

Experiment No.1

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Title:

Installation of TOMCAT/ WebSphere/ JBoss/ GlassFish Server and configuration of it.

Theory:

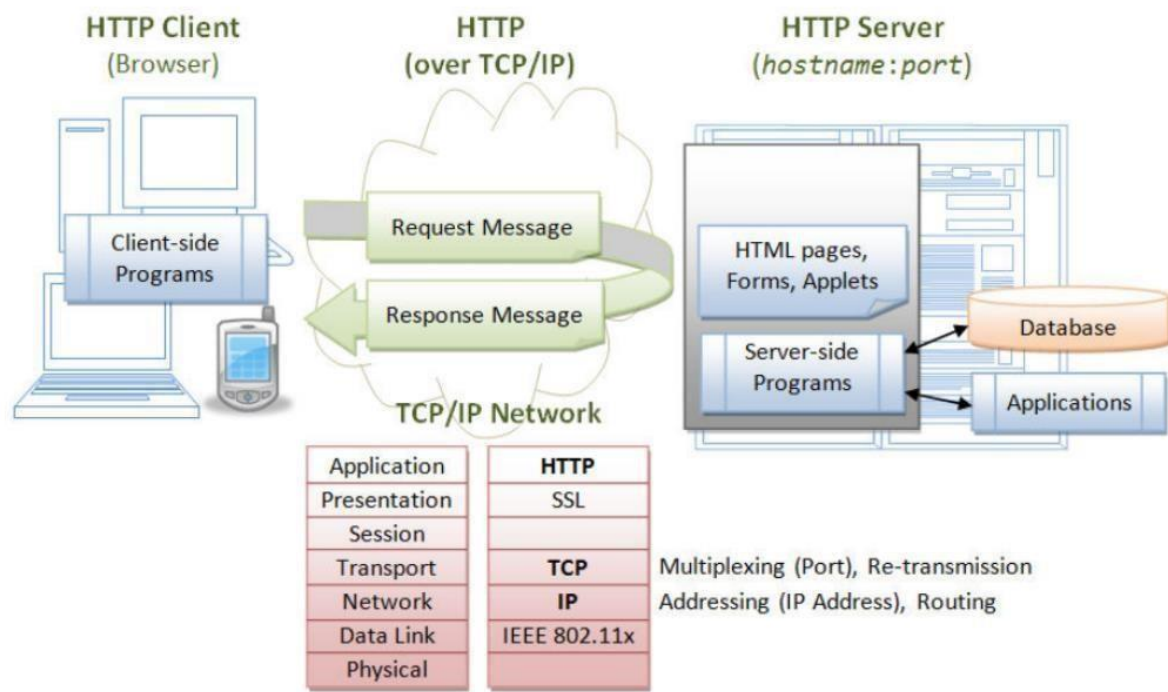
Web Application:

A web application runs over the Internet. Eg. eBay, Amazon, Google, Facebook, etc.

A web app contains five components:

- HTTP Server: Examples are: Google Web Server, Apache HTTP Server, Apache Tomcat Server, Microsoft Internet Information Server (IIS) etc.
- HTTP Client (Web Browser): Examples are: Internet Explorer, Firefox, Google Chrome, Safari, etc.
- Database: Examples are: MySQL, Apache Derby, MS SQL Server, SQLite, PostgreSQL, Commercial Oracle, IBM DB2, SAP SyBase, MS Access, etc.
- Client-Side Programs: It can be written in HTML Form, VBScript, JavaScript, Flash, etc.
- Server-Side Programs: could be written in Java Servlet/JSP, ASP, PHP, Perl, Python, CGI, and others.

A web app is a 3-tier (or multi-tier) client-server database application which run over the Internet as shown in the following diagram:



3-Tier Client-Server Architecture

1. To start a web app, A user, issues a URL request via a web browser (HTTP client), to HTTP server
2. The HTTP server returns an HTML form (client-side program), which is loaded into the client's browser
3. The user fills up the query data inside the form and submits that form
4. The client-side program sends the query parameters to a server-side program

5. The server-side program receives the query parameters, queries the database based on these parameters, and returns the query result to the client-side program
6. The client-side program displays the query result on the browser
7. The process repeats for the next request

Apache Tomcat:

Tomcat is an open-source project, under the “Apache Software Foundation”. The mother site for Tomcat is <http://tomcat.apache.org>. Alternatively, you can find tomcat via the Apache mother site: <http://tomcat.org>.

