PCAC2201 PYTHON PROGRAMMING LAB. (0-0-3)

Module 1

Programming for Everybody (Getting Started with Python)

Experiment 1: Python Basics

a)Write a program to add two numbers.b

b)Write a program to check whether a number is positive or negative using if-else.

c)Write a program to find the largest number among three numbers.

Experiment 2: Variables, Datatypes, and Operators

a)Write a program to create a menu with addition, subtraction, multiplication, and division.

b)Write a program to check if the string is a palindrome or not.

c)Write a program to find the factorial of a given number.

Experiment 3: Control Systems (If-Else, Loops) and Functions

a. Write a program to read a number and display the corresponding day of the week using if-elif.
b. Write a program that takes two lists and returns True if they are equal, otherwise False.
c. Write a program to prompt for a score between 0.0 and 1.0. If the score is out of range, print an error. If the score is between 0.0 and 1.0, print a grade.
d. Write a program to prompt the user for hours and rate per hour using input to compute gross pay. Pay the hourly rate for the hours up to 40 and 1.5 times the hourly rate for all hours worked above 40 hours. Use 45 hours and a rate of 10.50 per hour to test the program (the pay should be 498.75). You should use input to read a string and float() to convert the string to a number.

Module 2

Python Data Structures

Experiment 4: List and Dictionary

a)Create a list and perform the following methods:

insert (), remove (), append (), len(), pop(), clear()

b) Create a dictionary and apply the following methods:

Print the dictionary items, Access items, Use get(), Change values(), Use len()

c)Create a tuple and perform the following methods:

Add item(), len(), Check for item in tuple, Access items

Experiment 5: Data Structure

a)Write a program to create a linked list and display its elements.

b)Write a program to demonstrate the implementation of a stack using a linked list (using push and pop functions).

c)Write a program to demonstrate the implementation of a queue using a linked list (using the enqueue and dequeue functions).

Experiment 6: File Handling and Exception Management

a)Writing and reading to a text file.

b)Application of seek() and tell().

c)To create a text file and write data in it.

d)To display data from a text file.

e)To perform reading & writing operations in a text file.

Experiment 7: File Handling – Pickle Module

a)Pickling data in Python.

b)Unpickling data in Python.

c)To perform basic operations on a binary file using pickle module.