



LIFERAY QUICKSTART GUIDE

By Tapan Avasthi

Introduction of Liferay Portal

- Liferay Portal is one of the most popular JAVA based portal framework in current market. Liferay portal is open source and easily customizable by end users. Liferay Portal provides 60 out of box portlets with drag-and-drop functionalities. Liferay portal is easily to coupled with your application server as well in your current environment. Liferay portal provides easy coupling facility to engage with any enterprise application such as CMS, Workflow, ESB , SOA etc. Over the past decade Liferay is one of the good portal in horizontal platform.

- Liferay supported below JSR Standards for portlet creation. JSR -168, JSR -286 , JSR – 127 , JSR – 170 , JSR – 208 , AJAX based Portlet, Spring Portlet, Rich Faces Portlet. Liferay portal allows to create personalized pages for all users. Liferay support the flexible user interface and ready to integration with any platform. Liferay in portal which allows the all kind of portal creation whether it is B2B, B2C, E-Commerce, etc. Liferay delivers the content based on the identity. Liferay allow to create application in any language. Liferay provides open API through it allow and ready integrate with any other application.

- We will walk through the steps of implementing Liferay for Business Portal with mostly out of box applications for which Liferay Portal used. Let's get started with Liferay Installation.

■ Liferay Installation

- A prerequisite installation for quickly Liferay up and running in your system as below.

■ Install Java

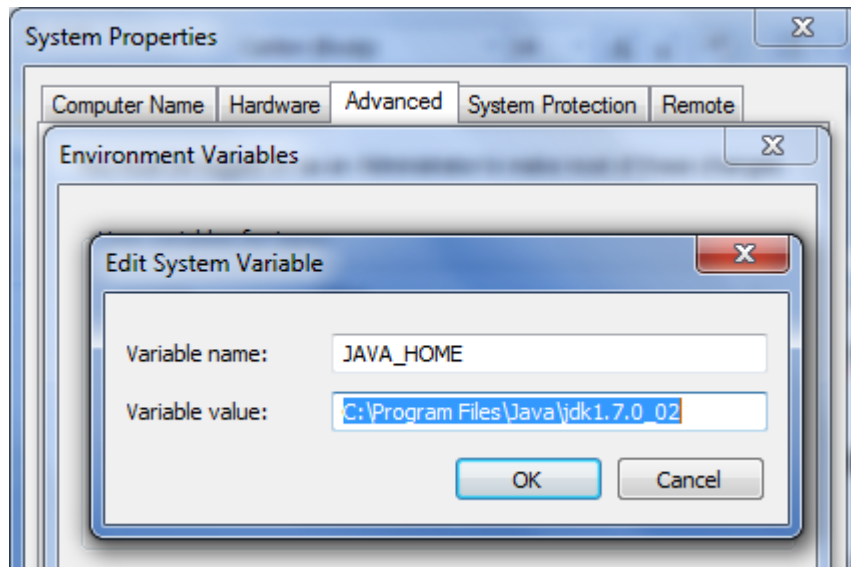
- Java is a programming language and free computing platform. Java is a programming language expressly designed for use in the distributed environment of the Internet. Basically, whole Liferay portal based on JDK environment. Use the JDK version 6.0 or latest JDK version for using Liferay portal in your system.

- If you are using Linux flavor or Mac OS then it can be provided by service vendor itself in installation package. If you are using Windows operating system then you may download install Java in your environment manually.

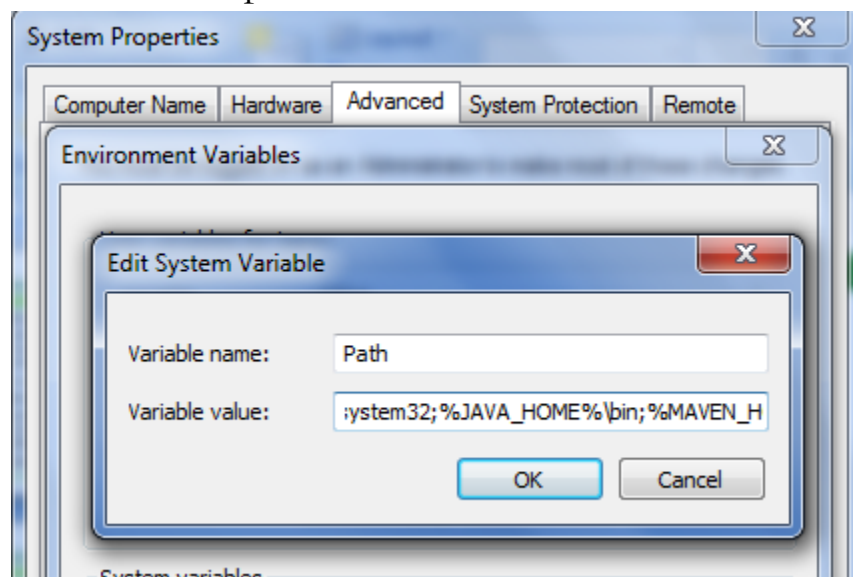
- Download latest version of Java from

<http://www.oracle.com/technetwork/java/javase/downloads/jdk7-downloads-1880260.html> and choose the package according your environment bit operating system. Afterwards, set JAVA_HOME in your system environment variable as below:

- Go to Control Panel\All Control Panel Items\System and click on Advanced system settings.
- Then click on Environment Variable button Advanced tab.

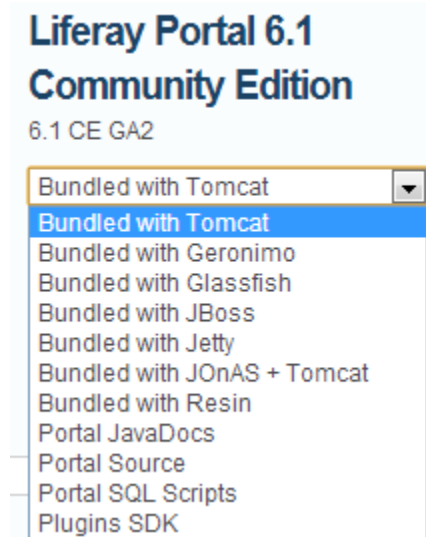



- Then add JAVA_HOME in path variable also as below.



