

Velocity-macro admits the creation of the iterative fragment of the template, that then can be reused. Also, it can take one or more parameters that can be used in this fragment of the template. Macro in *Velocity* is created by using the command:

#macro(macros_name param1 ... paramN)
MACROS_BODY
#end
Then it can be called as:
#macros_name(arg1 ... argN)
The parameters (and, accordingly, the arguments) can be absent.

How velocity-macros are used in Liferay?

During the development the template of the theme we have already used the macros that was created in *Liferay* by default, for example:

```
1) dockbar:
```

```
$theme.include($body_top_include)
#dockbar()
><div class="container-fluid" id="wrapper">
```

2) breadcrumb:

```
<div id="content">
        <nav id="breadcrumbs">#breadcrumbs()</nav>
```

These macros have been declared in the file /ROOT/WEB-INF/lib/portal-impl.jar!/ VM_liferay.vm:

```
¤ã VM_liferay.vm ×
macro 'dockbar'
#macro (breadcrumbs $control_panel)
     #set ($breadcrumb tag = $theme.getBreadcrumbTag())
     #if ($control panel == "control panel")
          $breadcrumb tag.setShowGuestGroup(false)
          $breadcrumb_tag.setShowParentGroups(false)
     #end
     $breadcrumb_tag.runTag()
 #end
 #macro (dockbar)
     $theme.runtime("145")
 #end
#macro (silently $foo)
     #set ($foo = $foo)
a#end
```

and can be used during the theme development.

Development of the own velocity-macro

Earlier in this chapter we added to this theme *Language* portlet. Now we do it with the help of the velocity-macro.

```
#* Navigation Macro *#
 #macro(navigation_macro $nav_elem)
       #set ($nav_elem_attr_selected="")
      #set ($nav_elem_css_class="lfr-nav-item")
       #if ($nav_elem.isSelected())
            #set ($nav_elem_attr_selected="aria-selected='true'")
            #set ($nav_elem_css_class="selected")
       #end
       <li class="$nav_elem_css_class" id="layout_$nav_elem.getLayoutId()"
            $nav_elem_attr_selected role="presentation">
            shar_ctem_attr_setected rote= presentation >
<a aria-labelledby="layout_$nav_elem.getLayoutId()" href="$nav_elem.getURL()"
    $nav_elem.getTarget() role="menuitem">$nav_elem.getName()</a>
#if ($nav_elem.hasChildren())

            <lass="dropdown-menu child-menu" role="menu">

                       #foreach ($nav_elem_child in $nav_elem.getChildren())
                             #navigation_macro($nav_elem_child)
                       #end
                  #end
       ⊖#end
```

þ porta	l_normal.vm ×
language	portlet
ė	<pre><div id="heading"></div></pre>
ė.	<hl><hl>class="site-title"></hl></hl>
	<pre><a class="\$logo_css_class" go-to-x"<="" href="\$site_default_url" site-name"="" th="" title="#language_format ("></pre>
A A	 #end
	<pre>#language_portlet()</pre>
ė.	

We take out the code for displaying *Language* portlet into separate macro (call it *'language_portlet'*) in *init_custom.vm*:

Now we can use the created macro in the template of the theme:

As we can see, after creating macro for *Language* portlet, we can use it just as well as *#dockbar ()* or *#breadcrumbs ()*. It reduces code of theme template and admits reuse it.

More elaborate Velocity-macro

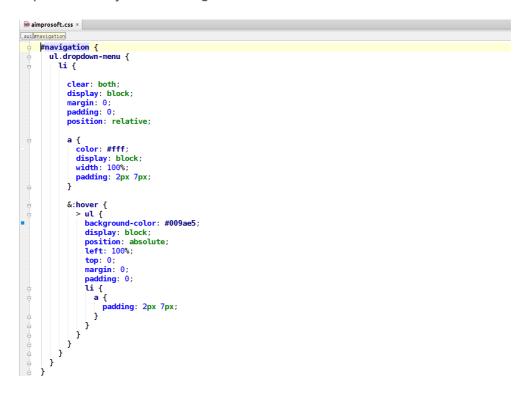
Now we develop more elaborate Velocity-macro. Earlier in this chapter we have changed the navigation menu in the theme so that it displays the pages of second level. We did this by using a nested cycle. But suppose that it will need to display the pages of the third, fourth level, etc. Then we have to write a nested cycle for each level of nesting. Not to do so, it is possible to use a recursion. Similarly to the recursion on **jsp**, it is possible to develop a velocity-macro, that will take the current page as a parameter, display the current level of the drop-down menu, and call itself for each of the subpages. Thus, the macro will call itself and display the next level of the menu as long as the subpages will be there. Add the macro for the navigation in *init_custom.vm*:

As we can see, the macro takes the parameter *\$nav_elem* and calls itself for each of *\$nav_elem_child*.

