| Lab02 | Get acquaintance with Programming Servlets |

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This week you get acquainted with programming Servlets.

This lab does not require any submission.

Do following here -

1. Setup #1: Install a J2EE server: popular choices are Tomcat, Glashfish, and Wildfy. Let us choose Tomcat 9. Download and install.
2. Install your choice of IDE for J2EE projects, if do not have already. Popular choices are Eclipse, Netbeans, IntelliJ. If you have not used any before, may be it is good time to start learning and using eclipse.
3. Start your IDE.
4. Add J2EEserver (Tomcat 9) to your IDE
5. Creating a Web Programming Projects in your IDE. Give Name to the Project as "Servlet Demo".
   a. In Eclipse it is done by choosing **Dynamic Web Project**
   b. Where as in Netbeans, you do it by choosing **Java Web→Java Web Application**
6. Browse through Project Explorer and select "Java Resources" and "src"folder.
7. Right click and Add a Package "**lab02.servlets**"
8. Right click on Package and **New →Servlet**
9. Name the Servlet to "**FactorialServlet**", and Finish
10. While creating Servlet, do not forget specifying "**Target Run Time system**" which is Tomcat 9 in this case (or select whichever you are using)
11. Replace all code of the class (i.e. code within {} of class implementation) with implementation in given source file **FactorialServlet.java**.
12. Attempt Running it. There may be some glitches, fix them out and run it.
13. Note also that while running Factorial servlet, you type in following request in address bar **http://localhost:8080/ServletDemo/FactorialServlet?num=6**
14. Similarly create another servlet **TableGenerator** by copying class code from given source. To run the servlet, you issue request URL as **http://localhost:8080/ServletDemo/TableGenerator?number=8**
15. Create another servlet **PollServlet**. It is a simple web based poll simulator. Suppose there are 5 candidates in an election race. Let the candidates be identified by IDs 1 through 5. Let all computation be done the servlet, and it is used as following

    Casting of vote is done as following, it is the case of voting in favor of candidate with id =2
    http://localhost:8080/ServletsDemo/PollServlet?action=vote&id=2

    Here it is to be noted that if give ID is other than 1 through 5, vote is considered as rejected.
    Perform few more random voting using above URL request.
    Voting report can be gotten by request:
    http://localhost:8080/ServletsDemo/PollServlet?action=report

Source code of servlets used here is available at:
https://moodle.daiict.ac.in/mod/resource/view.php?id=572