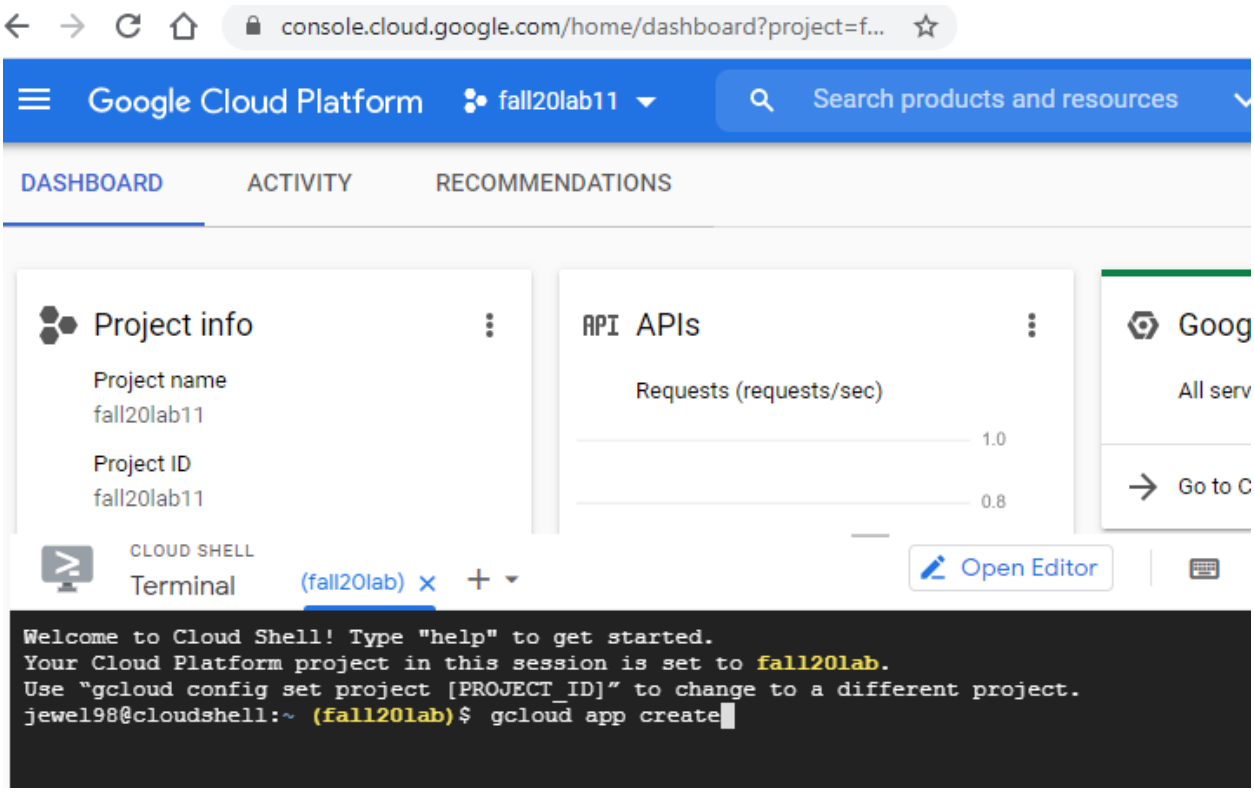
# GCP App Engine with JSP

## First Part: Setting Environment

1. Create your project as <your 4x4 +lab11>: https://console.cloud.google.com/projectcreate
2. Open Cloud Shell: *gcloud app create*




If ask for region, you can give 14 for US-Central (or any suitable region).