Now we use this macro in the navigation:



Also, we fix up the css-styles for navigation:



Add subpages of the several levels of nesting:

Site Pages®

Your request completed successfully.	
Public Pages Private Pages	
- Private Pages	+ Add Child Page
🗅 Home	
Software Development	Details
- 🗅 Liferay Development	Name (Required)
Themes Development	
Portlets Development	Liferay Customization
– 🗋 Liferay Customization	
🗅 Hooks	
EXT Plugins	Hide from Navigation Menu
Other customization	
Alfresco Development	Friendly URL 🥬
Mobile Development	http://localhost:8080/group/aimprosoft /liferay-customization
Portfolio	
Testimonials	

And look at the result:

aimprosoft AimProSoft						
Home	Services - Portfo	olio Testimonials				
AimProSoft	Software Development Liferay Development Alfresco Development	Themes Development Portlets Development				
	Mobile Development	Liferay Customization	Hooks <u>EXT Plugins</u> Other customization			

As we can see, with the help of the developed macro the submenu is displayed for any level of nesting pages.

Using Liferay-services in theme

Now we consider the use of Liferay-services in a theme.

What is Liferay-services?

Liferay-services – classes that allow to work with liferay models (create, retrieve from the database, save, etc.). For each **[Entity] model** in Liferay its own **[Entity] Service** was created. Liferay-services can be used in your theme by using the service locator:

```
#set($myService = $serviceLocator.findService("[Entity]Service"))
```

After obtaining the service by such way, it is possible to call its methods for receiving the required values in the theme. For example, we can obtain the service for users and for the layout in the following manner:

##User Service
#set(\$userLocalService = \$serviceLocator.findService("com.liferay.portal.service.UserLocalService"))
##Layout Service
#set(\$userLocalService = \$serviceLocator.findService("com.liferay.portal.service.LayoutLocalService"))
In Liferay the services can be local and remote. Local services:

- · Classes com.liferay.portal.service.[Entity]LocalService;
- Do not contain the checking of permissions before calling.

Remote services:

- · Classes com.liferay.portal.service.[Entity]Service;
- Before the call, they check permissions, and put the **PrincipalException** if the user does not have enough permissions for method calling.

It is better to use **local services** for avoiding the appearance of **PrincipalException**.

Example of Liferay-services

We will do it so that the page '/administration' will be displayed in the navigation only for users of 'Aim ProSoft' organization, which have there the role 'AimproSoft Admin'. To do this, we will connect the necessary services in init_custom.vm:

##Services
#set(\$organizationLocalService = \$serviceLocator.findService("com.liferay.portal.service.OrganizationLocalService"))
#set(\$userGroupRoleLocalService = \$serviceLocator.findService("com.liferay.portal.service.UserGroupRoleLocalService"))

Using these services, we will define, whether the current user has the role "AimProSoft

Admin" in the "AimProSoft" organization.

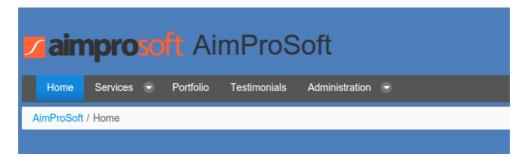
In navigation.vm for checking we use the variable \$isAimAdmin that was declared

in init_custom.vm.