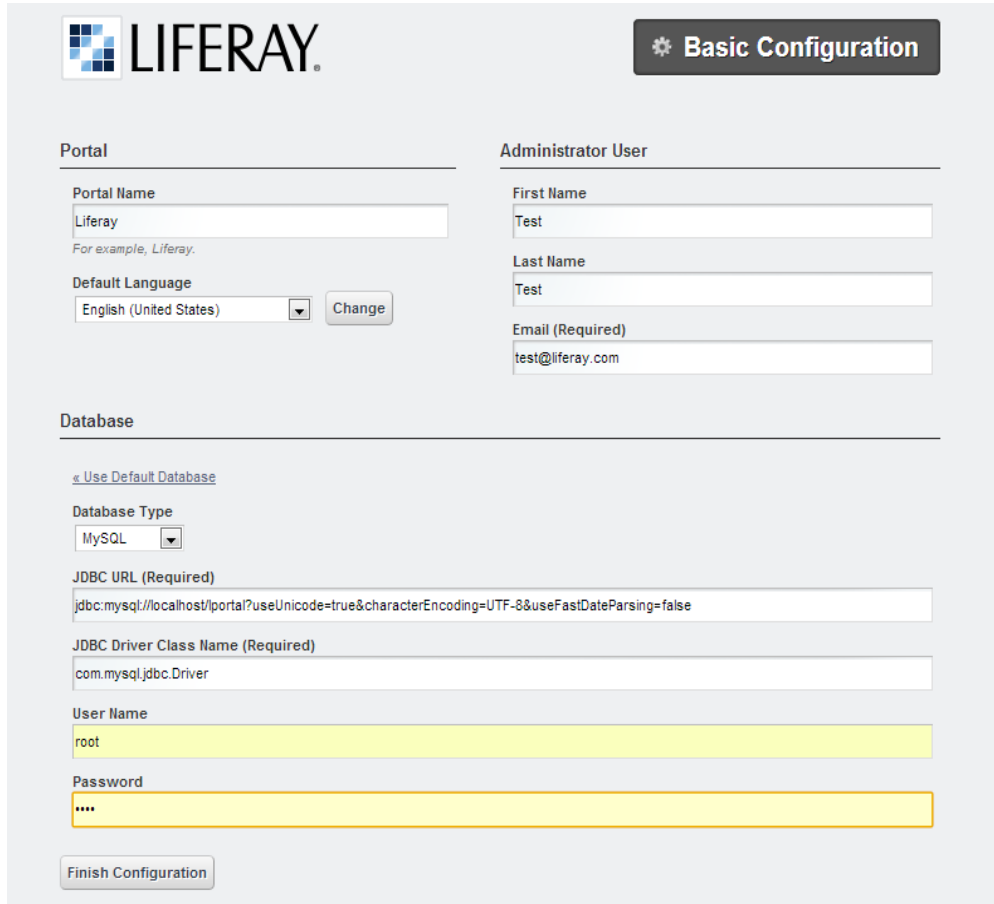
- Once your Java path set, now you are ready to install Liferay portal in your operating system.
- Go to <http://www.liferay.com/downloads/liferay-portal/available-releases> .

- Basically, Liferay CE portal comes with various application server as bundle.



- If you are new in Liferay then it is recommended to install Liferay portal with bundle with Apache Tomcat application server.
- Select **Bundled with Tomcat** from drop down menu and click on  button.
- Once, it's downloaded in your system just unzip it.
- It contains following folder
 - Data
 - Deploy
 - License
 - Tomcat application server folder.
- Go to /Tomcat_VERSION/bin directory and click on **startup.bat** (For Windows) or execute **sh startup.sh start** (For Linux).
- Liferay will start and create a new, blank hypersonic database automatically.
- To see your Liferay portal in browser, open browser and type the following address in to address box:
 - <http://localhost:8080/>

- You will be able to see Liferay Basic Configuration page.



LIFERAY Basic Configuration

Portal

Portal Name
Liferay
For example, Liferay.

Default Language
English (United States) Change

Administrator User

First Name
Test

Last Name
Test

Email (Required)
test@liferay.com

Database

[« Use Default Database](#)

Database Type
MySQL

JDBC URL (Required)
jdbc:mysql://localhost/portal?useUnicode=true&characterEncoding=UTF-8&useFastDateParsing=false

JDBC Driver Class Name (Required)
com.mysql.jdbc.Driver

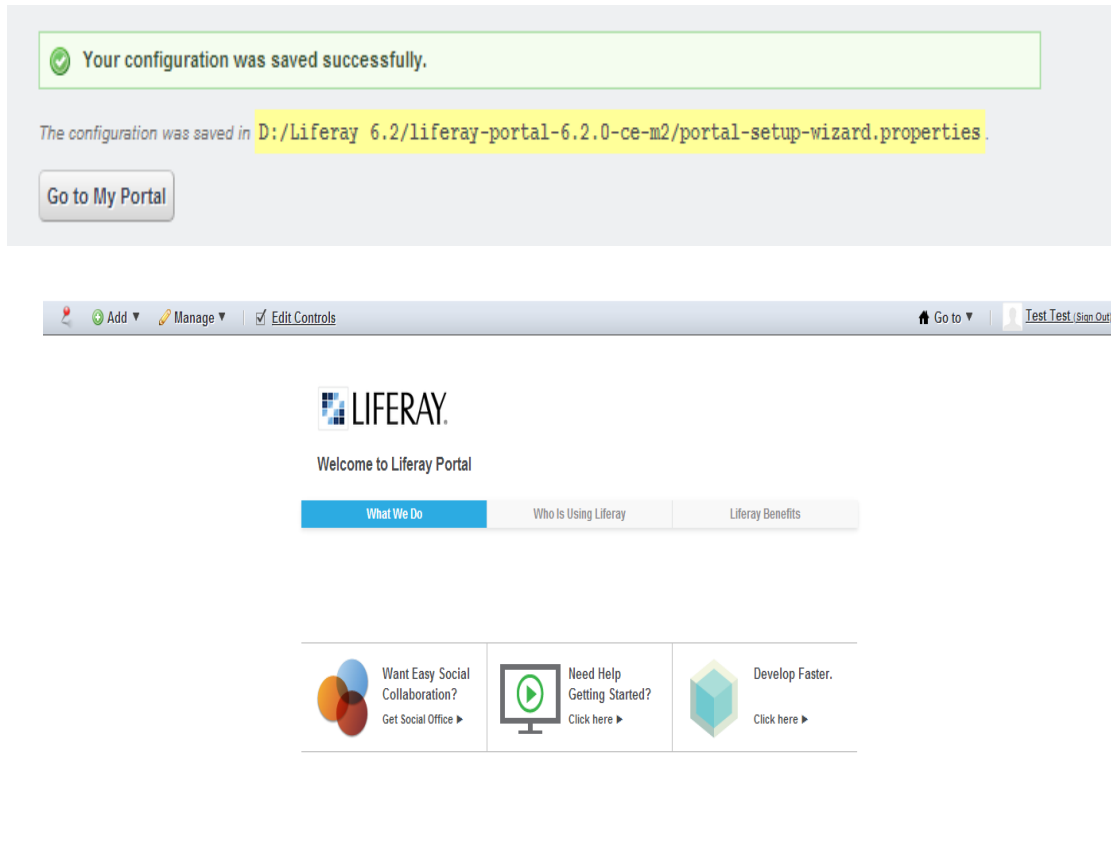
User Name
root

Password
....