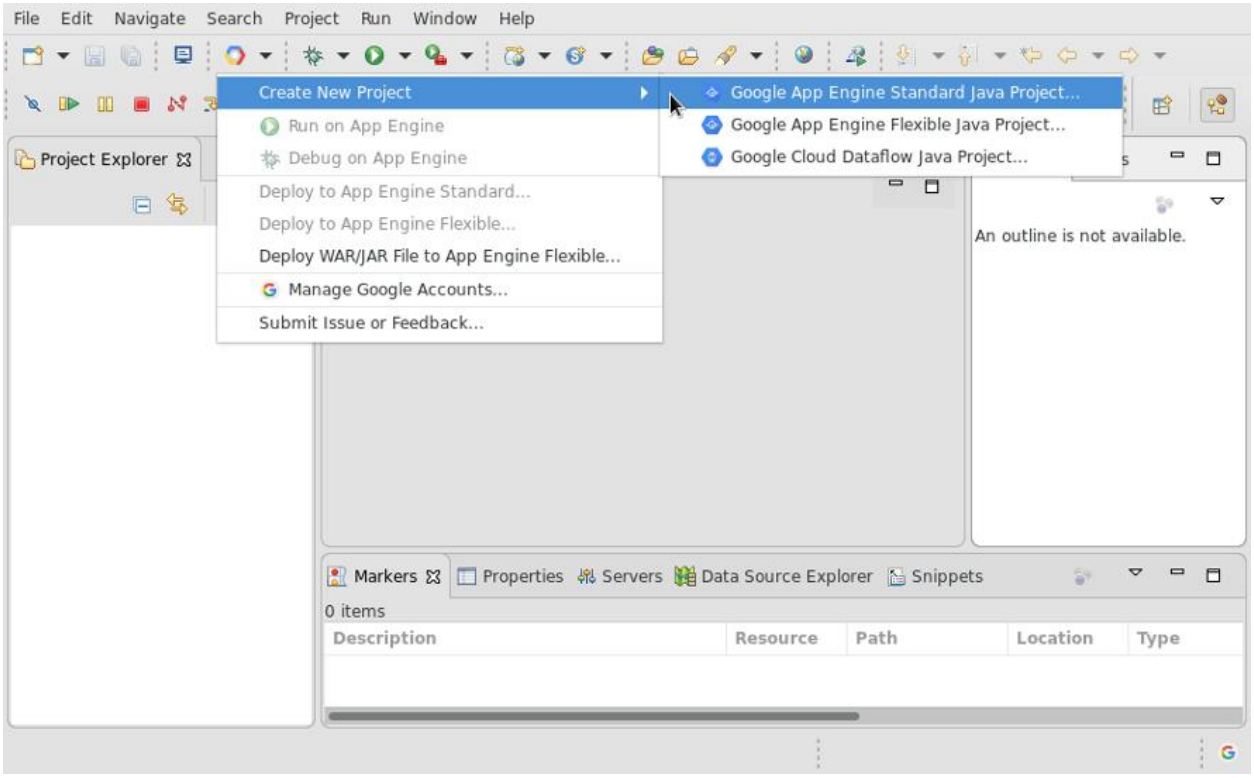
3. You can Download Eclipse IDE for Java EE Developers to write Java Server Page (JSP): https://www.eclipse.org/downloads/packages/ (I am personally using https://www.eclipse.org/downloads/packages/release/2018-09/r/eclipse-ide-java-ee-developers, but you can use the latest from 2020)
4. To connect Eclipse to GCP, you can do one of the following:
    a. https://marketplace.eclipse.org/marketplace-client-intro?mpc_install=3321165 and then drag the "Install" Icon from the webpage into your Eclipse workspace, or
    b. Open the link https://cloud.google.com/appengine/docs/standard/java/building-app/environment-setup and follow the instructions, or
    c. In the Eclipse toolbar go to Help > Eclipse Marketplace. Then in the "Find" text bar, type "Google" and search. Then, select "Install" for "Google Cloud Tools for Eclipse.."

    Restart Eclipse

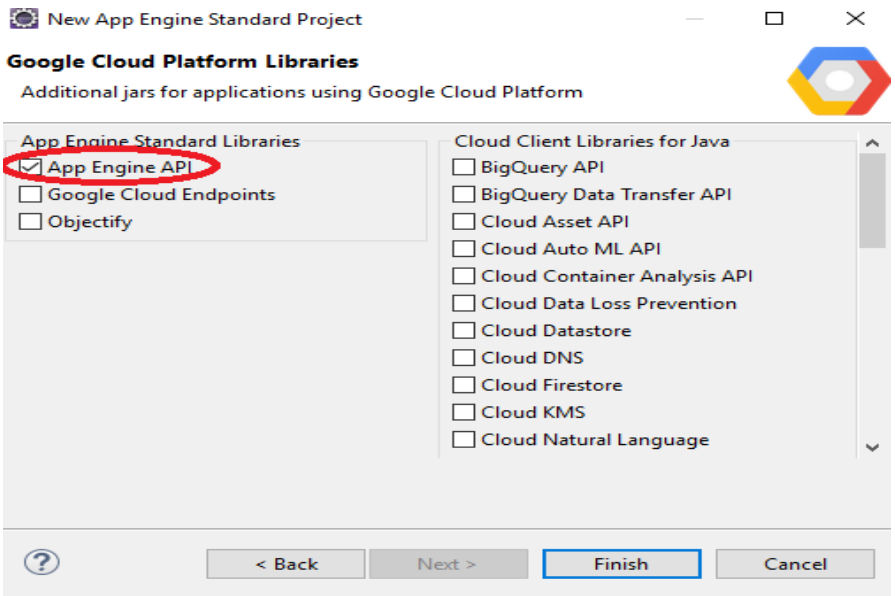
5. Now a Google Cloud Platform toolbar button will be visible in your Eclipse IDE.