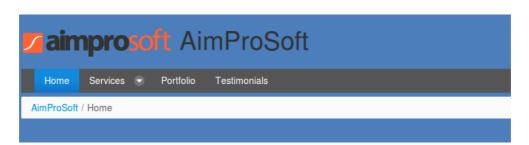
```
#foreach ($nav_item in $nav_items)
   #set($friendlyUrl = $nav_item.layout.friendlyURL) #* Get friendlyUrl of current $nav_item
                                                                                                    *#
                                                      #* Set 'showPage' as true by default
   #set($showPage = true)
                                                                                                    *#
   #if ($friendlyUrl == "/administration")
                                                      #* Check if friendlyUrl is '/administration' *#
       #set($showPage = $isAimAdmin)
                                                      #* Show '/administration' for AimAdmin only *#
   #end
   #if ($showPage == true)
        #set ($nav_item_attr_selected="")
        #set ($nav item attr has popup="")
        #set ($nav_item_caret="")
        #set ($nav_item_css_class="lfr-nav-item")
        #set ($nav item link css class="")
```

Here the checking isAimAdmin for the page '/administration' is executed. That is, only

users with the role 'Aim ProSoft Admin' will be able to see this page. After deployment we see that 'AimProSoft Admin' can see the page 'Administration',



but a user without this role - can not.



(**P.S.** The same functional can be realized via display of the permissions on the page; here it was so done for demonstration of capabilities of using the services in the theme).

Using the custom attributes

Custom attribute can be gained in the topic via expandoBridge:

\$entity.getExpandoBridge().getAttribute("[ATTR_NAME]"),

where **\$entity** - an entity, of it attribute we should receive (it can be user, organization, page, etc.), **"[ATTR_NAME]**" - the attribute name.

For the page we create custom attribute **"bgColor"** (for setting the page color in the navigation menu):

Bigs EndyCellBokmarks EndyCellBokmarks FolderCellCalendar EventCellColorents FolderCellDocuments FolderCellDocuments FolderCellCalendar Seage Boards AlessageCellChange Boards MessageCellCalendar Seage Boards MessageCel	Portal Settings	Custom Fields	Server Administration	Portal Instances	Workflow
Key @ bgColor Type @ Text Field - Indexed	A Page New	Custom Field			
bgColor Type Text Field - Indexed Szve Cancel Base for Marcel Color Field For Sing Cancel State for Marcel Color Field Construct Cancel Construct Cancel State for Marcel Color Field Construct Cancel State for Marcel	V Faye. New	Oustoff Field			
Type Image: Save state sta	Key 💷				
Text Field - Indexed	bgColor				
Save Cancel Rescree Cutom Fedds & Bogs Entry @ Edd & Bockmarks Entry @ Edd © Document Folder @ Edd © Document Folder @ Edd © Document Folder @ Edd © Massage Boards Entry @ Edd @ Massage @ Edd @ Document Stelar @ Edd @ Massage @ E	Туре 🥬				
Resource Custom Fields Image: State Sta	Text Field - Indexed	d 🗾			
Resource Custom Fields Image: State Sta					
Blags EntryCellBlags EntryCellBokmarks EndreCellBokmarks FolderCellCalendar EventCellO courentsCellO courents FolderCellDocuments FolderCellCalendar Seage Boards AlessageCellCalendar EventCellCalendar EventSeage Boards AlessageCalendar EventSeageCalendar Event	Save Cancel				
Bokmarks Entry Image: Constraint of the second	Resource			Custom Fields	
ProductProductProductBokmarks FolderSchellSchellCalculate KenderSchellSchellCounents FolderSchellSchellDocuments FolderSchellSchellMessage Boards CatagorySchellSchellMessage Boards MessageSchell<	Blogs Entry				📓 Edit
Colument Colum	The Bookmarks Entry				🛃 Edit
CommentCommentDocuments FolderCDocuments FolderCMessage Boards CategoryCMessage Boards MessageCMessage Boards MessageC	Bookmarks Folder				🛃 Edit
Documents Folder Image: Boards Category	Calendar Event				🛃 Edit
Assage Boards Category Image Boards Category Image Boards Category Image Boards Category Image Boards Image Boards <td>@ Document</td> <td></td> <td></td> <td></td> <td>🛃 Edit</td>	@ Document				🛃 Edit
Page Image: Constraint of the second of th	Documents Folder				🛃 Edit
A organizationSectorSe organizationBecolorSectorSectorBecolorSector	Message Boards Category				🛃 Edit
PageBgcolrSgcolrC RoleCSg CddC StateCSg Cdd	P Message Boards Message				🛃 Edit
Image: Content Aricle Image: Content Aricle Image: Content Aricle Image: Content Aricle	Maganization				📓 Edit
Stee Image: Comparison of the stee o	Page			Bgcolor	🛃 Edit
User Group Image: Content Article	L Role				🛃 Edit
User Group Image: Content Article Image: Web Content Article Image: Content Article	🗐 Site				📝 Edit
Web Content Article	L User				
Web Content Article	🐯 User Group				📝 Edit
The Wiki Page	Web Content Article				🖉 Edit
	🗅 Wiki Page				🛃 Edit

Now, in the **'Manage Pages'** we can specify the value of a custom attribute for the different pages:

Site Pages®		JU SHALES OF LITER
Public Pages Private Pages		
– 🗅 Private Pages 🗅 Home	+ Add Child Page	
– 🗅 Services		
Software Development	Custom Fields	Details
+ 🗅 Liferay Development		SEO
Alfresco Development	Bgcolor	Look and Feel
Mobile Development	#00a200	JavaScript
Portfolio		Custom Fields (Modified)
Testimonials		
– 🗅 Administration		Advanced
🗅 HR		Mobile Device Rules
Bookkeeping		Customization Settings
		Save Cancel

Then, we change the navigation using a custom attribute for the background color:

			n Macro *# ation_macro \$nav_elem)
	#set	(\$n	av_elem_attr_selected="") av_elem_css_class="lfr-nav-item")
Þ	#	≠set	v_elem.isSelected()) (\$nav_elem_attr_selected="aria-selected='true'") (\$nav_elem_css_class="selected")
	#set ((\$ bg)	Color = \$nav_elem.layout.getExpandoBridge().getAttribute("bgColor"))
Þ			s="\$nav_elem_css_class" style="background-color: \$bgColor" id="layout_\$nav_elem. _elem_attr_selected_role="presentation">
Ģ			ria-labelledby="layout_\$nav_elem.getLayoutId()" href="\$nav_elem.getURL()"
Å			<pre>\$nav_elem.getTarget() role="menuitem">\$nav_elem.getName()</pre>
	#		(\$nav_elem.hasChildren())
¢			<ul class="dropdown-menu child-menu" role="menu">
Þ			<pre>#foreach (\$nav_elem_child in \$nav_elem.getChildren()) #navigation_macro(\$nav_elem_child)</pre>
ė.			#end
ė.			
白		tend/	
θ.,		>	
	na		

After that we will get an multicolored menu:

aimprosoft AimProSoft						
Home	Services Portfo	olio Testimonials				
AimProSoft	Software Development					
	Liferay Development	Themes Development				
	Alfresco Development	Portlets Development				
	Mobile Development	Liferay Customization	Hooks			
			EXT Plugins			
			Other customization			

Chapter 8. Color Schemes

Add the colors...

What is the color schemes?

Color Scheme - is one of the variants of Liferay-theme (that has its proper colors, styles, borders, etc.). For the same theme the several color schemes can be developed.

Color schemes for CLASSIC theme

Color schemes for theme are specified in the file **liferay-look-and-feel.xml**. For classic theme we see the following:

🖻 liferay-look-and-feel.xml ×	
xml version="1.0"?	
<pre><!DOCTYPE look-and-feel PUBLIC "-//Liferay//DTD Look and Feel 6.2.0//EN" "http://www.liferay.com/dtd/liferay-look</pre> </pre>	ok - ar
<pre><look-and-feel></look-and-feel></pre>	
<pre><compatibility></compatibility></pre>	
<version>6.2.0+</version>	
<pre></pre>	
<pre><company-limit></company-limit></pre>	
<company-includes></company-includes>	
<company-excludes></company-excludes>	
<pre><theme id="classic" name="Classic"></theme></pre>	
<root-path>/html/themes/classic</root-path>	
<templates-path>\${root-path/templates</templates-path>	
<images-path>\${root-path}/images/images-path></images-path>	
<pre><template-extension>vm</template-extension> < <settings></settings></pre>	
<pre><setlings> <setling configurable="true" key="bullet-style" options="dots, arrows" type="select" value="dots"></setling></setlings></pre>	
<pre><setling ,="" ,<="" configurable="true" key="putlet-setup-show-borders-default" td="" true"="" type="true" value="true"><td></td></setling></pre>	
<pre><setting '="" configurable="false" key="show-site-name-default" value="true"></setting></pre>	//
<pre><setting configurable="false" key="show-site-name-supported" value="true"></setting></pre>	
<pre>settings </pre>	
a <roles></roles>	
<pre><role-name>User</role-name></pre>	
<pre></pre>	
<pre><code of="" set="" set<="" td="" the=""><td></td></code></pre>	
<color-scheme-images-path>s{images-path}/color schemes/\${css-class}</color-scheme-images-path>	
<pre><color-scheme id="02" name="Dark"></color-scheme></pre>	
<css-class>dark</css-class>	
<color-scheme id="03" name="Light"></color-scheme>	
<css-class>light</css-class>	
<pre></pre>	

