Background

- Google App Engine is a Platform as a Service (PaaS) offering that lets you build and run applications on Google's infrastructure. App Engine applications are easy to build, easy to maintain, and easy to scale as your traffic and data storage needs change.
- Don't forget, PaaS model provides developer or company with needed key services (i.e. Java runtime environment, MySQL) to start applications
- With App Engine, there are no servers for you to maintain. You simply upload your application and it's ready to go.
- Using App Engine's Java runtime environment, you can build your application using standard Java technologies.
- **App Engine's java runtime environment is JRE7 (Jdk1.7), So it's very important to make your eclipse support jdk 1.7 and your application uses jdk 1.7**

Now let's create our hello world google app engine project

1- Open your browser and sign in to https://appengine.google.com using your Gmail account.
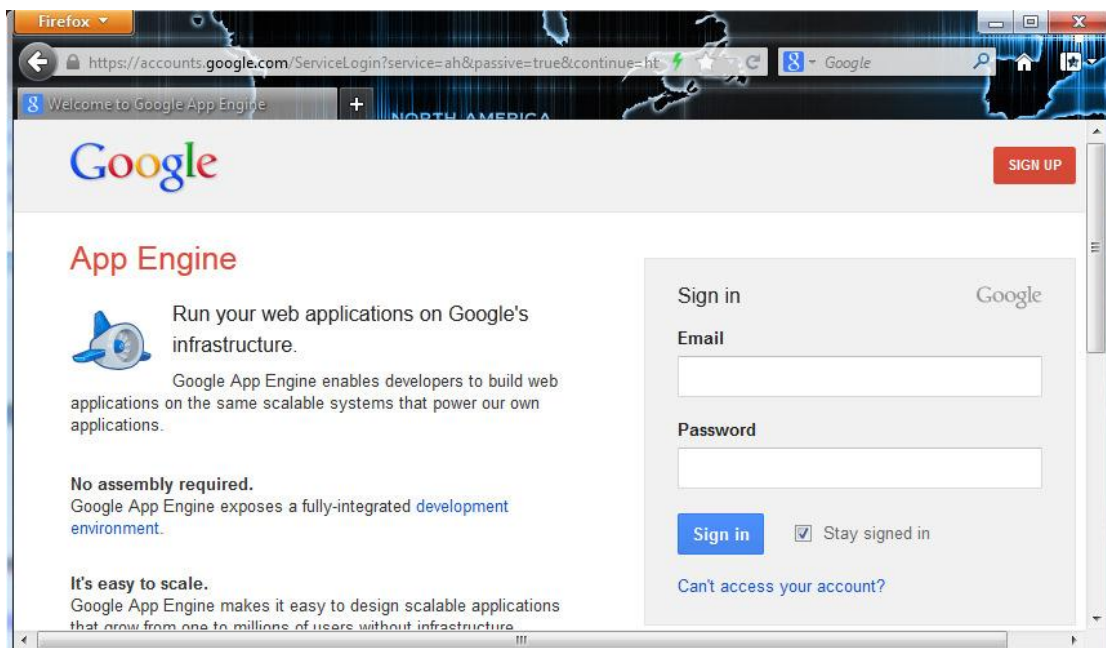
2- Click on " Create Application"

My Applications

‹ Prev 20 **1-1 of 1** Next 20 ›

Application	Title	Storage Scheme	Status
heroic-cedar-693	My Project	High Replication	None Deployed

Create Application

‹ Prev 20 **1-1 of 1** Next 20 ›

You have 24 applications remaining.

3- Google may ask you to verify your mail with a message to your mobile, so google may ask you about your phone number

4- So you will now see this screen

Google app engine

mhmdsamir92@gmail.com | My Account | Help | Sign out

Create an Application

You have 22 applications remaining.

Application Identifier:

swe-lab3   .appspot.com   Check Availability

All Google account names and certain offensive or trademarked names may not be used as Application Identifiers.
You can map this application to your own domain later. Learn more

Application Title:

Displayed when users access your application.

Authentication Options (Advanced):   Learn more

Google App Engine provides an API for authenticating your users, including Google Accounts, Google Apps , and OpenID. If you choose to use this feature for some parts of your site, you'll need to specify now what type of users can sign in to your application:

⦿ Open to all Google Accounts users (default)
    If your application uses authentication, anyone with a valid Google Account may sign in.

◯ Restricted to the following Google Apps domain:

Put your application identifier and click "create application" button in the bottom of this page, it's very important to remember this application identifier

5- If your application id is valid and available you should see this screen

Google app engine

mhmdsamir92@gmail.com | My Account | Help | Sign out

Application Registered Successfully

The application will use **swe-lab3** as an identifier. This identifier belongs in your application's configuration as well. Note that this identifier cannot be changed. Learn more

The application uses the **High Replication** storage scheme. Learn more

If you use Google authentication for your application, **swe-lab3** will be displayed on Sign In pages when users access your application.
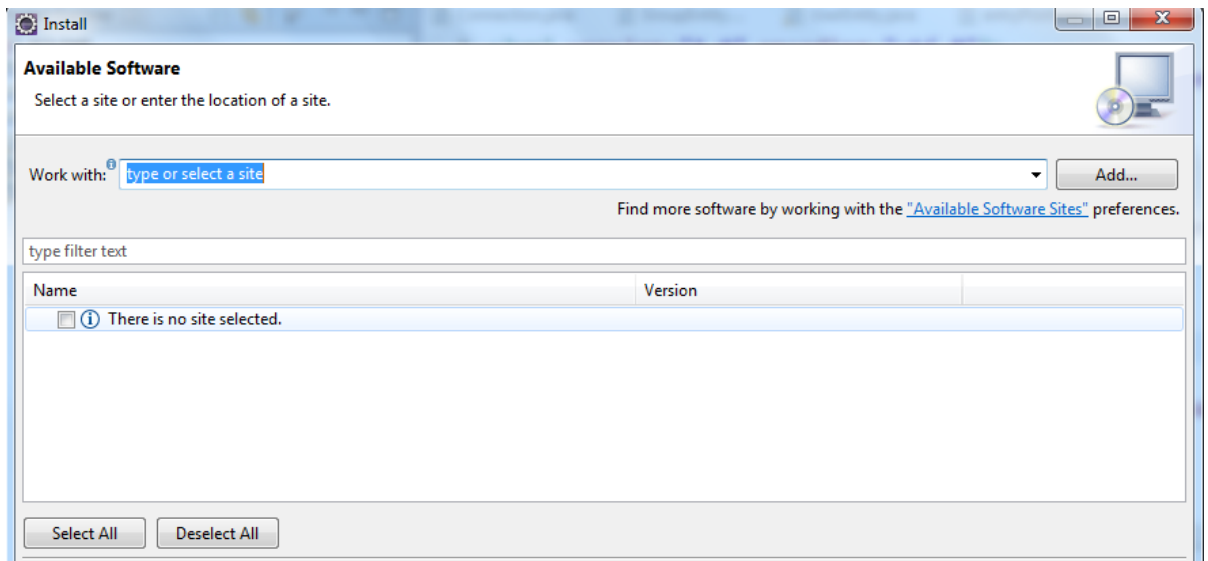
Choose an option below:

- View the dashboard for swe-lab3.
- Use appcfg to upload and deploy your application code.
- Add administrators to collaborate on this application.

6- Now open your eclipse, your eclipse should be support JavaEE, in the next steps we will work with Eclipse luna 4.4

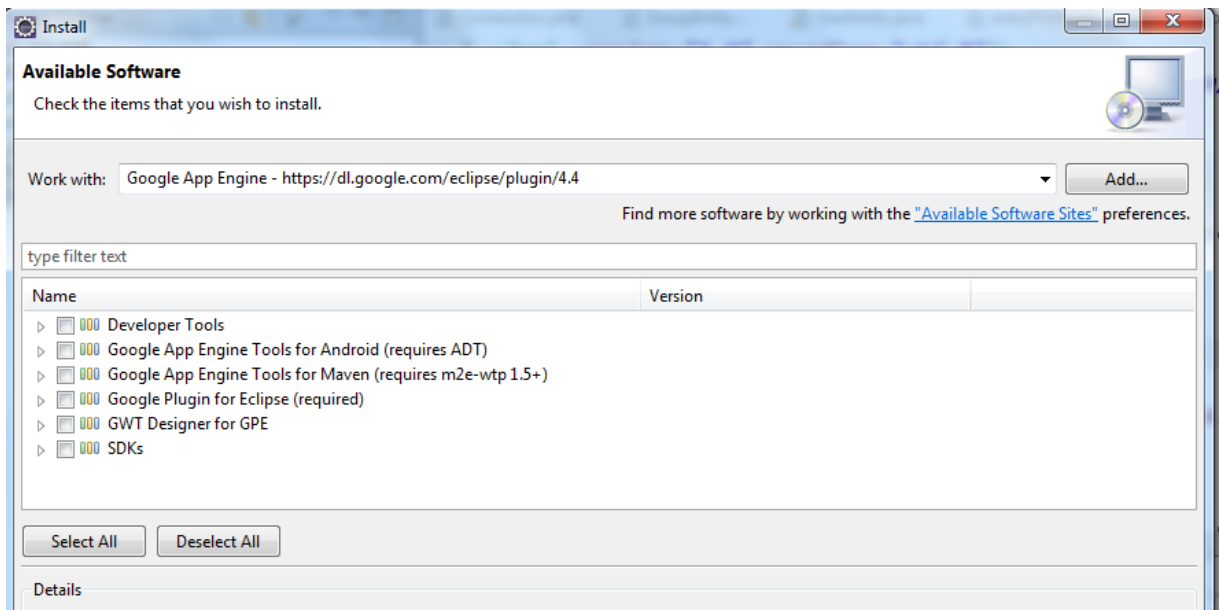7- Click help then install new software, you should see screen like this

8- Click Add, input box should appear with two required parameters (name, location) In name enter "Google App Engine" and enter this url in location
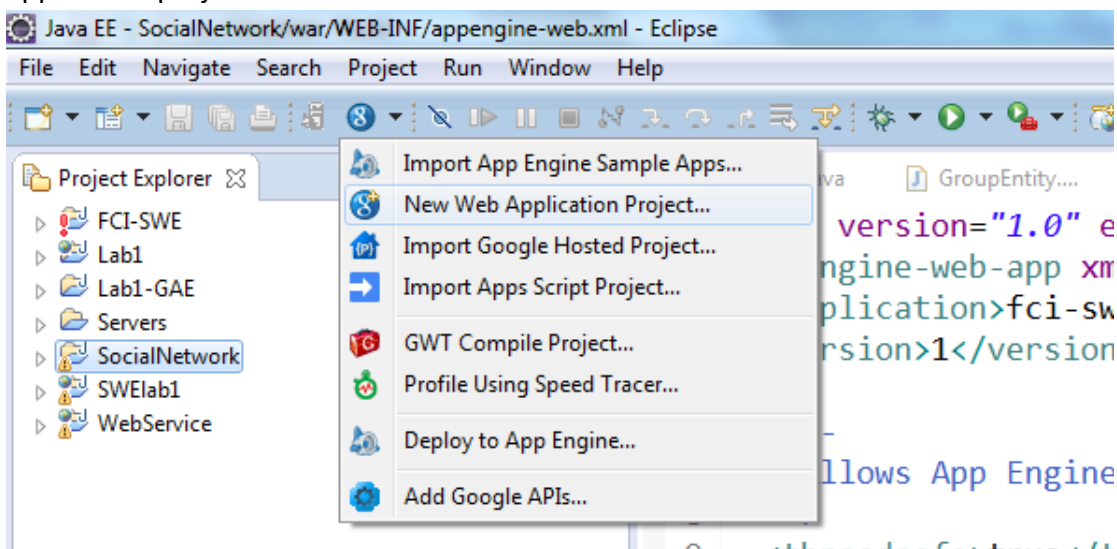https://dl.google.com/eclipse/plugin/4.4
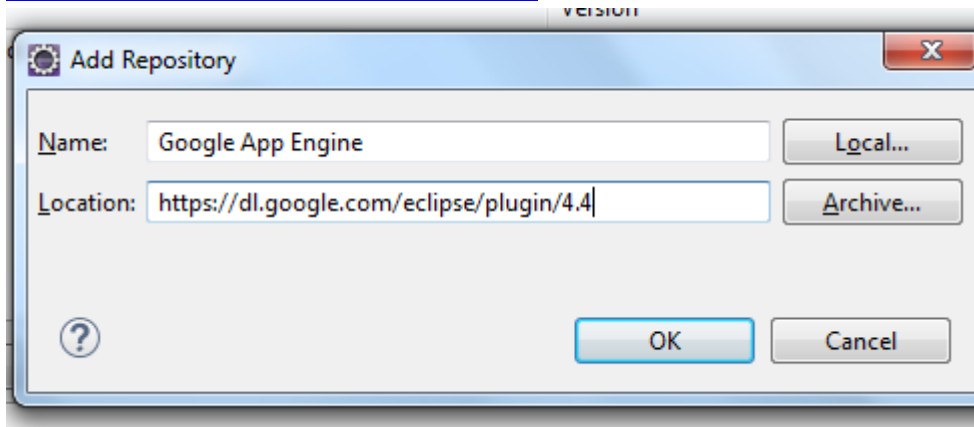
9- Then, you should see screen like this