## Second Part: Creating project in Eclipse

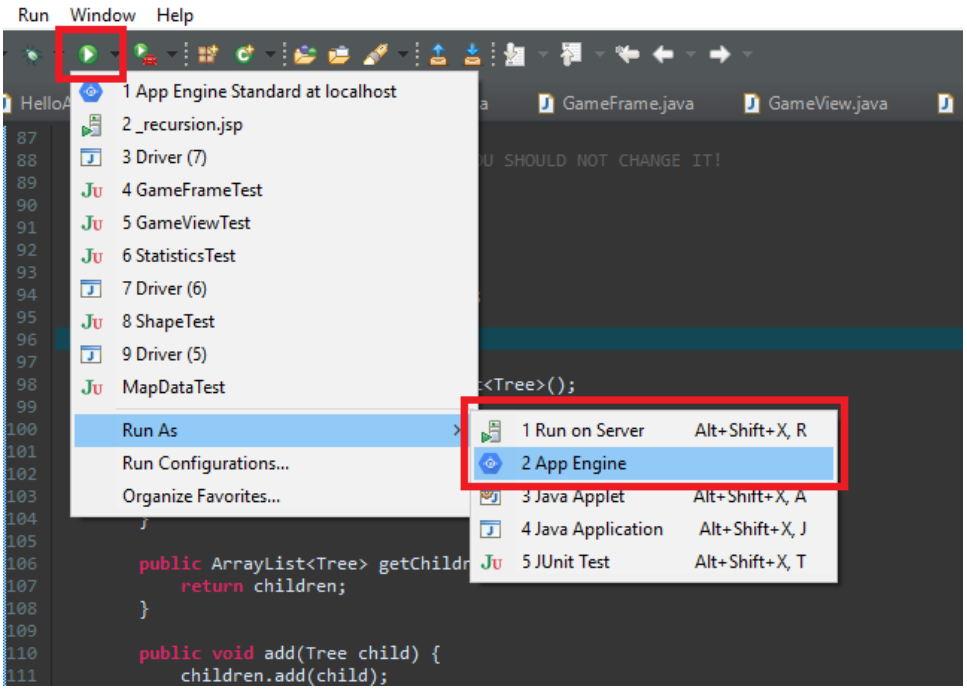
1. Click the **Google Cloud Platform** toolbar button 
2. Select **Create New Project** > **Google App Engine Standard Java Project**.

