This text records steps to create skeleton source code for application "ACMA" (AccountManagement) for Sakai (http://sakaiproject.org)

Step 1. Prepare tools

- Java: JDK 1.7 or later

- NetBean 8.1 or Eclipse 4.3

- Maven 3.3.1 (Install by execute command with root permission: yum install maven)

Step 2. Prepare to generate code for project

1. Create the folder for project. Ex: ~/ACMA/SourceCode

2. From terminal, change the current directory to folder of project. Then execute below command:

```
mvn archetype:generate -DarchetypeGroupId=org.sakaiproject.maven-archetype -
DarchetypeArtifactId=sakai-spring-maven-archetype -DarchetypeVersion=1.2 -
DarchetypeRepository=https://source.sakaiproject.org/maven2/
```

(Refer: https://confluence.sakaiproject.org/display/BOOT/Sakai+Spring+MVC+Maven+Archetype)

Fill data for questions:

```
groupId: mks

artifactId: acma

version: 0.1

package: m.k.s.sakaiapp
```

Step 3. Configure to compile and deploy the application to sakai 10.5

1.Modify "acma\pom.xml"

Line	Old source	To be updated
8	<name>sakai-spring-maven-archetype</name>	<name>**acma-spingmvc-sakai**</name>
42~46	<dependency> <groupId>log4j</groupId> <artifactId>log4j</artifactId> <version>1.2.14</version> </dependency>	<dependency> <groupId>log4j</groupId> <artifactId>log4j</artifactId> <version>1.2.**16**</version> </dependency>

2.Modify "acma\tool\pom.xml"

Line	Old source	To be updated
15~18	<dependency> <groupId>org.springframework</groupId> <artifactId>spring</artifactId> </dependency>	<dependency> <groupId>org.springframework</groupId> <artifactId>spring-**core**</artifactId> </dependency>
23~26	<dependency> <groupId>org.springframework</groupId> <artifactId>spring-webmvc</artifactId> </dependency>	<dependency> <groupId>org.springframework</groupId> <artifactId>spring-webmvc</artifactId> **<version>3.2.3.RELEASE</version>** **<scope>compile</scope>** </dependency>

You can get the source code at "https://github.com/software-handbook/qms/tree/master/Samples/SakaiApp/ACMA/SourceCode/acma"

Step 4. Compile and deploy to sakai

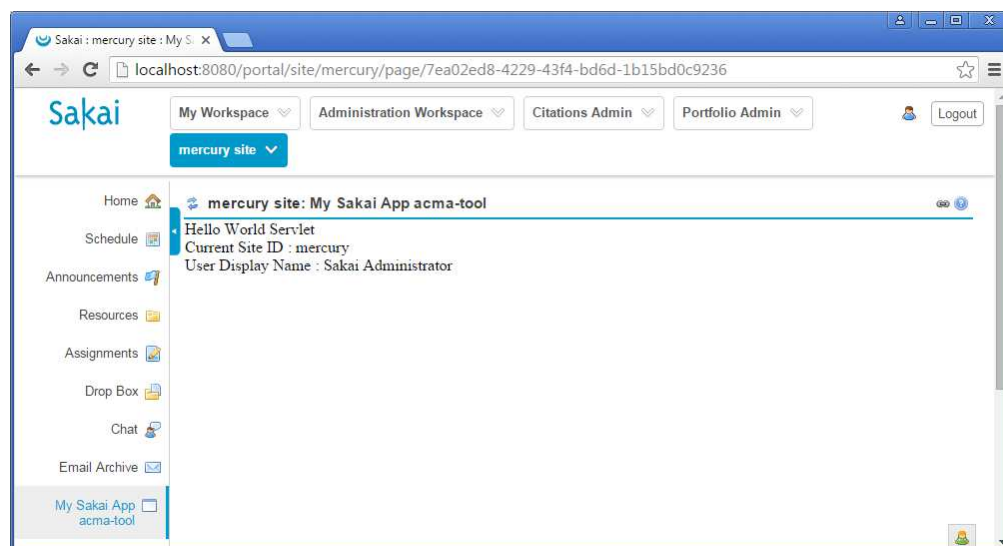Change the current directory to the home of project. Then execute below command:

mvn -Dmaven.tomcat.home=<HOME OF SAKAI> install sakai:deploy

Ex:

mvn -Dmaven.tomcat.home=D:/jPackages/sakai-base-demo-10.5 clean install sakai:deploy

Step 5. Run sakai to view the tools

Now you can start the sakai, add tool "My Sakai App acma-tool" to a site by tool "Site info" to view the result as below:

Step 6: Change name of the application

Modify "acma\tool\src\main\webapp\tools\sakai.sakai-spring-maven-archetype.xml"

```
<?xml version="1.0"?>
<registration>
        <tool id="sakai.acma"
                title="Account management"
                description="Manage groups and accounts in LDAP">
...
```

Then compile and deploy by the above step 4.

The title of application is changed as below: