

## OOP Assignment – 1

**Deadline: 7-Dec-2021 11:00 PM**

1. Write a Java program that prompts the user for an integer and then prints out all the prime numbers up to that Integer?
2. Write a Java program that checks whether a given string is a palindrome or not. Ex: MADAM is a palindrome?
3. Write a Java program for sorting a given list of names in ascending order?
4. Write a Java program that reads a line of integers and then displays each integer and the sum of all integers.
5. Write a Java program to display the following star pattern

```
*****
*****
*****
*****
*****
```

- a. Square Star Pattern

```
*****
*      *
*      *
*      *
*      *
*****
```

- b. Hollow Square Star Pattern

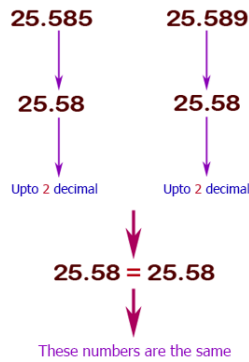
```
 *
***
*****
*****
*****
```

- c. Pyramid Star Pattern

```
*****
*****
*****
***
*
```

- d. Inverted Pyramid Star Pattern

6. Write a Java program that accepts three numbers from the user and prints "increasing" if the numbers are in increasing order, "decreasing" if the numbers are in decreasing order, and "Neither increasing or decreasing order" otherwise.
7. Write a Java program that accepts two floating-point numbers and checks whether they are the same up to two decimal places.



8. Write a Java program to compute body mass index (BMI).

**Note:**

The formula is **BMI = kg/m<sup>2</sup>** where kg is a person's weight in kilograms and m<sup>2</sup> is their height in metres squared.

9. Write a Java program to takes the user for a distance (in meters) and the time was taken (as three numbers: hours, minutes, seconds), and display the speed, in meters per second, kilometers per hour and miles per hour (hint: 1 mile = 1609 meters).

**Example**

Input distance in meters: 2500

Input hour: 5

Input minutes: 56

Input seconds: 23

Expected Output:

Your speed in meters/second is 0.11691531

Your speed in km/h is 0.42089513

Your speed in miles/h is 0.26158804

10. Write a java program to check weather a given number is Armstrong number or not.

**Note:**

An Armstrong number of a three-digit number is a number in which the sum of the cube of the digits is equal to the number itself. Hence 153 is an Armstrong number.

Note:

Accept the assignment from the given link below.

Batch 30A

<https://classroom.github.com/a/1HuQUuEv>

Batch 30B

<https://classroom.github.com/a/2Lt2Dd-P>