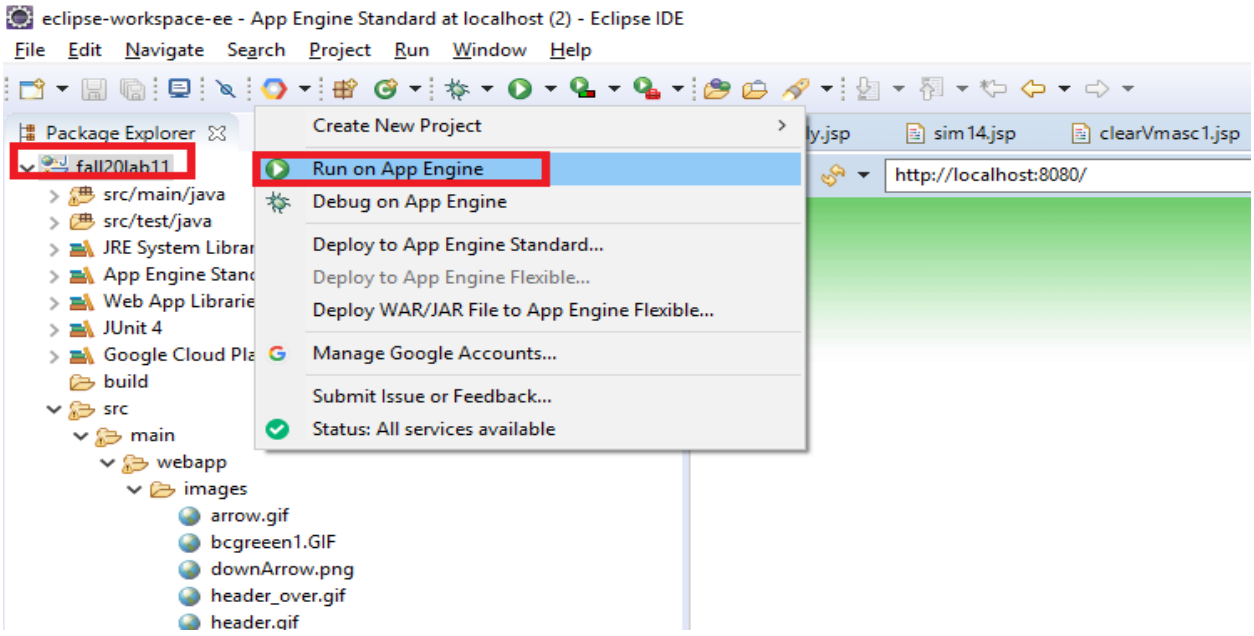



3. Enter a **Project name**, in our case Lab11. Make sure to "Check" App Engine API libraries. Click Finish.



4. Replace webapp with the given source files to your \Lab11\src\main\webapp.
5. You can run the code, either (a. first picture) using the Eclipse "Run" button and selecting "App Engine", to start up a *local* server to view the program output. You can see logging information and the *local* url (localhost:8080) in the Eclipse Console. Or (b. second picture) By clicking "Run on App Engine"

