

Paper Code: BCADSC 4.7

Paper Title: Python Programming Lab

Teaching Hours: 3 Hrs / Week

Marks: Th-40+IA-10

Credits: 1

Assignment Programs:

Section A:

1. Write a Python function to calculate the factorial of a number (a non-negative integer). The function accepts the number as an argument.
2. Write a Python function that takes a list and returns a new list with unique elements of the first list.
3. Write a Python program of recursion list sum.
4. Write a Python program to get the sum of digits of a non-negative integer.
5. Write a Python program to demonstrate any 5 string operations.
6. Write a Python program that uses List Comprehension to perform any 3 of the following tasks.
 - a. Create an output list which contains only the even numbers from the input list.
 - b. Create an output list which contains squares of all the numbers from 1 to 9.
 - c. Create an output list which extracts all the numbers from an input string.
7. Create an output tuple that converts the words to uppercase from the input tuple of words.
8. Write a Python program to demonstrate any 5 operations performed on dictionary.
9. Write a Python program to create a module Calculation.py that contains functions to perform basic arithmetic operations. Demonstrate importing the module.

Section B:

1. Write a Python program to demonstrate modification of an existing table data from MySQL database.
2. Write a Python class named Circle constructed by a radius and two methods which will compute the area and the perimeter of a circle.
3. Write a Python class named Rectangle constructed by a length and width and a method which will compute the area and perimeter of rectangle. Inherit a class Box that contains additional method volume. Override the perimeter method to compute perimeter of a Box.
4. Write a program to show use of Regular expressions with match(), search(), findall(), sub() and split().
5. Write a python program to demonstrate Exception handling using 'try', 'except', 'finally' and 'else' block.
6. Write a Python GUI program to draw various shapes on Canvas.
7. Write a Python program to read a file line by line store it into an array.
8. Write a Python GUI program to design Student Registration Form using any 5 widgets.

Practice Programs:

1. Write a Python program to solve the Fibonacci sequence using recursion.
2. Write a Python function to check whether a number is perfect or not.
3. Write a Python program to converting an Integer to a String in any base.
4. Write a Python program to count the number of lines in a text file.
5. Write a Python program to copy the contents of a file to another file.