17CI62 PYTHON PROGRAMMING LAB

Lab Exercises

I. Exercise programs on basic control structures & loops.

a) Write a program for checking the given number is even or odd.

b) Using a for loop, write a program that prints the decimal equivalents of 1/2, 1/3, 1/4 ,..... 1/10

c) Write a program for displaying reversal of a number.

d) Write a program for finding biggest number among 3 numbers.

e) Write a program using a while loop that asks the user for a number, and prints a countdown from that number to zero.

II. Exercise programs on operators & I/O operations.

a) Write a program that takes 2 numbers as command line arguments and prints its sum.

b) Implement python script to show the usage of various operators available in python language.

c) Implement python script to read person's age from keyboard and display whether he is eligible for voting or not.

d) Implement python script to check the given year is leap year or not.

III. Exercise programs on Python Script.

a) Implement Python Script to generate first N natural numbers.

b) Implement Python Script to check given number is palindrome or not.

c) Implement Python script to print factorial of a number.

d) Implement Python Script to print sum of N natural numbers.

e) Implement Python Script to check given number is Armstrong or not.

f) Implement Python Script to generate prime numbers series up to n

IV. Exercise programs on Lists.

a) Finding the sum and average of given numbers using lists.

b) To display elements of list in reverse order.

c) Finding the minimum and maximum elements in the lists.

V. Exercise programs on Strings.

a) Implement Python Script to perform various operations on string using string libraries.

b) Implement Python Script to check given string is palindrome or not.

c) Implement python script to accept line of text and find the number of characters, number of vowels and number of blank spaces in it.

VI. Exercise programs on functions.

a) Define a function max_of_three() that takes three numbers as arguments and returns the largest of them.

b) Write a program which makes use of function to display all such numbers which are divisible by 7 but are not a multiple of 5, between 1000 and 2000.

VII. Exercise programs on recursion & parameter passing techniques.

a) Define a function which generates Fibonacci series up to n numbers.

b) Define a function that checks whether the given number is Armstrong

c) Implement a python script for Call-by-value and Call-by-reference

d) Implement a python script for factorial of number by using recursion.

VIII. Exercise programs on Tuples.

a) Write a program which accepts a sequence of comma-separated numbers from console and generate a list and a tuple which contains every number. Suppose the following input is supplied to the program: 34, 67, 55, 33, 12, 98. Then, the output should be: ['34', '67', '55', '33', '12', '98'] ('34',67', '55', '33', '12', '98').

b) With a given tuple (1, 2, 3, 4, 5, 6, 7, 8, 9, 10), write a program to print the first half values in one line and the last half values in one line.

IX. Exercise programs on files.

a) Write Python script to display file contents.

b) Write Python script to copy file contents from one file to another.

X. Exercise programs on searching & sorting Techniques.

a) Implement a python script to check the element is in the list or not by using Linear search & Binary search.

b) Implement a python script to arrange the elements in sorted order using Bubble, Selection, Insertion and Merge sorting techniques.

XI. Exercise programs on Exception handling concepts.

a) Write a python program by using exception handling mechanism.
b) Write a python program to perform various database operations (create, insert, delete, update).