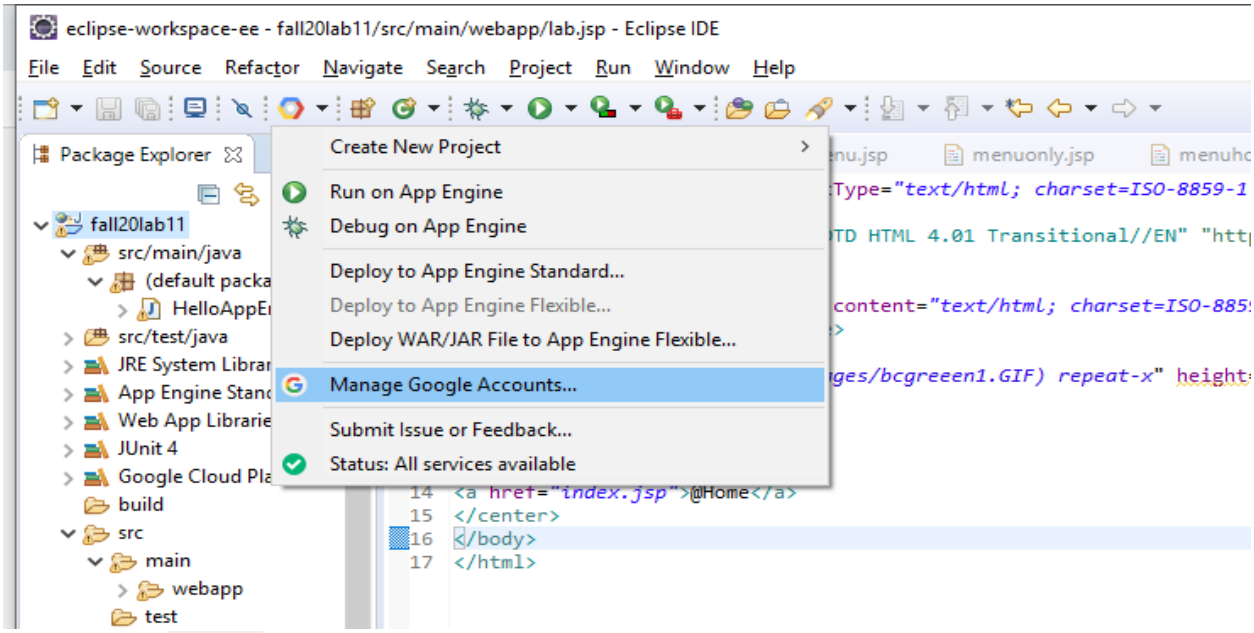


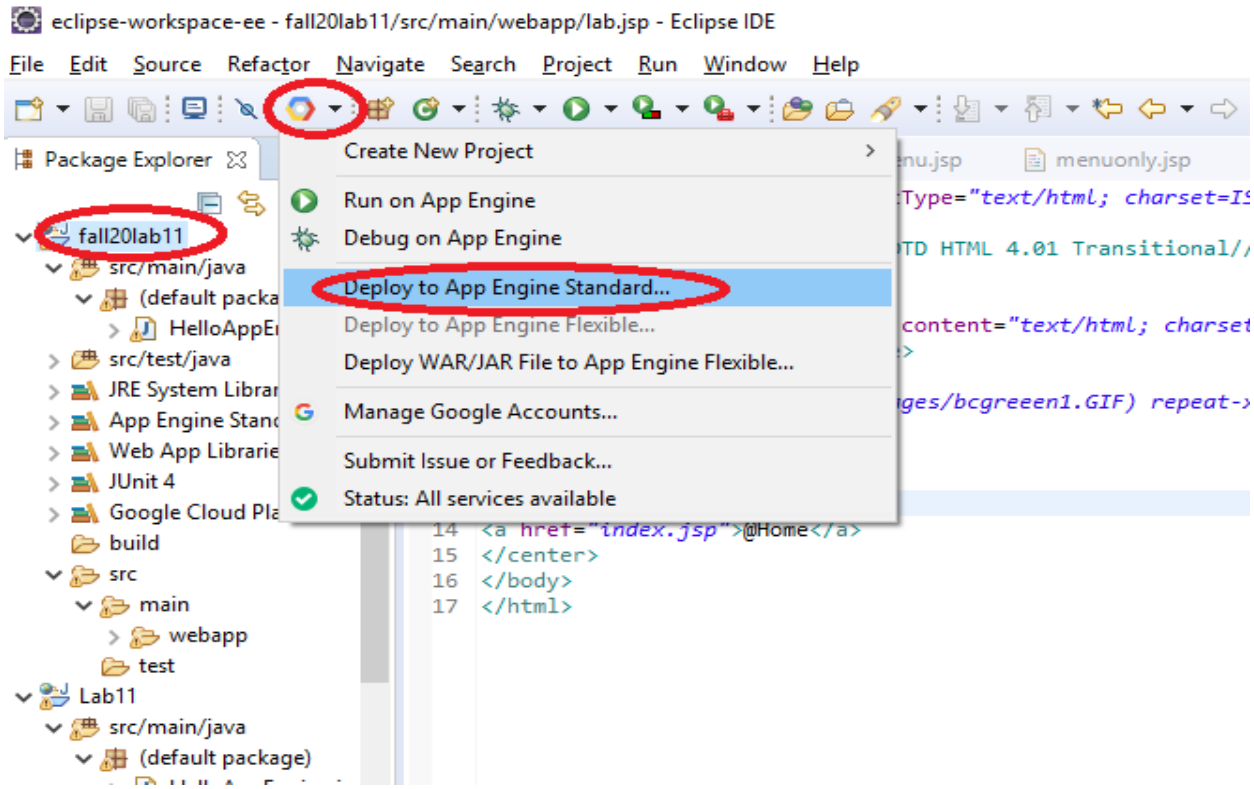

If everything is ok and you have completed ALL the TODOs and thoroughly tested your web app, terminate the session by pressing the red square in the Eclipse Console, then proceed to Third Part for deployment to App Engine so that anyone can access your website from anywhere.