Program:

Step 1:

To download the Apache Tomcat go to the URL <http://tomcat.apache.org/download-80.cgi> and download the zip file as shown below:

8.5.15

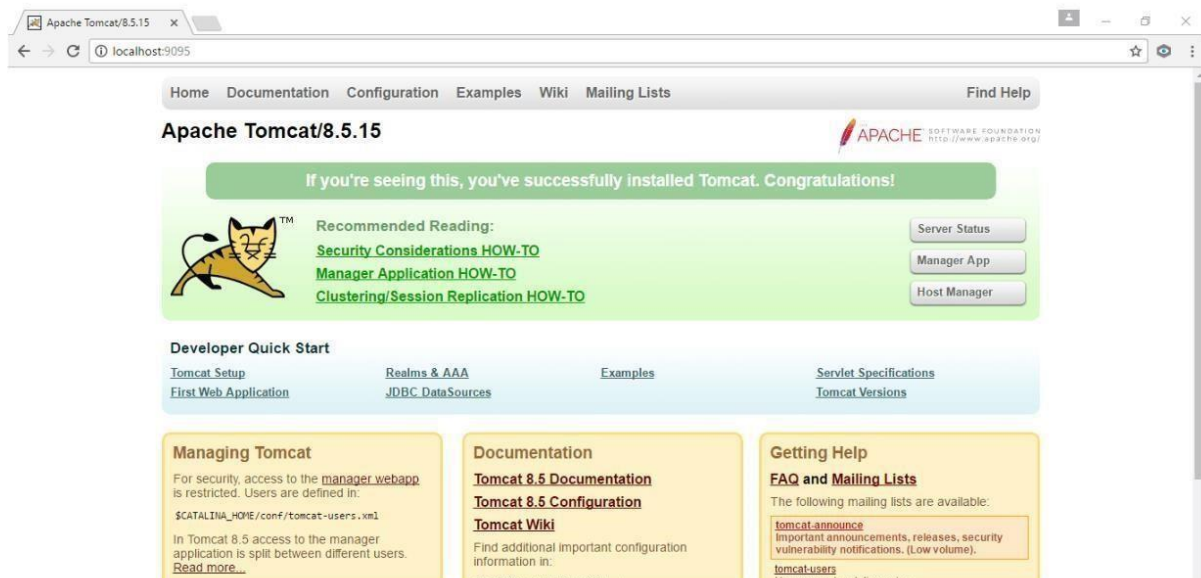
Please see the [README](#) file for packaging information. It explains what every distribution contains.

Binary Distributions

- Core:
 - [zip](#) (pgp, md5, sha1)
 - [tar.gz](#) (pgp, md5, sha1)
 - [32-bit Windows zip](#) (pgp, md5, sha1)
 - [64-bit Windows zip](#) (pgp, md5, sha1)
 - [32-bit/64-bit Windows Service Installer](#) (pgp, md5, sha1)
- Full documentation:
 - [tar.gz](#) (pgp, md5, sha1)
- Deployer:
 - [zip](#) (pgp, md5, sha1)
 - [tar.gz](#) (pgp, md5, sha1)
- Extras:
 - [JMX Remote jar](#) (pgp, md5, sha1)
 - [Web services jar](#) (pgp, md5, sha1)
- Embedded:
 - [tar.gz](#) (pgp, md5, sha1)
 - [zip](#) (pgp, md5, sha1)

Step 2:

Unzip the downloaded Tomcat file to a specific folder on the computer.