Finish Configuration

- In real time portal usage, set database configuration with any database.
- Here, we communicate our Liferay portal with MySQL database with above configuration detail.
- Now, click on Finish Configuration button.
- Now, Liferay is being installed with necessary table creation for out of box portlet.

- In Liferay 6.x, your configuration detail stored at one particular file with named portal-setup-wizard.properties .
- Now, click on Go to My Portal button.



- Congratulations! You have installed Liferay portal with database connectivity.

Introduction of Liferay Portal Administration

- The Enterprise Admin portlet is used for managing the most of administration tasks.

- Admin portlet has an interface for the creation and maintenance of

- Users
- Organizations
- User Groups
- Roles

- It also allows you to configure many server settings such as Information about the site. Authentication options, including Single Sign-On and LDAP integration, Default User Associations, etc. The Enterprise Admin portlet also has a convenient interface to the plugin installer.

- **User Management**

- Go to Control Panel-> Portal -> Users and Organizations
- Click on Add User
- Enter your details and click on Save

Browse View Organizations View Users Add Export Users

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« Back

Details

Screen Name (Required)
tapan

Email Address (Required)
tapan.avasthi@attuneinfocc

Title
Mr.

First Name (Required)
Tapan

Middle Name
R

Last Name
Avasthi

Suffix
Sr.

User ID
11028

Birthdate
July 16 1986

Gender
Male

Job Title
Portal / ECM Consultant

[Change](#)

User Information

Details

[Password](#)

[Organizations](#)

[Sites](#)

[User Groups](#)

[Roles](#)

[Personal site](#)

[Categorization](#)

Identification

[Addresses](#)

[Phone Numbers](#)

[Additional Email Addresses](#)

[Websites](#)

[Instant Messenger](#)

[Social Network](#)

[SMS](#)

[OpenID](#)

Miscellaneous

[Announcements](#)

[Display Settings](#)

[Comments](#)

[Custom Fields](#)

[Save](#) [Cancel](#)

- Now, click on Password tab and set your one time password for first time login in Liferay Portal

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Password

New Password

Enter Again

☒ Password Reset Required

User Information

[Details](#)

Password (Modified)

[Organizations](#)

[Sites](#)

[User Groups](#)












Quick Tour of Liferay User Interface

▪ Liferay portal is easy to use and Liferay introduce the drag-and-drop application features. All application can easily maximize, minimize and remove from page with single click. All application's look and feel, layout and theme easily can change.

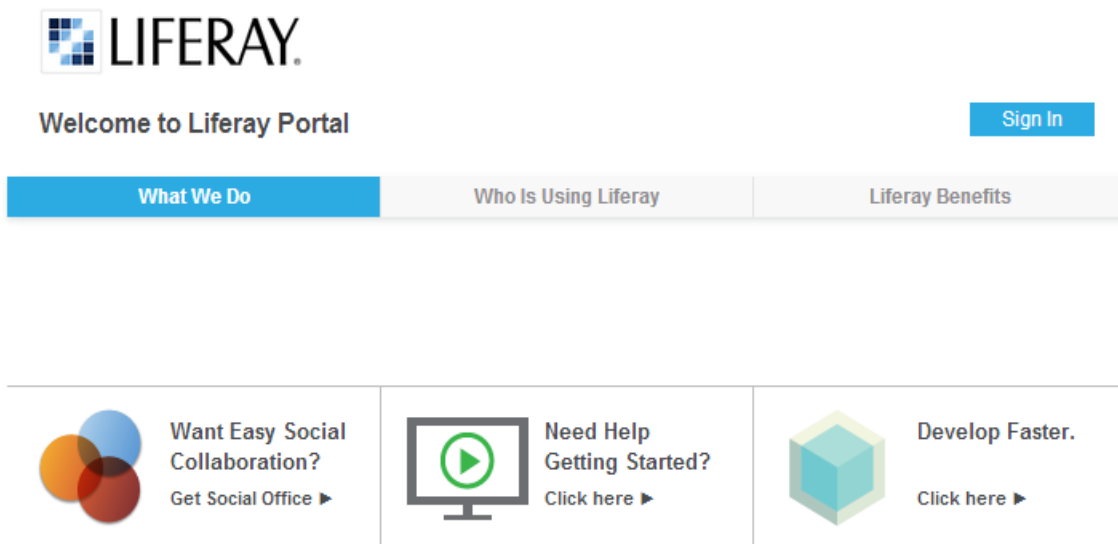
Portlets are web applications that appear in windows on a page.

▪ Portlets are written by developers, and can have any functionality a web application has. Many portlets can be added to a single page, allowing convenient access to many applications in one place.

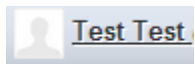
▪ Liferay administration interface is itself implemented as portlets. From Liferay 5.2, all the administrative portlets are accessible through the Control Panel. They are classified in 5 areas.

- Marketplace  Marketplace 
- Personal  Test Test 
- Content  Global ▼  Staging ▼ 
- Portal  Portal 
- Server  Server 

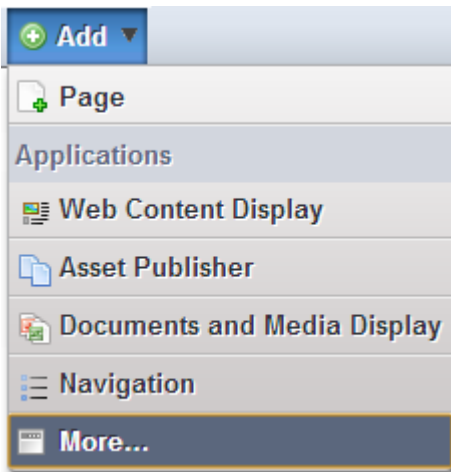
▪ The Dock appears at the top right of the screen. The Dock is the key to navigating in Liferay. By default, it has only two links: Home and Sign In. Click the **Sign In** link. Liferay by default uses email addresses as user names. Log in with the name test@liferay.com and the password is test. If you are trying to login first time with above credentials then accept the terms of use agreement.



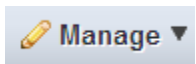
▪ Once you logged in with Liferay administrator user then you will get some more link as compare to normal user. Administrator user have links as below:



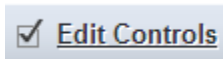
Manage My Account – This link default comes with each user. Through this link user can update the his/her personal , social network information.



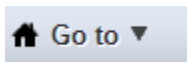
Add Application Menu – Through this link administrator easily drag-and-drop portlets in the portal page.



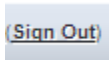
Manage Pages – Through this link administrator can manage pages. Administrator can perform page creation, page theme applying, page layout applying, page details modification, sub pages creation etc.