Select Google plugin for eclipse and SDKs and Google App Engine Tools for Maven,
Developer tools and Google App Engine Tools for Android is needed for android
applications, GWT is optional extension for Google App Engine

10- Click next then finish, download will start

11- After finishing download plugins, let's create web application based on google app
engine plugin, click on dropdown beside google "g" icon, then click new web
application project

12- Choose application name and package, **uncheck googlegwt just like this**

13- Click finish then your project will be created

14- Then your project will show up in project explorer in the left side, we will now make small modification in index.html

15- Expand project, then war you will see index.html
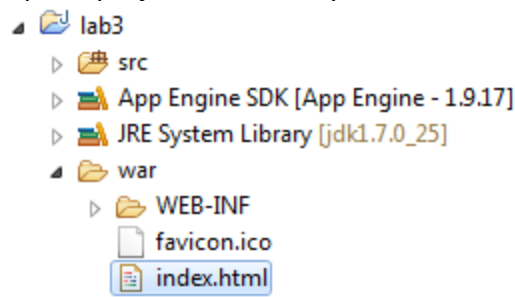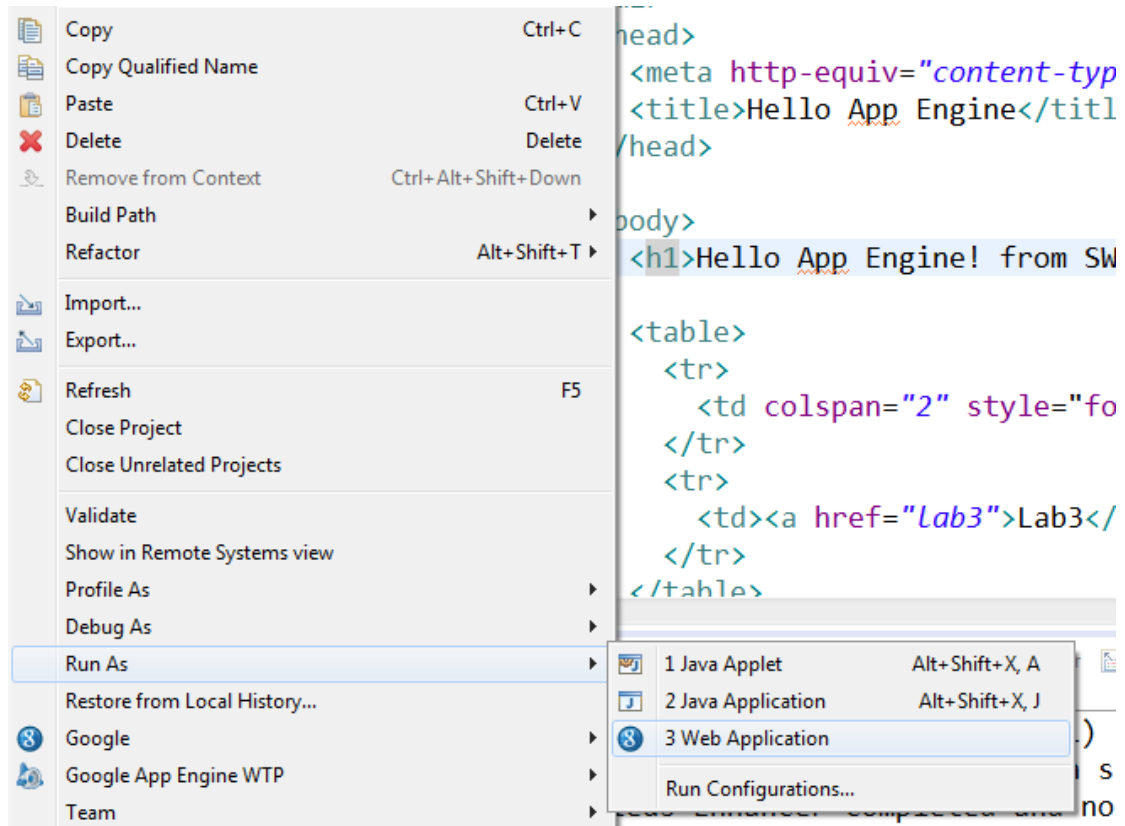

