Experiment No. 3

Title: Configure and deploy web pages on XAMPP Server and access it from client machine.

Objective:

At the end of practical session student will be able to configure apache tomcat server with deployment of created web application to provide service to client.

Theory:

Apache Tomcat, often referred to as Tomcat, is an open-source web server developed by the Apache Software Foundation. It is an open source implementation of the Java Servlet, JavaServer Pages, Java Expression Language and Java WebSocket technologies. Tomcat software powers numerous large-scale, mission-critical web applications across a diverse range of industries and organizations.

Installing Apache Tomcat on Windows Machine

On Windows operating system, to install Apache Tomcat you can download .exe installer. By double clicking on .exe as an administrator installation process starts. During installation process:

- It will prompt you for the desired port.

It will ask you what port it should run on, and make the changes in server.xml for you.

- It will set JAVA_HOME for you.

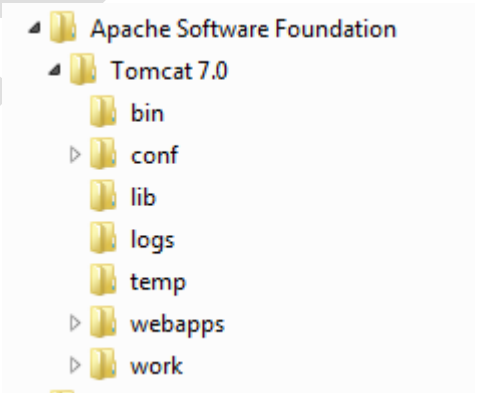
The installer hunts for your Java installation and tries to set JAVA_HOME appropriately.

- It will setup Start Menu entries.

To start apache tomcat go to Start Menu, select Apache Tomcat 5.5, select Monitor Tomcat, and select Start or Stop. We can also use startup.bat and shutdown.bat to start and stop tomcat

Configuration:

After successful installation of Apache Tomcat following directory structure will present in home folder.



'bin' folder contains executable jar file and binary files. From these files we can configure apache tomcat. 'conf' folder contains all configuration files in xml format. We can also configure apache through these xml configuration files. In 'lib' folder all jar files are present. In webapps folder we have create hierarchy for deploying all web pages with. At first we

have to create folder with our applications name. Then in this folder following files or directory should present into webapps.

- *.html, *.jsp, etc. - The HTML and JSP pages, along with other files that must be visible to the client browser (such as JavaScript, stylesheet files, and images) for your application. In larger applications you may choose to divide these files into a subdirectory hierarchy, but for smaller apps, it is generally much simpler to maintain only a single directory for these files.

- /WEB-INF/web.xml - The Web Application Deployment Descriptor for your application. This is an XML file describing the servlets and other components that make up your application, along with any initialization parameters and container-managed security constraints that you want the server to enforce for you. This file is discussed in more detail in the following subsection.

- /WEB-INF/classes/ - This directory contains any Java class files (and associated resources) required for your application, including both servlet and non-servlet classes, that are not combined into JAR files. If your classes are organized into Java packages, you must reflect this in the directory hierarchy under /WEB-INF/classes/. For example, a Java class named com.mycompany.mypackage.MyServlet would need to be stored in a file named /WEB-INF/classes/com/mycompany/mypackage/MyServlet.class.

- /WEB-INF/lib/ - This directory contains JAR files that contain Java class files (and associated resources) required for your application, such as third party class libraries or JDBC drivers.

Now to call html pages from client provide address in address-bar http://ip-address-of-machine/application-folders-name/index.html.

Key concepts: Deployment, Web Pages, HTML, CSS

Steps:

- Install apache tomcat
- Configure apache tomcat for deployment of HTML pages
- Deploy HTML and CSS on server
- Send request from client for HTML pages deployed at server.