Toggle Edit Control – Through this link administrator can turn on or off the each portlets control.

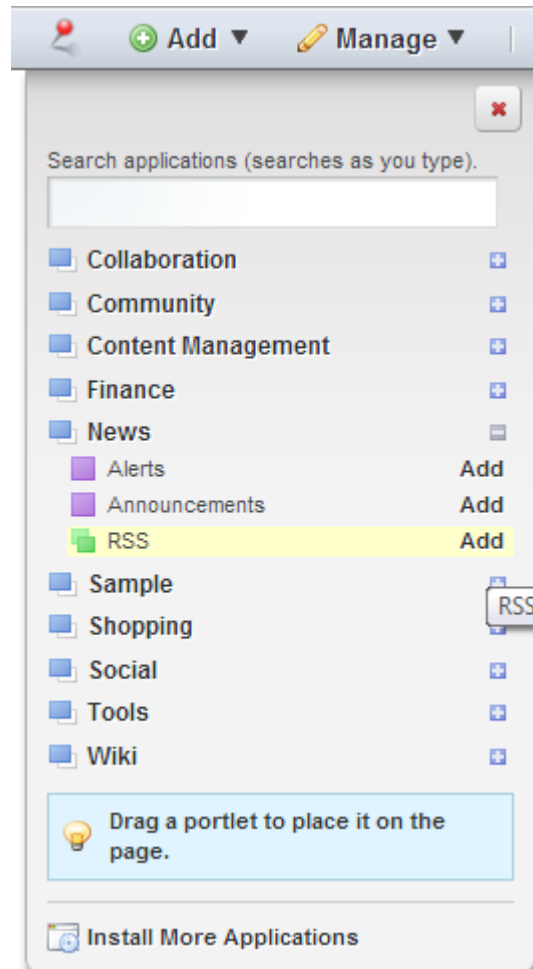


Go To – Through this link administrator easily redirect to control panel as well manage public and private pages of various Liferay sites.



Sign Out – Administrator log off from the Liferay Portal.

- To add portlet click on add or drag and drop as below.

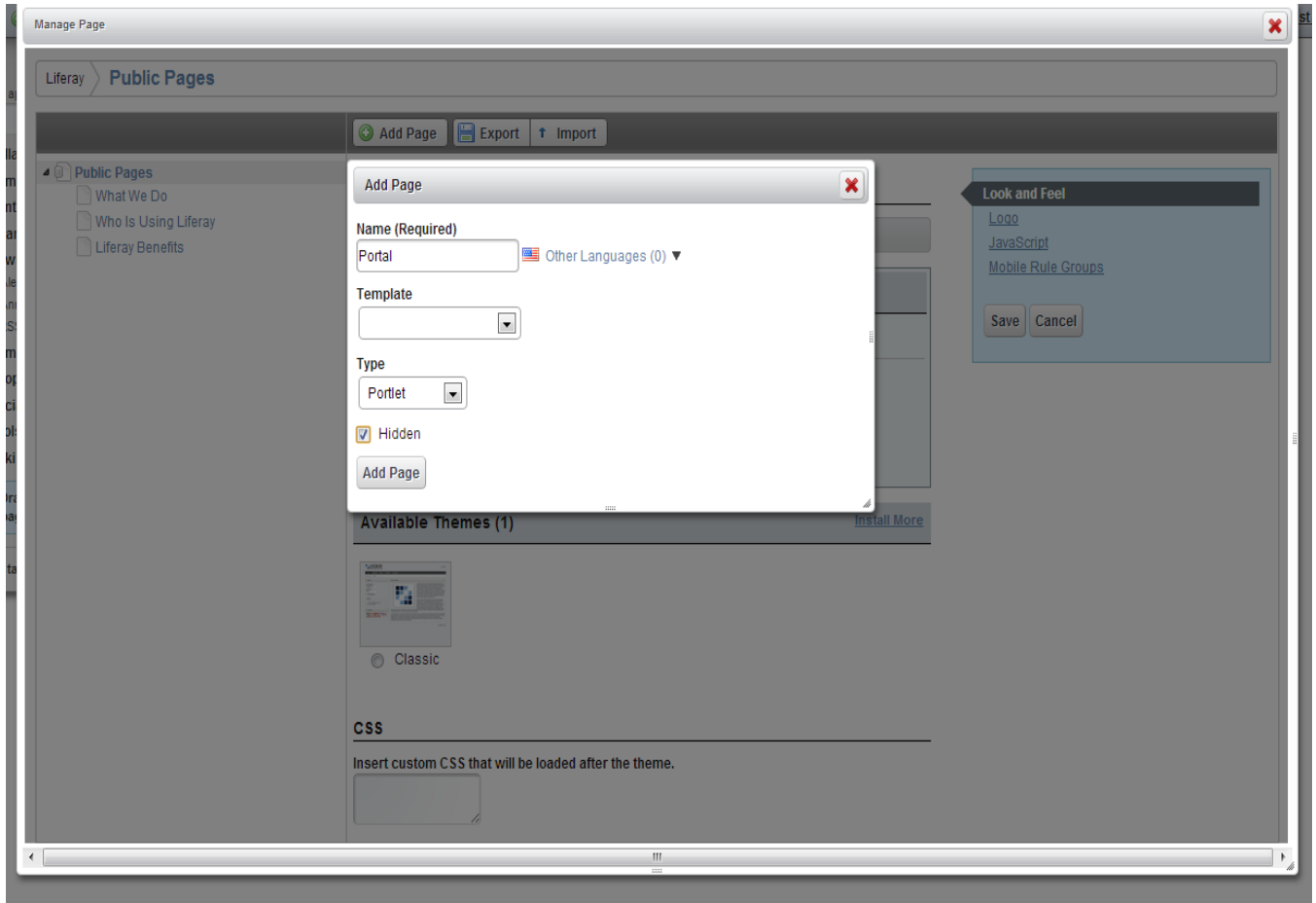


- Now, let's take look of how to use layout template functionality in Liferay portal.
- Liferay portal provides to select the portal page layout as per real time requirement. Here, Liferay comes with list of sample layout such like 1-2 Columns , 1-1 Columns etc. User can also create custom layout through plugin environment for Liferay portal. You may also create custom layout template for your Liferay portal through Liferay plugin SDK.

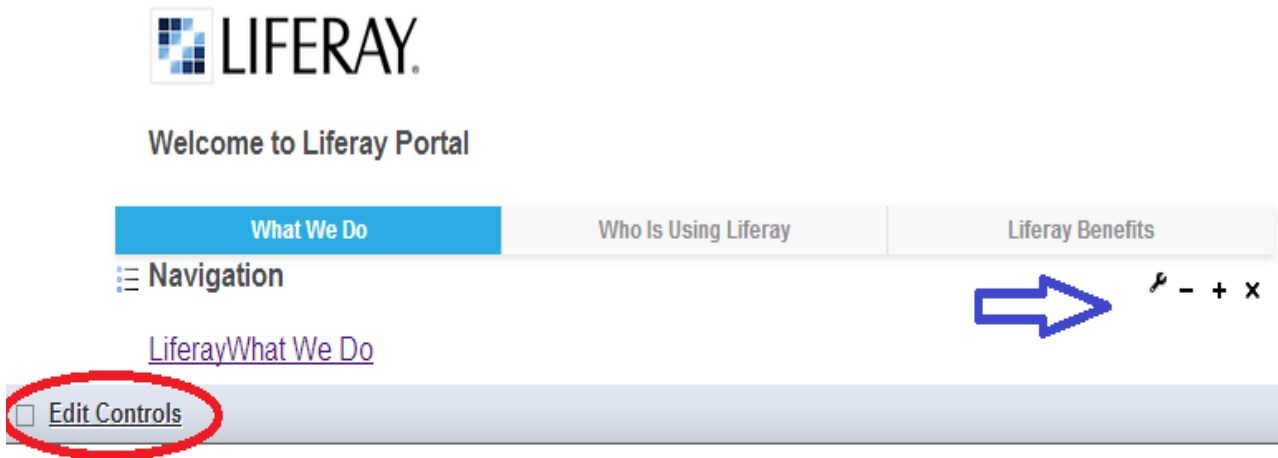
Go to Manage -> Page Layout

The screenshot displays the Liferay portal's 'Page Layout' management interface. On the left, a sidebar lists 'Public Pages' with links to 'What We Do', 'Who Is Using Liferay', and 'Liferay Benefits'. The main area shows a grid of layout templates under the 'Page' tab. The '1 Column' layout is selected and highlighted with a green border. Other layouts include 'Freeform', '2 Columns (70/30)', '3 Columns', '2 Columns (50/50)', '1-2 Columns (30/70)', and '2 Columns (30/70)'. A right sidebar contains links for 'Details', 'SEO', 'Look and Feel', 'JavaScript', 'Custom Fields', 'Advanced', 'Mobile Rule Groups', and 'Customization Settings', along with 'Save' and 'Cancel' buttons.

In Liferay portal, user(with administrator role) may also able to manage pages, look and feel as well user may also can export or import pages through **Liferay Archive (LAR)** approach.



- Basically, through this control you can disable the portlets control which you were placed on the portal page. This control working as an on/off.



- Go to will allow us to redirect between user's own public and private pages as well user may also navigate between the site joined by him.



- User may also access his own detail/account page to click on

Manage My Account

Control Panel > Test Test > My Account > Edit

My Account

My Account organizes all of your information in one, easy to use location. Users can edit their profile and view site memberships and the organizations and user groups to which they belong.

Test Test

Details

Screen Name (Required)
test

Email Address (Required)
test@liferay.com

Title
▼

First Name (Required)
Test

Middle Name
▼

Last Name
Test

Suffix
▼

[Change](#)

User ID
10195

Birthday
January 1 1970

Gender
Male

Job Title
test@liferay.com

Test Test

User Information

Details

- [Password](#)
- [Organizations](#)
- [Sites](#)
- [User Groups](#)
- [Roles](#)
- [Categorization](#)

Identification

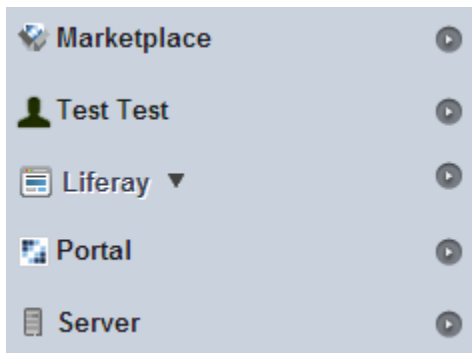
- [Addresses](#)
- [Phone Numbers](#)
- [Additional Email Addresses](#)
- [Websites](#)
- [Instant Messenger](#)
- [Social Network](#)
- [SMS](#)
- [OpenID](#)

Miscellaneous

- [Announcements](#)
- [Display Settings](#)
- [Comments](#)
- [Custom Fields](#)