## Third Part: To Deploy

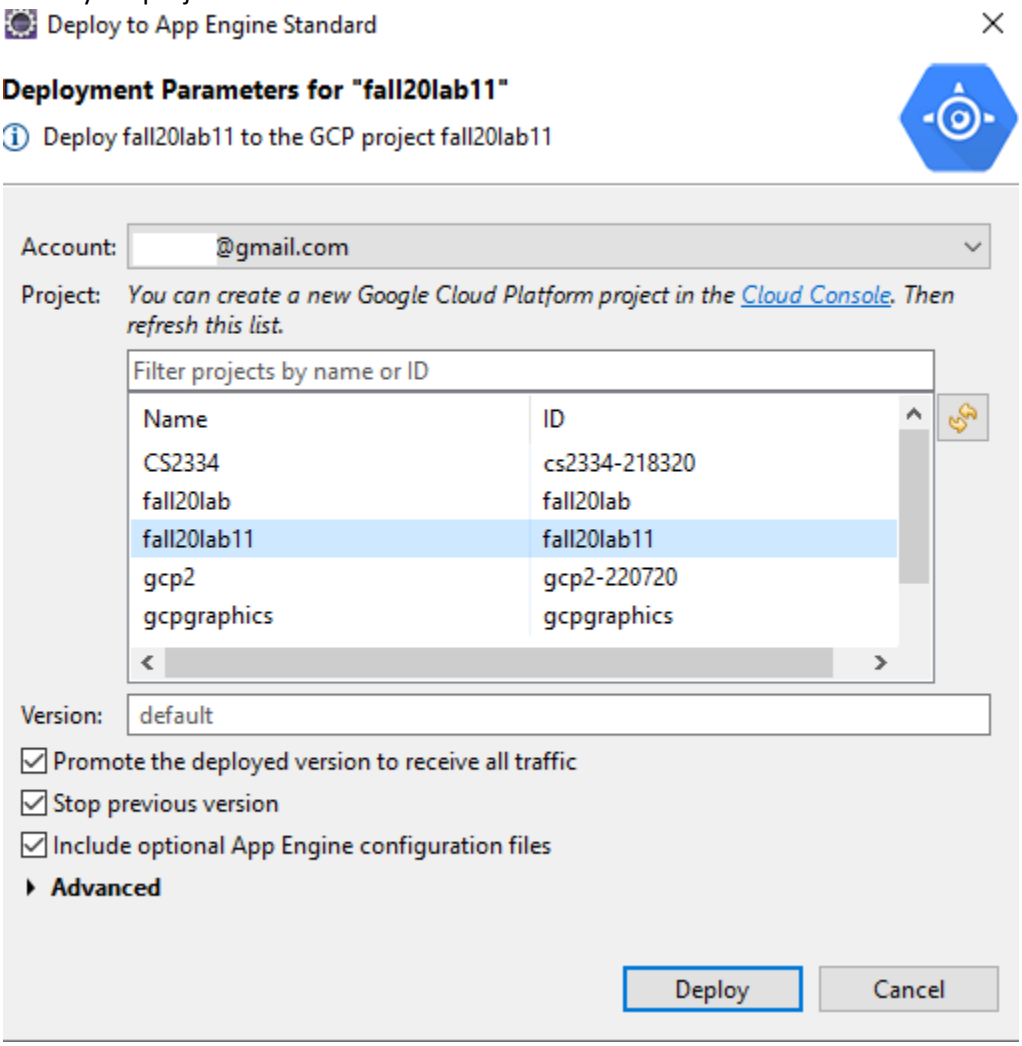
1. From Project Explorer, select Lab11, click on  and Select Google Account Login and give your username and password, I have already synchronized, so it now looks like below:




2. Next, click on  and Select Deploy to App Engine



3. Select your project from GCP:




4. Click Deploy. You will get an url after target url.

```
target project:  [fall20lab11]
target service:  [default]
target version:  [20201201t203634]
target url:      [https://fall20lab11.uc.r.appspot.com]


Beginning deployment of service [default]...
#============================================================#
#= Uploading 41 files to Google Cloud Storage               =#
#============================================================#
File upload done.
```

5. Now you can browse your_url (this is your website) from any internet browser. In the example, the url is: https://fall20lab11.uc.r.appspot.com
6. If you face any problem to browse the login page through your_url, change it to your_url/index.jsp
7. Task for Lab 11: We are not giving any new programming assignment for Lab 11 since you have already Project 4 and Project 5 due in the next week. Take a screenshot of your lab 10 output, save it in the src->main->webapp->images folder as lab.jpg (replace the existing one)
8. After making the change you can deploy again to reflect the change in App Engine. There is no limitation on number of deployments.
9. Submit the full url of your project (e.g. your_url /lab.jsp) on canvas.

*THANKS*

*This is the end of the semester!*