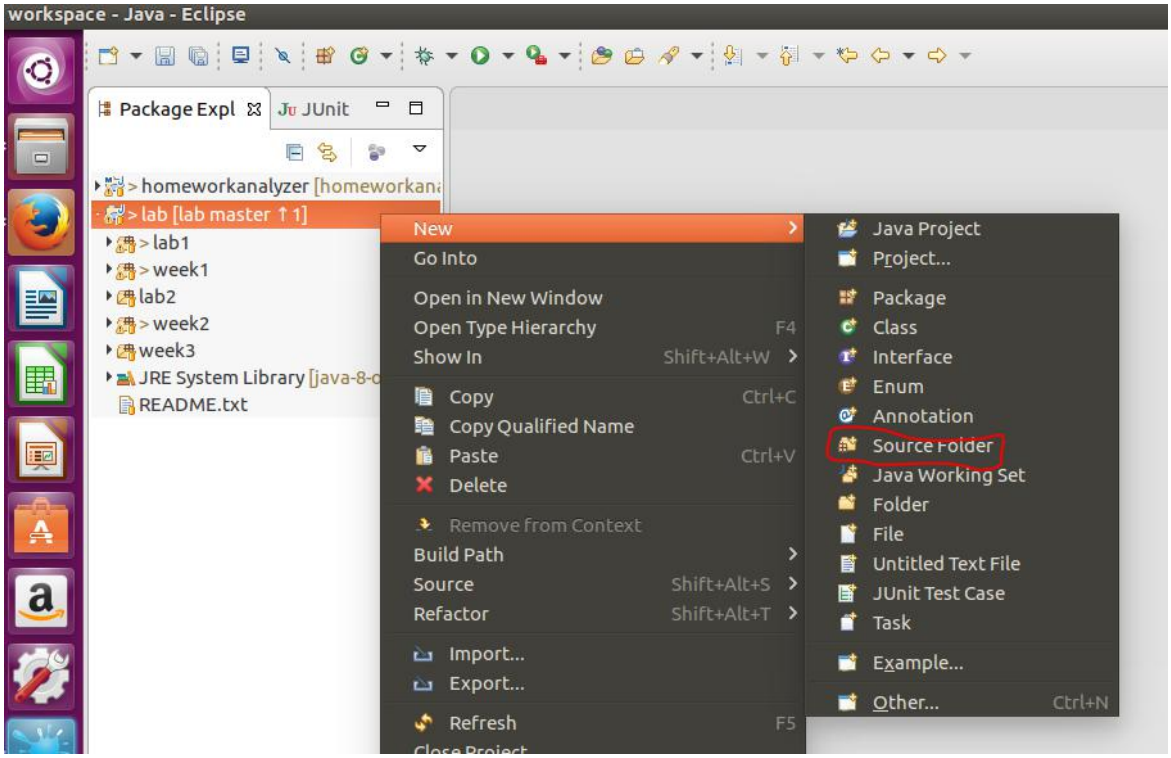
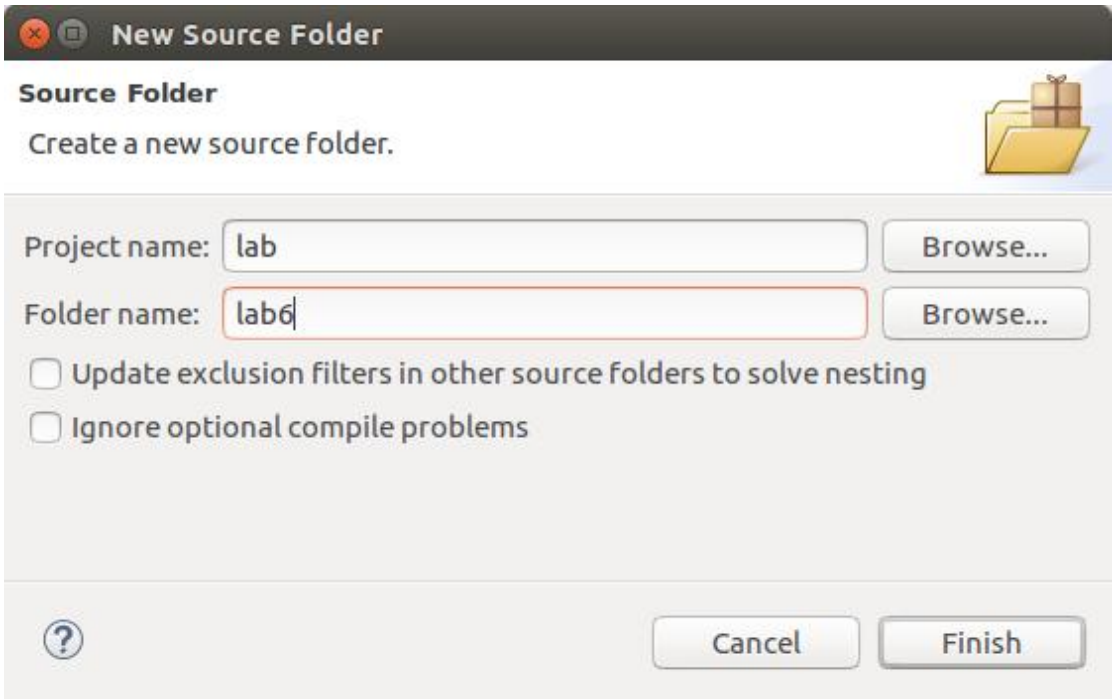
Lab 6: Packages and Java API

