Engineering College Jhalawar Rajasthan

B.Tech 3rd year 6th semester, 2020-21

Python Programming Language Lab

Assignment

Topic: Basics

1. Write a Python program to print the following string in a specific format   
   ***Sample String*** *:* "Twinkle, twinkle, little star, How I wonder what you are! Up above the world so high, Like a diamond in the sky. Twinkle, twinkle, little star, How I wonder what you are"

***Output :***

Twinkle, twinkle, little star,

How I wonder what you are!

Up above the world so high,

Like a diamond in the sky.

Twinkle, twinkle, little star,

How I wonder what you are

1. Write a Python program which accepts the radius of a circle from the user and compute the area.
2. Write a program which can compute the factorial of the given numbers. The results should be printed in a comma-separated sequence on a line. Suppose the following input is supplied to the program: 8. Then the output should be 40320.
3. Write a Python program to test whether a number is within 100 of 1000 or 2000.
4. Write a Python program to calculate the sum of three given numbers, if the values are equal then return three times of their sum.
5. Write a Python program to test whether a passed letter is a vowel or not.
6. Write a Python program to concatenate all elements in a list into a string and return it
7. Write a Python program to print all even numbers from a given numbers list in the same order and stop the printing if any numbers that come after 237 in the sequence.  
   Sample numbers list :

numbers = [

386, 462, 47, 418, 907, 344, 236, 375, 823, 566, 597, 978, 328,615, 953, 345,399, 162, 758, 219, 918, 237, 412, 566, 826, 248, 866,950, 626, 949, 687, 217, 815, 67, 104, 58, 512, 24, 892, 894, 767, 553, 81, 379, 843, 831, 445, 742, 717, 958,743, 527

]

1. Write a Python program to print out a set containing all the colors from color\_list\_1 which are not present in color\_list\_2.

Test Data :   
color\_list\_1 = set(["White", "Black", "Red"])   
color\_list\_2 = set(["Red", "Green"])

Expected Output :   
{'Black', 'White'}

1. Write a Python program to get the least common multiple (LCM) of two positive integers.
2. Write a Python program to compute the distance between the points (x1, y1) and (x2, y2).
3. Write a Python program to convert height (in feet and inches) to centimeters.
4. Write a Python program to swap two variables.
5. Write a Python function that takes a sequence of numbers and determines whether all the numbers are different from each other.
6. Write a Python program to find the median among three given numbers.
7. Write a Python program to create a sequence where the first four members of the sequence are equal to one, and each successive term of the sequence is equal to the sum of the four previous ones. Find the Nth member of the sequence.
8. Write a Python program to print the length of the series and the series from the given 3rd term, 3rd last term and the sum of a series.   
   Sample Data:  
   Input third term of the series: 3  
   Input 3rd last term: 3  
   Sum of the series: 15  
   Length of the series: 5  
   Series:  
   1 2 3 4 5
9. Write a python program to find heights of the top three building in descending order from eight given buildings.   
   **Input:**  
   0 <= height of building (integer) <= 10,000  
   Input the heights of eight buildings:  
   25  
   35  
   15  
   16  
   30  
   45  
   37  
   39  
   Heights of the top three buildings:  
   45  
   39  
   37
10. Write a Python program to compute the digit number of sum of two given integers.  
    **Input:**  
    Each test case consists of two non-negative integers x and y which are separated by a space in a line.  
    0 <= x, y <= 1,000,000  
    Input two integers(a b):   
    5 7  
    Sum of two integers a and b.:  
    2
11. Write a Python program which solve the equation:  
    ax+by=c  
    dx+ey=f  
    Print the values of x, y where a, b, c, d, e and f are given.  
    **Input:**  
    a,b,c,d,e,f separated by a single space.  
    (-1,000 <= a,b,c,d,e,f <= 1,000)  
    Input the value of a, b, c, d, e, f:  
    5 8 6 7 9 4  
    Values of x and y:  
    -2.000 2.000
12. Write a Python program to compute and print sum of two given integers (more than or equal to zero). If given integers or the sum have more than 80 digits, print "overflow".  
    Input first integer:  
    25  
    Input second integer:  
    22  
    Sum of the two integers: 47
13. Write a Python program to that reads a date (from 2016/1/1 to 2016/12/31) and prints the day of the date. Jan. 1, 2016, is Friday. Note that 2016 is a leap year.  
    **Input:**   
    Two integers m and d separated by a single space in a line, m ,d represent the month and the day.  
    Input month and date (separated by a single space):  
    5 15  
    Name of the date: Sunday
14. Write a Python program that reads n digits (given) chosen from 0 to 9 and prints the number of combinations where the sum of the digits equals to another given number (s). Do not use the same digits in a combination.  
    **Input:**   
    Two integers as number of combinations and their sum by a single space in a line. Input 0 0 to exit.  
    Input number of combinations and sum, input 0 0 to exit:  
    5 6  
    2 4  
    0 0  
    2
15. Write a Python program to find the difference between the largest integer and the smallest integer which are created by 8 numbers from 0 to 9. The number that can be rearranged shall start with 0 as in 00135668.   
    **Input:**  
    Input an integer created by 8 numbers from 0 to 9.:  
    2345  
    Difference between the largest and the smallest integer from the given integer:  
    3087
16. Write a Python program to compute the sum of first n given prime numbers. [Go to the editor](https://www.w3resource.com/python-exercises/basic/#EDITOR)  
    **Input:**  
    n ( n <= 10000). Input 0 to exit the program.  
    Input a number (n<=10000) to compute the sum:(0 to exit)  
    25  
    Sum of first 25 prime numbers:  
    1060