Project 1
Dynamic Web Application
using Servlets, JSPs and Javabeans
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Description :

« WebTodoList » is a dynamic web application that allows an instructor to put online a todo list for his students and allows the students to access this todo list.

The instructor can access the web site to create, edit or delete some todos.The students can only consult the todo list prepared by the instructor.
To make simple, we will suppose that a todo is only caracterized by an « id » and a « description ».

To save the todos, we use a MySQL database. To access the application, a login system is in use. The instructor and all of his students have user accounts in the database. An account is defined by a username, a password and a role (instructor or student).

How it works ?

Once the url of the web site is entered, a login page is displayed. A user having an account can enter his username and his password before pressing a Login button. The web server verifies his account and if it is not a valid user, an error message is displayed.
In case of validation, two scenarios are possible :

1. The user is the instructor : He can access the latest list of todos and update it.
2. The user is a student : he can just access the latest list of todos.

At any moment, a user can logout and the login page is displayed again.

After the first login of a user, the web site creates a cookie for the username so that the username is automatically filled in later logins.

Once the user is logged in, the server saves his username in a session, and displays it in a welcome message. This message should be displayed in all visited pages.

Organization and submission:

- You shall work in pairs.
- The submission delivery (One single compressed file) shall contain:
    1. A small pdf report describing how your application works, the functionalites that you succeed to do and those that you didn't succeed.
    2. All source code
- Upload your project on BrightSpace.

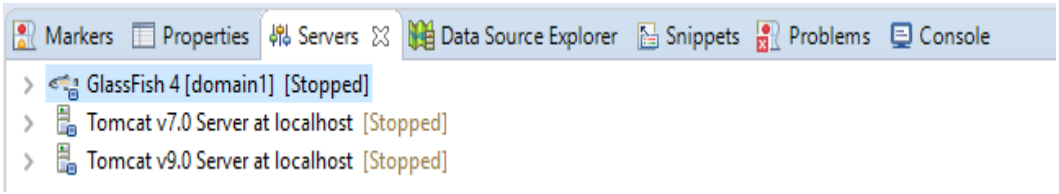
- The deadline for submitting the reports is Sunday 28 October by midnight.
- Late reports are panalized.
- In the first session after the deadline, each group will have 2 minutes to demonstrate his application.

Project Deployment

The idea of the deployment in our case is to prepare the « war » (web archive) file. This file is what we need to put on the server that will host the application.

To create the war file, you have to export your project into war file : right click on the project → export → war file. You choose the destination, you check the « Export source files » and « Overwrite existing file » and you click ok. You will find this war file in the destination that you choosed and that's it.

To test the deployment, go to eclipse. Open the servers tab, expand the server that you use for the application, remove your project from the server's list of applications and close eclipse.



Now, Try to run the application from the browser without using eclipse. You will see that you will not be able to run it because eclipse,the only link between the application and tomcat, is closed.

To solve the problem, you need to put the war file in the « webapps » folder of tomcat.

- Go to your Tomcat folder → webapps folder → paste the war file inside
- Start Tomcat : Go to the Tomcat Folder → bin → startup.bat
- Open your browser → tape the url of your project → you will have the start page of your project. So now it runs.

For more details, please refer to the link below :
http://sdz.tdct.org/sdz/creez-votre-application-web-avec-java-ee.html#Empaquetageetdploiementd039unprojet

Remark:
Tomcat is a real application server and not a virtual one. An application server is a software that should be installed on the server that will execute the web application. That's why we installed tomcat on our machines. What we have done in this course, is to consider our machine as a local server that hosts the application (localhost). To excute the application, our local server uses tomcat (application server) and mysql (data server). **This is sufficient for this course.**

But if you are curious to know how to deploy your project on a public hosting server, take a look on this link (An example of java ee project deployment with jelastic) :
https://docs.jelastic.com/setting-up-environment
https://docs.jelastic.com/upload-deploy-application

You can see that you can configure your environement and that you have the possibility to select Tomcat as application server and mysql as data server. You can then upload your archive and your application will run properly on the new server.

Barème :

Login page :
student log : 1 point
instructor log : 1 point

List todos : 2 points
Add Todo : 2 points
Update Todo : 3 points
Delete Todo : 2 points

Sessions : 3 points
Cookies : 3 points
Deployment : 1 point
css : 1 point
Good Report : 1 point.

Total : 20 points.