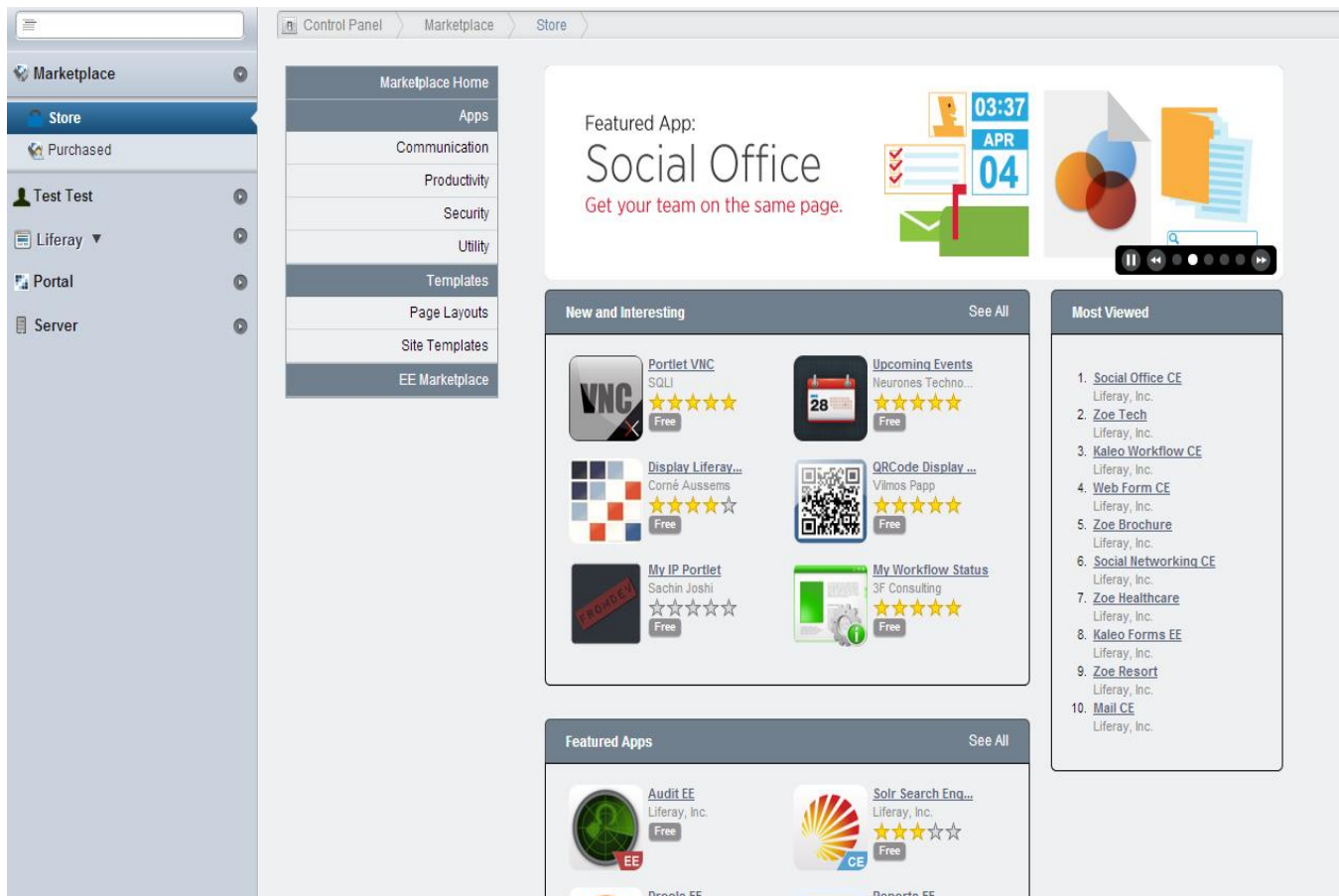
Liferay Control Panel

- Liferay Control Panel is a one kind of setting wizards. But in Liferay portal it is administrative task which can be used to apply the settings or effect to the different portlets.
- The Control Panel is contains all Liferay administration tasks. The Control Panel has better and easy user interface for creation and maintaining of users, user groups, organizations, sites, user roles, web content, documents and media, blogs, wikis, polls and application server settings etc.
- The Control Panel has better server setting as well too. It maintain server administration of user associations, mail settings, email notification and SSO LDAP Integration.
- Let's take a rapid overview of Liferay Control Panel.



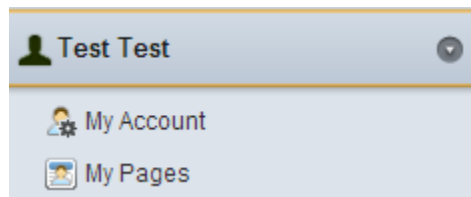
- Basically, Liferay maintains Control Panel is 5 task.
 - **Marketplace task**
 - **Admin or User information task**
 - **Content means current site task**
 - **Portal task**
 - **Server task**

▪ Marketplace task



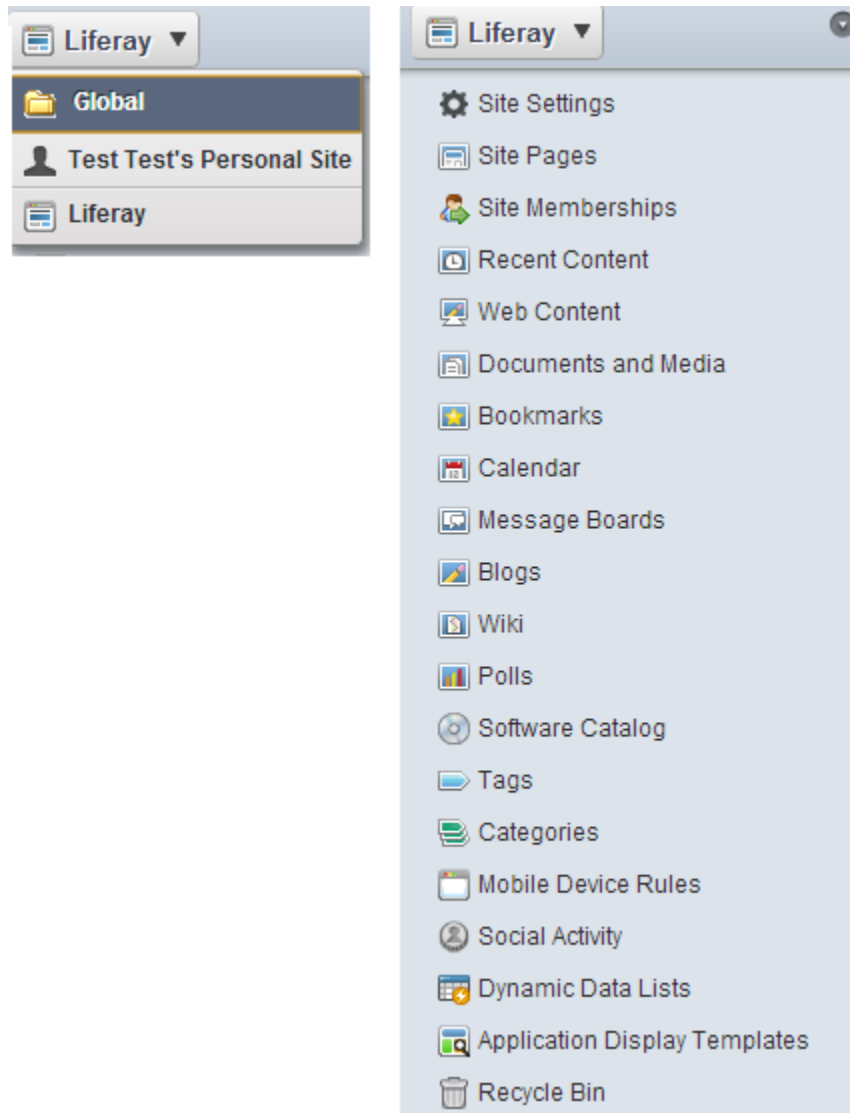
- Liferay Marketplace is an fresh center for sharing, accessing, and used Liferay compatible application which was made by Liferay Community members. Liferay Marketplace is an avenues where developers and customers be able to find the solution according their portal requirement as well share and upload their knowledge as an application for Liferay members. Liferay Marketplace drives the whole Liferay System whether as a market perspective or sharing perspective. To access Liferay Marketplace, you must be part of Liferay Community members. You may download free application as well also purchase the purchasable application from Liferay Marketplace.

- **Admin or User information task**



- Admin contains mainly 2 options for user operation.
- **My Account** – In this option user can update personal information such like first name , last name, update password, address, profile picture, email information etc. User can also add the social networking information here.
- **My Pages** – This option shows the user private and public pages information and also can manage, create and delete pages as well export and import page information as Liferay Archive.

- **Content means current site task**



- The content section includes mostly portal user interface options. It's also known as Liferay section. Through this section user can manage each site operation like creation, modification of current sites, deletion of pages , users , roles etc.