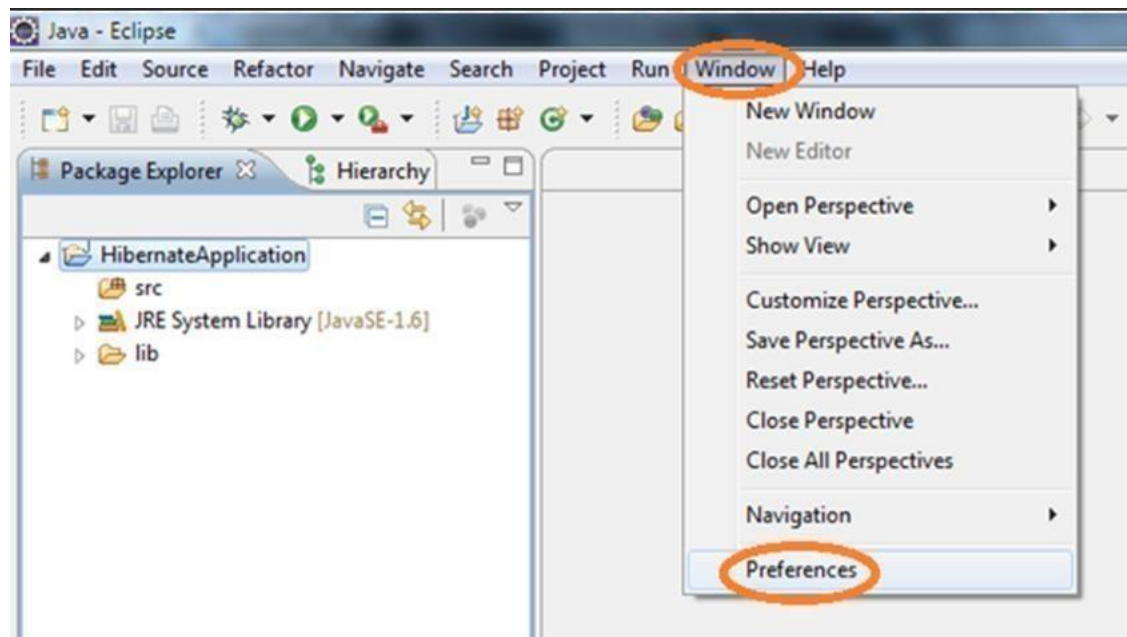


The screenshot shows the Apache Tomcat/8.5.15 web interface in a browser window. The address bar shows 'localhost:9095'. The page has a navigation bar with links: Home, Documentation, Configuration, Examples, Wiki, Mailing Lists, and a 'Find Help' button. The main heading is 'Apache Tomcat/8.5.15'. Below this, a green banner says 'If you're seeing this, you've successfully installed Tomcat. Congratulations!'. To the left of this banner is the Tomcat logo. To the right, under 'Recommended Reading:', there are links for 'Security Considerations HOW-TO', 'Manager Application HOW-TO', and 'Clustering/Session Replication HOW-TO'. Further right are buttons for 'Server Status', 'Manager App', and 'Host Manager'. Below the banner is a 'Developer Quick Start' section with links for 'Tomcat Setup', 'First Web Application', 'Realms & AAA', 'JDBC DataSources', 'Examples', 'Servlet Specifications', and 'Tomcat Versions'. At the bottom, there are three yellow boxes: 'Managing Tomcat' (with links for security and configuration), 'Documentation' (with links for 8.5 documentation, configuration, and wiki), and 'Getting Help' (with links for FAQ and mailing lists).

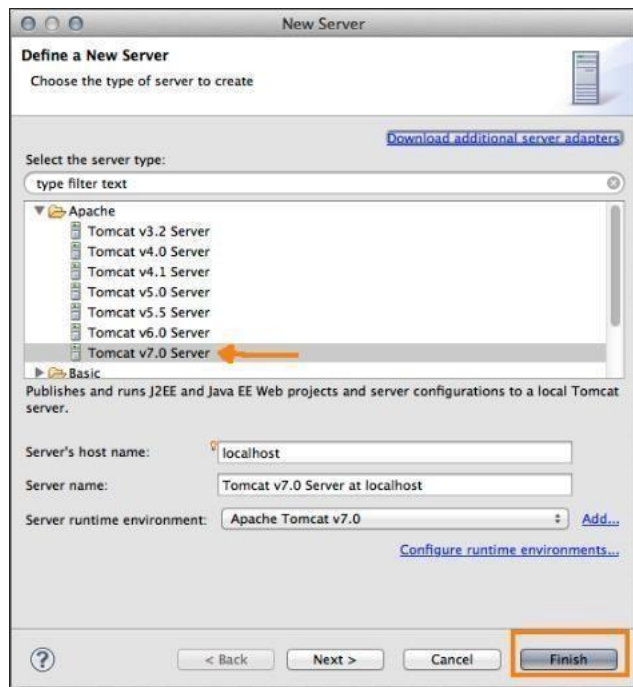
Step 3:

Now we have to link the Tomcat with Eclipse. For this purpose, perform the following steps:

1. Open Eclipse and select Window>Preferences from Menu Bar.



2. Create new **Runtime Server**.
3. Click on Add button following window will be appear. Now click on Apache folder and Select Tomcat 7 and click **next** button.



4. Enter the location of Tomcat
5. Click OK to finish

Conclusion:

We studied installation of Tomcat and its configuration.