Python Programming

Besant Technologies

- Find the square root of a number.
- Calculate the area of a triangle.
- Swap two variables.
- Convert from celsius to Fahrenheit.
- Check if a number is even or odd.
- Check if a given year is leap year or not.
- Find the largest among three numbers.
- Check if a given number is prime or not.
- Print all the prime numbers in a given interval.
- Find the factorial of a given number.
- Print multiplication table for a given number.
- Print the first ‘n’ terms of a fibonacci series.
- Sum of n natural numbers.

Conditionals:

- Find the factors of a given number.
- Print all elements from 1 to 10 except 5.
- Write a Python program which takes two digits m (row) and n (column) as input and generates a two-dimensional array. The element value in the i-th row and j-th column of the array should be i*j.
- Write a Python program to convert month name to a number of days.
- Write a Python program to check a triangle is equilateral, isosceles or scalene.

Practice:

- Check if a given number is a perfect square or not.
- Find two numbers from a list such that the sum of two numbers is a given number.
- Print the elements which are only unique in the list.
- Add the digits of a positive number until it becomes single digit.
- Check if a sequence of numbers is Arithmetic progression or not.
- Push all the zeros to the end of the list.
- Find the most repeated element in a list.

Strings:

Dictionary:

- Write a Python script to sort (ascending and descending) a dictionary by value.
- Write a Python script to check if a given key already exists in a dictionary.
- Write a Python script to generate and print a dictionary that contains a number (between 1 and n) in the form (x, x*x).
- Write a Python program to map two lists into a dictionary.
- Write a Python program to remove duplicates from Dictionary.

Classes:

- Write a Python class to find validity of a string of parentheses, '(', ')', '{', '}', '[' and ']. These brackets must be close in the correct order, for example "()" and "()[]{}" are valid but "[)", "({[)]" and "{{{" are invalid.
- Write a Python class to get all possible unique subsets from a set of distinct integers.
- Write a Python class to reverse a string word by word.
- Write a Python class named Rectangle constructed by a length and width and a method which will compute the area of a rectangle.
- Write a Python class named Circle constructed by a radius and two methods which will compute the area and the perimeter of a circle.
- Write a time class and create two time objects. Create a add_time() method that takes both the objects and add them.

- 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.
- Write a program that accepts a sentence and calculate the number of letters and digits.
- Write a program that accepts a sentence and calculate the number of upper case letters and lower case letters.
- Use a list comprehension to square each odd number in a list.
- Write a program to check the validity of password input by users.Following are the criteria for checking the password:1.. At least 1 letter between [a-z],2. At least 1 number between [0-9],3. At least 1 letter between [A-Z],4. At least 1 character from [$#@],5. Minimum length of transaction password: 6,6.Maximum length of transaction password: 12.

- Define a class with a generator which can iterate the numbers, which are divisible by 7, between a given range 0 and n.
- A robot moves in a plane starting from the original point (0,0). The robot can move toward UP, DOWN, LEFT and RIGHT with a given steps. The trace of robot movement is shown as the following:UP 5,DOWN 3,LEFT 3,RIGHT 2. The numbers after the direction are steps. Please write a program to compute the distance from current position after a sequence of movement and original point. If the distance is a float, then just print the nearest integer.
- Write a program which can map() to make a list whose elements are square of numbers between 1 and 20 (both included). Use map() function.
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Bus reservation System:

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Practice:

- Distribute apples
- Football points
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