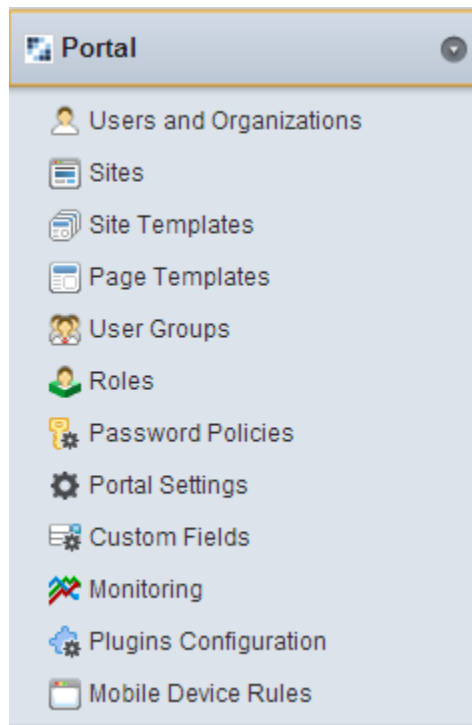
- **Liferay Pages** are custom web pages that have been created in the portal.
Depending on your role you may edit these pages, add pages or change the look and feel of a page.
- **Liferay Web Content** is a set of portlets that manipulate and display Web Content. Liferay Web Content includes an Image Gallery and a JSR-170 compliant Document Library. Web Content are collection of 3 portlets — Web Content Display, Web Content List, Web Content Search.
- **Liferay Document Library** is a full featured virtual shared drive, with file attributes and metadata, versioning and customizable folders. Administrator can manage folders and documents, change permission and browse the document library.
- **Liferay Image Gallery** provides a central repository for images that can be accessed from anywhere, anytime. Administrator can add folders, images, set permission , can create subfolders and manage advance permissions. User can manage their images and folders, depending on their roles.
- **Bookmarks** are shortcut way to website that you like. User can add, delete and share bookmarks.
- **Message Boards** are one of the most widely used collaboration features provided by the Liferay. Message Boards offer a conversation forum for users with multiple levels of depth and hierarchy.
- **Blog** is usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video. Entries are



commonly displayed in reverse-chronological order. "Blog" can also be used as a verb, meaning to maintain or add content to a blog.

- **Wiki** is an application which allows users to collaborate on information.
- **Polls** is like one kind of a forum or an frequently asked question panel.
- **Software Catalog** is used when we wish to have multiple users submitting portlets into the repository.
- **Tags** enable categorization of content through flexible groups of terms and preset vocabularies.

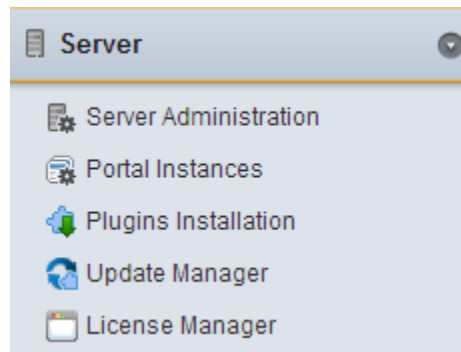
▪ Portal task



- **Users** can be members of Organizations hierarchies, such as Liferay. Users can be collected into arbitrary User Groups, such as Writers. Users can be members of Communities which draw together common interests. Users can have Roles which describe their function in the system, and these roles can be scoped by Portal, Organization, or Community.
- **Organizations** are hierarchical collections of Users. Organizations can have portal pages. Users can be members of multiple organizations. Organizations can have Roles, such as Security, granting members of that organization particular permissions.
- **User Groups** are simple, arbitrary collections of users. They can be members of Communities or Roles. User Groups can have Page Templates, allowing certain users access to certain applications automatically. There are three kinds of Roles:

- **Portal Roles**
- **Organization Roles**
- **Community Roles**
- **Password Policies** allow you to configure password settings, such as expiration, history, and syntax.
- **Setting** is a general setting wizard, it contains main configuration & additional information.
- In Custom Fields, admin can manage the most prominent and popular fields like Wiki page, Message Boards Category, Calendar Event, Page, User, Image Gallery Folder, Blogs Entry, etc.
- To see the live session monitoring. **Plugins Configuration** option useful to configure a themes plugins, portal plugins, layout template plugins, hook plugins, web plugins.
- **Page Templates** allow you to select a page to use and portlets to be included when creating a page.
- **Site Templates** allow you to define pages and web content to include when creating communities and organizations.

▪ Server task



- **Server Administration** shows the use of resources , log event, property, captcha, data migration, file upload, mail, open office, script shutdown etc.
- **Portal Instances** allow administrators to run more than one portal instance on a single server. Data for each portal instance are kept separate from every other portal instance.
- It shows the details of the portal like portal id, web id, virtual host, mail domain, no of users.
- **Plugin Installation** will be list the all of the plugins installed by all the users it may be portal plugins, theme plugins, layout template plugins, hook plugins, web plugins.
- It allows users to install additional plugins from the Liferay repository or install custom plugins.
- **Update Manager** shows you all user installed plugins as well as their version number, whether it is from the Liferay repository, and whether it can be upgraded.
- **License Manager** is place where you can register your portal through the unique Order Id which your firm got at the time of portal purchase.

Quick Tour of Liferay Plugin Portlet Creation

- Let's do a small dive in Liferay Plugin environment. Here, we are going to create a simple portlet through Liferay Plugin.
- I assume that you have been already set your ANT_HOME in your system environment.
- For deploying any portlet as hot deployable in to application server for that you need to set the properties in **build.SYSTEM_NAME.properties** file.
- From command prompt Go to
SYSTEM_DRIVE:\PATH_UP_TO_PLUGIN\portlet
- Type the below command

Create.bat sayHello "Say Hello"

```
C:\Windows\system32\cmd.exe
D:\Self Paced Training\tapan\plugins\portlets> create.bat sayHello "Say Hello"
```

Press enter and Liferay artifact will create your portlet and output should be as below

