



CSE 215L: Programming Language II Lab

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Quiz 1–Summer 2021, Total: 30 points

Duration: 50 minutes (to code) + 5 minutes (to submit)

Submission guideline:

1. Create a single project with name Quiz1_YOUR_ID.
2. Inside the project create 3 separate classes namely Task1_YOUR_ID.java, Task2_YOUR_ID.java, and Task3_YOUR_ID.java for the 3 tasks respectively.
3. You need to submit your codes in “**Online Quiz I**” assignment.

Note: Your quiz will be marked on your submitted code only. Therefore, if you fail to submit legitimate files maintaining the given guidelines, you have to accept the consequences.

Task – 1

10 points

(Geometry: area of a regular polygon) A regular polygon is an n-sided polygon in which all sides are of the same length and all angles have the same degree (i.e., the polygon is both equilateral and equiangular). The formula for computing the area of a regular polygon is

$$\text{Area} = \frac{n * s^2}{4 * \tan \frac{\pi}{n}}$$

Write a program that prompts the user to enter the number of sides and the side of a regular polygon and displays its area. Here is a sample run:

```
Enter the side: 5.5
Enter the number of sides: 5
The area of the polygon is 52.04444136781625
```

Task – 2

10 points

Write a program that determines if a person is overweight or not.

The program will prompt the user for an age, and a weight in kilograms. If the age is less than 40, and the weight in kilogram is more than 90, the person is overweight otherwise not overweight. Here is a sample run:

```
Enter the age: 47
Enter the weight in kilograms: 100
You are overweight.
```

Task – 3**10 points**

(Display pyramid) Write a program that prompts the user to enter an integer from 1 to 15 and displays a pyramid, as shown in the following sample run:

Enter the number of lines: 7

```
      1
     3 1 3
    5 3 1 3 5
   7 5 3 1 3 5 7
  9 7 5 3 1 3 5 7 9
 11 9 7 5 3 1 3 5 7 9 11
13 11 9 7 5 3 1 3 5 7 9 11 13
```