16- Open this html file, modify <h1> element with any new value (i.e. HelloAppEngine from SWE course)

17- Now let's run this project locally (on local host)

18- Right click on project then RunAs then web application

19- Your project will be deployed on local host, there will be some updates in your console, your console should show something like this to be sure that your project is deployed successfully

20- On any browser, copy link in the second line in previous picture (http://localhost:8888/) and paste it on browser

21- You will see something like this

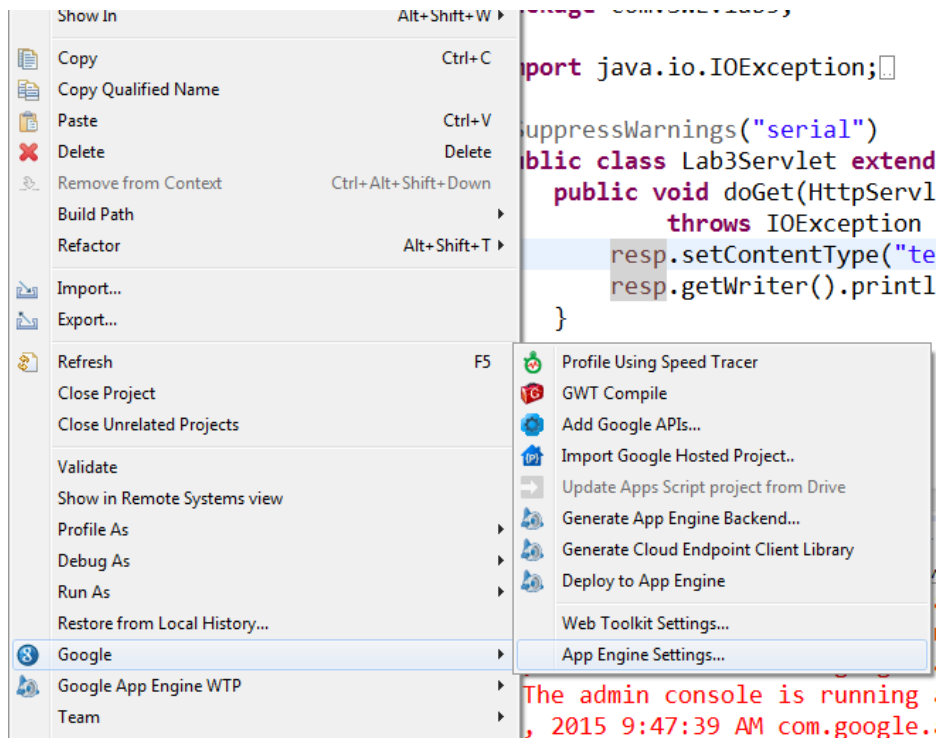# Hello App Engine! from SWE course

Available Servlets:

Lab3

22- Note: Google App Engine server is jetty server, **you are allowed to deploy only one application on this server**

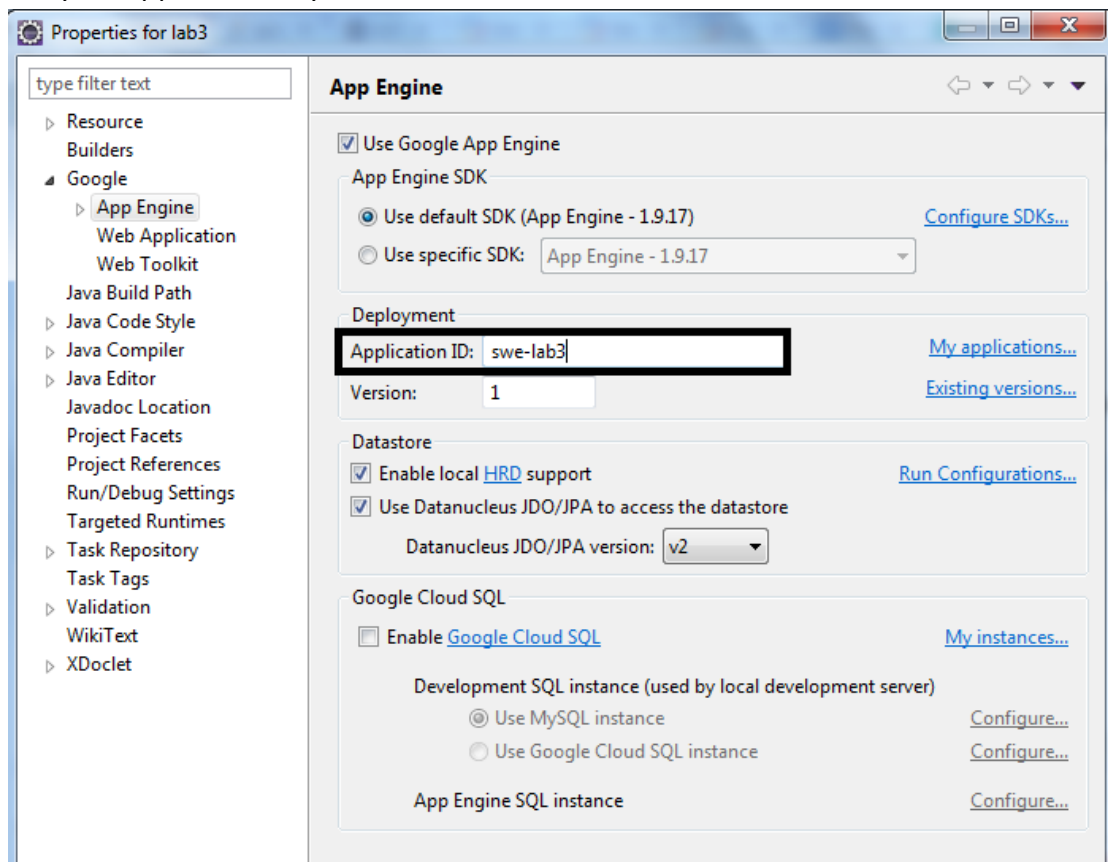23- Now we are going to deploy this application online, **check your internet connection**

