## TAKE HOME AND SOLVE FOLLOWING PROBLEMS

# **Solve the Following Problems**

**Problem 1:** Print your name in reverse order? Get second letter of your name from string? Check that your name is palindrome or not?

**Problem 2:** Write a program which will find all such numbers which are divisible by 7 but are not a multiple of 5, between 2000 and 3200 (both included).

The numbers obtained should be printed in a comma-separated sequence on a single line.

### **Hints:**

Consider use range(#begin, #end) method

## **Problem 3:**

With a given integral number n, write a program to generate a dictionary that contains (i, i\*i) such that is an integral number between 1 and n (both included). and then the program should print the dictionary.

Suppose the following input is supplied to the program:

8

Then, the output should be:

```
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64}
```

#### **Hints:**

In case of input data being supplied to the question, it should be assumed to be a console input.

Consider use dict()

### **Problem 4:**

Write a program that calculates and prints the value according to the given formula:

## Q = Square root of [(2 \* C \* D)/H]

Following are the fixed values of C and H:

C is 50. H is 30.

D is the variable whose values should be input to your program in a comma-separated sequence.

## **Example**

Let us assume the following comma separated input sequence is given to the program:

100,150,180

The output of the program should be:

## TAKE HOME AND SOLVE FOLLOWING PROBLEMS

18,22,24

### Hints:

If the output received is in decimal form, it should be rounded off to its nearest value (for example, if the output received is 26.0, it should be printed as 26)

In case of input data being supplied to the question, it should be assumed to be a console input.

## **Problem 5:**

Python has many built-in functions, and if you do not know how to use it, you can read document online or find some books. But Python has a built-in document function for every built-in functions.

Please write a program to print some Python built-in functions documents, such as abs(), max(),sum()And add document for your own function

### Problem 6:

Define a function that can accept two strings as input and concatenate them and then print it in console.

**Problem 7:** Write a function to compute Euclidean distance of 4 points, Points Should be 2D(x,y),

## Hint:

Point A(x,y) taken as initial Point and Point B(x,y) taken as Destination Point.

Then find Euclidean distance between A&C and as well for 4<sup>th</sup> Distance.

### **Problem 8:**

Create two list in python, perform list operations like as .append(), .insert(), .del() etc.

Create a 2D array in python, print their values.

### **Problem 9:**

Write python code that will generate Fibonacci series between two numbers?

# **Problem 10:**

Write python program for BMI (Body Mass Index) calculator.