Setup: Create a source folder named lab6

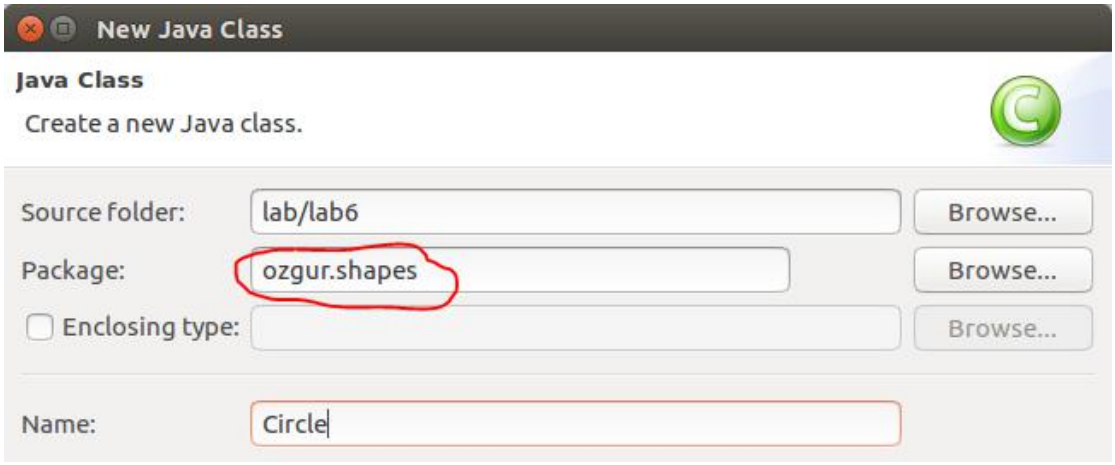
1. Create a source folder named “lab6”





Exercise 1 : Create a Circle Class in a package

1. Create a Circle class in package named “yourname.shapes”
   a) If you are using Eclipse create your class as shown below. Replace “ozgur” with your name!



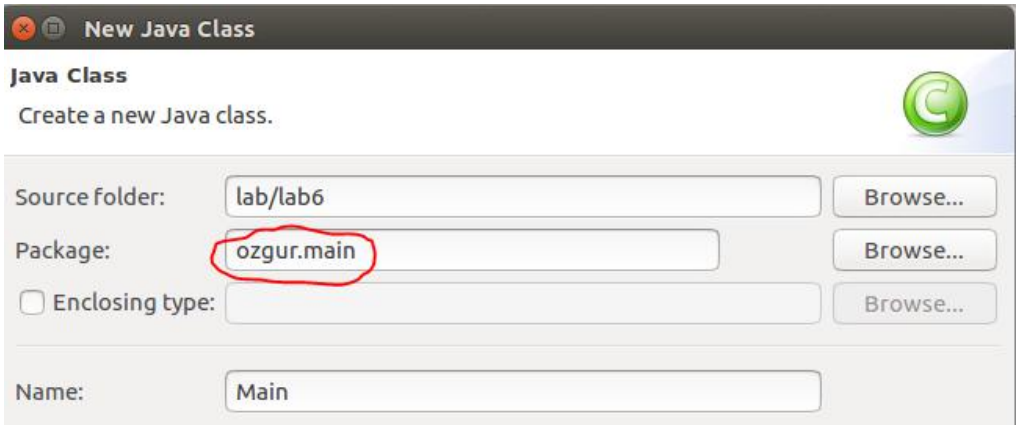
   b) If you are using text editor, create a directory and name the directory as your name in “lab6” directory. In this directory, create “shapes” directory. In this “shapes” directory, create a java file called Circle.java. The first line of this file should be:

```
package yourname.shapes;
```

   where yourname is your name. And define Circle class after this line.
2. In Circle class, declare radius as instance variable. Define the Circle constructor to accept and initialize the radius. Include method that calculate and return the area of the circle.
3. If you are not using Eclipse compile Circle.java. In order compile you should execute the following command in “lab6” directory.
   javac yourname/shapes/Circle.java

Exercise 2: Importing Circle class

1. Create a Main class in package named “yourname.main”
   a) If you are using Eclipse create your class as shown below. Replace “ozgur” with your name!



b) If you are using text editor, create “main” directory in “yourname” directory. In this “main” directory, create a java file called Main.java. The first line of this file should be:

```
package yourname.main;
```

where yourname is your name. And define Main class after this line.

2. In Main class, declare the “public static void main” method. In this method declare and create three instance of Circle class. Note that you should import the Circle class in Main class.

```
import yourname.shapes.Circle;
```

Exercise 3: Importing ArrayList class

1. In the main method of Main class create an instance of ArrayList class. Note that you should import the ArrayList class of Java API.

```
import java.util.ArrayList;
```

2. Add the three Circle instances to the ArrayList instance.
3. Loop the ArrayList and print the ares of each circle.
4. If you are not using Eclipse compile Circle.java. In order to compile you should execute the following command in “lab6” directory.

javac yourname/main/Main.java

5. Run the Main class. If you are not using Eclipse you should execute the following command in “lab6” directory.

java yourname.main.Main

NOTE: Your lab will **not be graded** if

- Your account name does not have the format described in lab1.pdf
- Your repository name is not lab
- Your files have compilation errors
- You haven’t complete the steps described in exercises
- Your added/modified files are not submitted to Bitbucket.
  - You have to add commit and push files as described in lab1.pdf