

COM 102 – OBJECT ORIENTED PROGRAMMING DURING LAB Assignment#4

Academic Year: Spring 2016

Date : March 29, 2016

Course Instructor: Assoc. Prof. Dr. I.Furkan INCE

Course Assistant: Res.Asst. Arzum KARATAŞ & Res.Asst. Feyza GALIP

1- General Exercises:

- a. Write a java application called “**MistryOfScoping**” showing shadowing.
- b. Write a java application for demonstration of **method overloading** concept. (Ex: divide methods with different return type or with different parameter type)
- c. Write a **SimpleMath** class has two constants PI and E (which are 3.141592653589793 and 2.718281828459045, respectively.) Also, it should achieve the following tasks:
 - produce a random number
 - find square of a number
 - find cube of a number
 - convert an integer to float
 - convert a float to integer
- d. Write a java application for demonstration of **arrays**.

2- Write a class named as “**Point**” that has a *position* represented on 2-D space. It can perform the following tasks:

- show the position of that point
- calculate the distance between current point and an arbitrarily given position.
- return String representation of a point.

Then, write a java application for calculating the distance between randomly generated two points. (**Hint:** reuse your Position class.)

*Please, before coding, draw a UML class diagram for the classes. (You can draw on to a paper or use an UML drawing tool)