

North South University

Department of Electrical and Computer Engineering

CSE 215L: Programming Language II Lab

Lab - 14: Packages & Interface

Learning Objectives:

- to learn about packages and its applications
- to learn about Interface and its applications

Reference for Packages: https://www.w3schools.com/java/java_packages.asp

Reference for Interface: https://www.w3schools.com/java/java_interface.asp

Lab Task:

<pre><< interface >> Shape</pre>
<pre>+ getArea(): double + getPerimeter(): double</pre>

<pre>Triangle</pre>
<pre>- base: double - height: double</pre>
<pre>+ Triangle() + Triangle(b: double, h: double) + setBase(b: double): void + setHeight(h: double): void + getBase(): double + getHeight(): double + getArea(): double + getPerimeter(): double + toString(): String</pre>

<pre>Rectangle</pre>
<pre>- length: double - width: double</pre>
<pre>+ Rectangle() + Rectangle(l: double, w: double) + setLength(l: double): void + setWidth(w: double): void + getLength(): double + getWidth(): double + getArea(): double + getPerimeter(): double + toString(): String</pre>

Suppose, Shape is an interface and Triangle, Rectangle are two classes those implement that interface. Now accomplish the following tasks.

a) Create an instance of the Triangle and Rectangle class respectively and you must read their initialization values from the user.

b) Print the status of both instances using the toString() method.

[Hint: Status for Triangle instance: base: p, height: q, area: r and perimeter: s and Status for Rectangle instance: length: p, width: q, area: r and perimeter: s, where p, q, r, s are real numbers.]