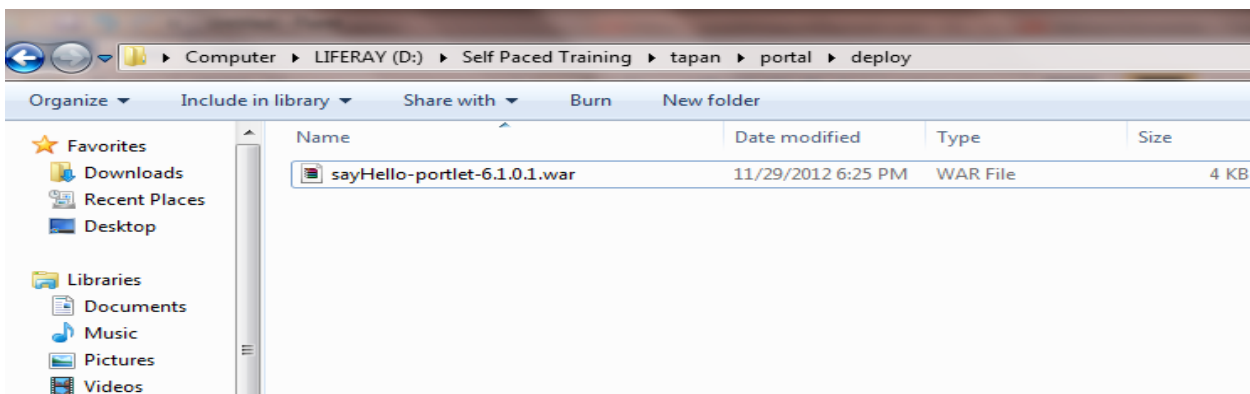
```
C:\Windows\system32\cmd.exe
D:\Self Paced Training\tapan\plugins\portlets> create.bat sayHello "Say Hello"
Buildfile: D:\Self Paced Training\tapan\plugins\portlets\build.xml
create:
[copy] Copying 9 files to D:\Self Paced Training\tapan\plugins\portlets\sayHello-portlet
[mkdir] Created dir: D:\Self Paced Training\tapan\plugins\portlets\sayHello-portlet\docroot\WEB-INF\td
BUILD FAILED
D:\Self Paced Training\tapan\plugins\portlets\build.xml:172: D:\Self Paced Training\NessTraining-30-8-12\portal\tomcat-7.0.23\webapps\ROOT\WEB-INF\td does not exist
Total time: 2 seconds
```

- Go to sayHello-portlet and deploy in your application server. We are going to deploy portlet through ANT. Type ant deploy command from up to sayHello-portlet path.
- Ant deployment framework will deploy sayHello-portlet.war in hot deploy folder(/deploy) of your application server.

```

C:\Windows\system32\cmd.exe
D:\Self Paced Training\tapan\plugins\portlets\sayHello-portlet>ant deploy
Buildfile: D:\Self Paced Training\tapan\plugins\portlets\sayHello-portlet\build.xml
compile:
merge:
merge:
war:
build-css:
[java] Nov 29, 2012 6:25:07 PM com.liferay.portal.kernel.log.Jdk14LogImpl info
[java] INFO: No server detected
[java] Loading jar:file:/D:/Self Paced Training\tapan\portal\tomcat-7.0.23\webapps\ROOT\WEB-INF\lib\portal-impl.jar!/system.properties
[java] Nov 29, 2012 6:25:07 PM com.liferay.portal.kernel.log.Jdk14LogImpl info
[java] INFO: Global lib directory /D:/Self Paced Training\tapan\portal\tomcat-7.0.23/lib/ext/
[java] INFO: Portal lib directory D:/Self Paced Training\tapan\portal\tomcat-7.0.23\webapps\ROOT\WEB-INF\lib/
[java] 18:25:08.044 INFO [EasyConf:122] Refreshed the configuration of all components
[java] 18:25:08.762 INFO [ConfigurationLoader:56] Properties for jar:file:/D:/Self Paced Training\tapan\portal\tomcat-7.0.23\webapps\ROOT\WEB-INF\lib\portal-impl.jar!/portal.properties
[java] Loading file:/D:/Self Paced Training\tapan\portal\tomcat-7.0.23\webapps\ROOT\WEB-INF\classes\portal-ext.properties
[java] Parsed D:/Self Paced Training\tapan\plugins\portlets\sayHello-portlet/docroot/css/main.css in 9064 ns
compile:
merge:
merge:
build-common-plugin-war:
clean-portal-dependencies:
[zip] Building zip: D:\Self Paced Training\tapan\plugins\dist\sayHello-portlet-6.1.0.1.war
deploy:
[copy] Copying 1 file to D:\Self Paced Training\tapan\portal\deploy
BUILD SUCCESSFUL
Total time: 18 seconds
D:\Self Paced Training\tapan\plugins\portlets\sayHello-portlet>

```



```

13:05:41,748 INFO [AutoDeployDir:167] Processing sayHello-portlet-6.1.0.1.war
13:05:41,861 INFO [PortletAutoDeployListener:71] Copying portlets for C:\liferay\portal\deploy\sayHello-portlet-6.1.0.1.war
Expanding: C:\liferay\portal\deploy\sayHello-portlet-6.1.0.1.war into D:\Self Paced Training\tapan\portal\tomcat-7.0.23\temp\20121129130541867
Copying 1 file to D:\Self Paced Training\tapan\portal\tomcat-7.0.23\temp\20121129130541867\WEB-INF
Copying 1 file to D:\Self Paced Training\tapan\portal\tomcat-7.0.23\temp\20121129130541867\WEB-INF\classes
Copying 1 file to D:\Self Paced Training\tapan\portal\tomcat-7.0.23\temp\20121129130541867\WEB-INF\classes
Copying 1 file to D:\Self Paced Training\tapan\portal\tomcat-7.0.23\temp\20121129130541867\WEB-INF
Copying 1 file to D:\Self Paced Training\tapan\portal\tomcat-7.0.23\temp\20121129130541867\META-INF
Copying 1 file to D:\Self Paced Training\tapan\portal\tomcat-7.0.23\temp\20121129130541867\WEB-INF\jsp
Warning: WEB-INF\liferay-plugin-package.properties modified in the future.
Warning: css\sass-cache\main.css modified in the future.
Warning: css\main.css modified in the future.
Warning: icon.png modified in the future.
Warning: js\main.js modified in the future.
Warning: view.jsp modified in the future.
Copying 30 files to D:\Self Paced Training\tapan\portal\tomcat-7.0.23\webapps\sayHello-portlet
Copying 1 file to D:\Self Paced Training\tapan\portal\tomcat-7.0.23\webapps\sayHello-portlet
Deleting directory D:\Self Paced Training\tapan\portal\tomcat-7.0.23\temp\20121129130541867
13:05:43,532 INFO [PortletAutoDeployListener:81] Portlets for C:\liferay\portal\deploy\sayHello-portlet-6.1.0.1.war copied successfully. Deployment will start in
s.
Nov 29, 2012 1:05:53 PM org.apache.catalina.startup.HostConfig deployDirectory
INFO: Deploying web application directory D:\Self Paced Training\tapan\portal\tomcat-7.0.23\webapps\sayHello-portlet
13:05:53,391 INFO [PluginPackageUtil:1099] Reading plugin package for sayHello-portlet
13:05:53,531 INFO [PortletHotDeployListener:614] Registering portlets for sayHello-portlet
13:05:53,781 INFO [PortletHotDeployListener:433] 1 portlet for sayHello-portlet is available for use

```

- Now, our application as a portlet available in Liferay Portal.
- Now , go to dockbar and click on Add menu then search say hello in your add application search text box.
- Our portlet placed at Sample category so either you can search or you can directly walkthrough to sample category.
- Now, add portlet in your portal page or you can drag and drop from menu to portal page.
- So, at the end of presentation we are start getting familiar of one of usable plugin type OF Liferay Plugin SDK.