As we see, for theme **'classic'** were created three color schemes: **Default**, **Dark** and **Light**. When we go to '*Look and Feel*' and select '*Classic*'theme, we will see, that three color schemes are available for this theme:



<complex-block></complex-block>	
Description Portlets, themes, and layout templates included with Liferay Portal. Author Liferay, Inc.	
Color Schemes (3)	
<complex-block></complex-block>	
<complex-block></complex-block>	
<complex-block></complex-block>	

Applying the different color schemes for **classic** theme, we will get the different styles for theme.

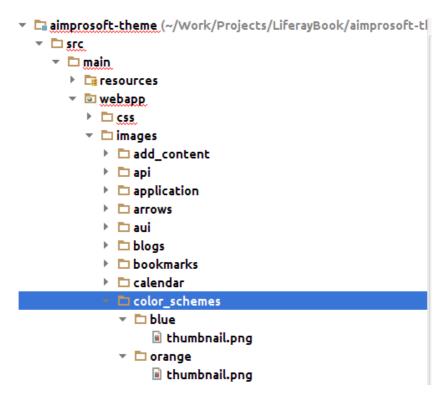
Creating our own COLOR SCHEMES

For created theme **'aimprosoft-theme'** we will create two color schemes: **orange** and **blue**. We create the file liferay-look-and-feel.xml (on basis of **classic** scheme):



Here we described two color schemes for **aimprosoft-theme**, indicating for each of them css-class and basic path to images.

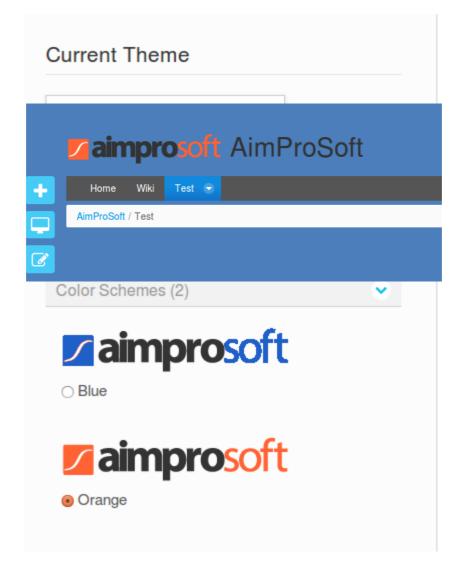
In the folder *aimprosoft-theme/src/main/webapp/images/color_schemes* we will create the folders for each of color schemes. We will deposit the file **thumbnail.png** in each of these folders.



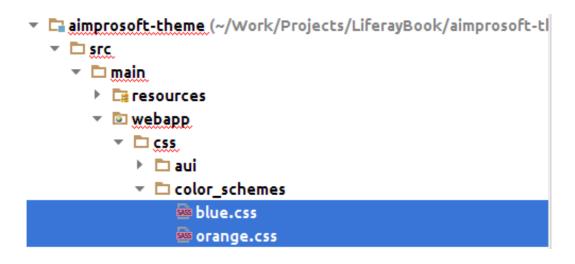
After recompiling of the theme we will see that the two color schemes became available



for "aimprosoft-theme":



Now we specify the styles for color schemes. We create the files css/color_schemes/ blue.css and css/color_schemes/orange.css:



and specify various colors of background:

Similarly we can specify another styles inside of classes **.blue** and **.orange**. We apply the created color schemes and check the result.

- 1) Blue Color Scheme
- 2) Orange Color Scheme

