

## ASSIGNMENT 1

1. Python program to find the largest number among the three input numbers
2. Python program to find the factorial of a number provided by the user
3. 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.

4. With a given integral number  $n$ , write a program to generate a dictionary that contains  $(i, i*i)$  such that  $i$  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}

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

$Q = \text{Square root of } [(2 * C * D)/H]$

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.

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

100,150,180

The output of the program should be:

18,22,24

6. Write a program which takes 2 digits,  $X, Y$  as input and generates a 2-dimensional array. The element value in the  $i$ -th row and  $j$ -th column of the array should be  $i*j$ .

Note:  $i=0,1,.., X-1$ ;  $j=0,1,.., Y-1$ .

Suppose the following inputs are given to the program:

3,5

Then, the output of the program should be:

[[0, 0, 0, 0, 0], [0, 1, 2, 3, 4], [0, 2, 4, 6, 8]]

7. Write a program that accepts a comma separated sequence of words as input and prints the words in a comma-separated sequence after sorting them alphabetically.

Suppose the following input is supplied to the program:

without,hello,bag,world

Then, the output should be:

bag,hello,without,world

8. Write a program that accepts sequence of lines as input and prints the lines after making all characters in the sentence capitalized.

Suppose the following input is supplied to the program:

Hello world

Practice makes perfect

Then, the output should be:

HELLO WORLD

PRACTICE MAKES PERFECT

9. Write a program that accepts a sentence and calculate the number of letters and digits.

Suppose the following input is supplied to the program:

hello world! 123

Then, the output should be:

LETTERS 10

DIGITS 3

10. Write a program that accepts a sentence and calculate the number of upper case letters and lower case letters.

Suppose the following input is supplied to the program:

Hello world!

Then, the output should be:

UPPER CASE 1

LOWER CASE 9