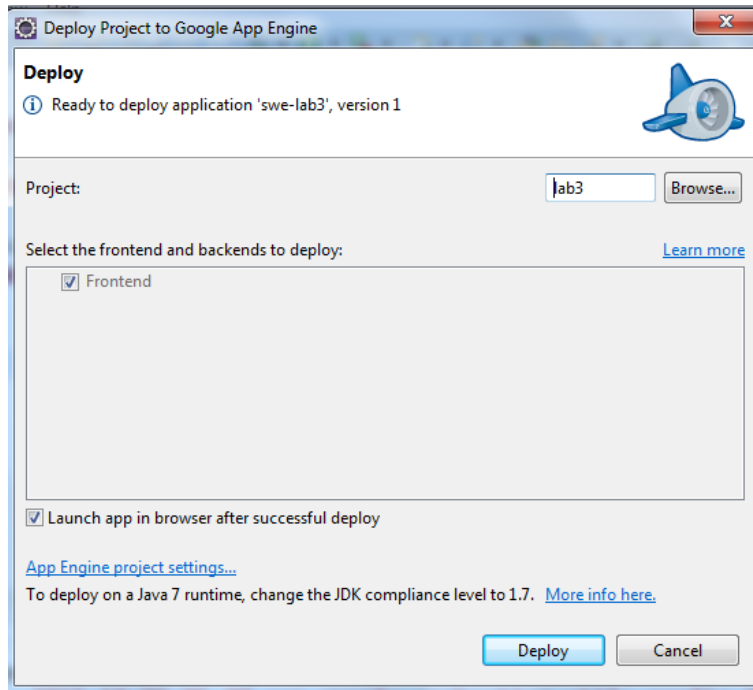24- Right click on your project, then google then App Engine Settings

25- Put your application id you created earlier, then click ok
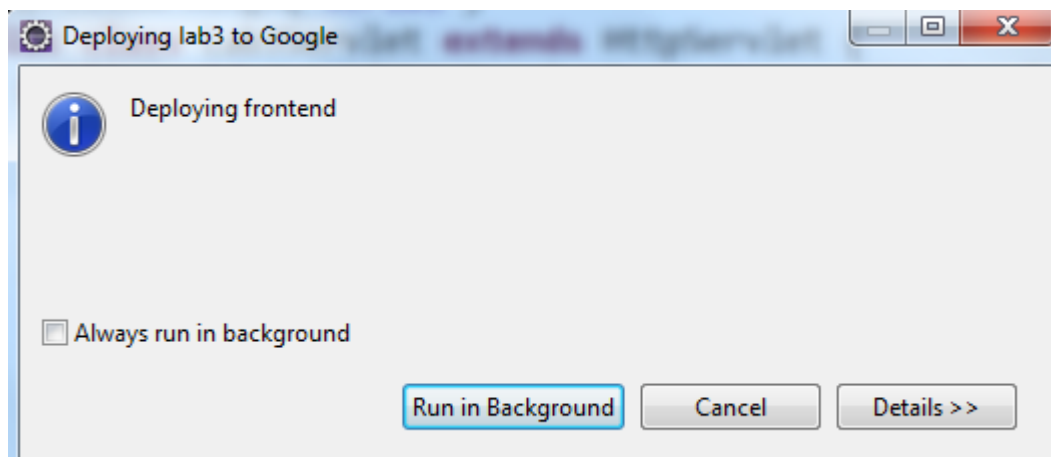
26- Right click on your project, Google, Deploy to App Engine, Eclipse will ask you to enter your gmail which you use to create application, allow google to use your gmail to deploy project, then you should see screen like this
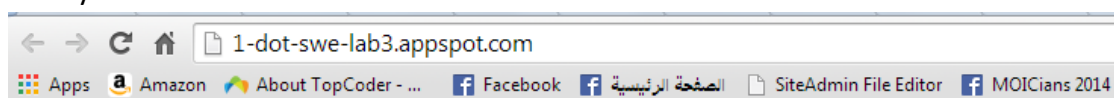

27- Click on Deploy, wait some minutes

28- Then

29- Finally ☺

CS352 | Lab 3
Google App Engine

Cairo University

Faculty of Computers and Information

References

CS4504 Lab (2014) Part I: Google AppEngine

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