**Lab-1**

1. Installation of Pycharm
2. Write a python program to design calculator.
3. Write a program to find the area of circle.
4. Write a program to generate two random number and perform left and right shift of generated number.
5. Write a program to swap two numbers.

**Lab-2**

1. Write a program to check whether given number is odd or even.
2. Write a program to check whether given number is prime or not.
3. Write a Python program to get a string made of the first 2 and the last 2 chars from a given a string. If the string length is less than 2, return instead the empty string.
4. Write a Python program to count the number of characters (character frequency) in a string.
5. Write a Python program to change a given string to a new string where the first and last chars have been exchanged.

**Lab-3**

1. Write a program to compute the frequency of largest element in list.
2. Substract two list elements and output new list if the element in the first list are greater.
3. Print all the pelindrom numbers in a list.
4. Write a Python program to check if a 3 digit number is Armstrong number or not.
5. Write Python Program to reverse a number and also find the Sum of digits in the reversed number. Prompt the user for input.
6. Write Python Program to count the number of times an item appears in the list.

**Lab-4**

1. Write Pythonic code to check if a given year is a leap year or not.
2. Write Python program to count the total number of vowels, consonants and blanks in a String.
3. Write Pythonic code to find Mean, Variance and Standard Deviation for a list of numbers.
4. Write a program that accepts a sentence and calculate the number of digits, uppercase and lowercase letters.
5. Write Pythonic code to sort a sequence of names according to their alphabetical order without using sort() function.
6. Write Pythonic code to find the factorial of a number
7. Write Python program to perform a linear search for a given Key number in the list and report Success or Failure.

**Lab-5**

1. Given a tuples containing both int and string remove all the string from tuples.
2. Write a program to count the unique tuples in a list and remove the duplicate tuples.
3. Write a program to calculate min and max values from a list of tuples.
4. Write a program to unzip a list of tuples.
5. Write a program to merge two list.

**Lab-6**

1. WAP to find max and min value in a set and also find the length of the set
2. WAP to create union and intersection of sets
3. WAP to count no of vowels using set in a given string.
4. Write a python program to create a dictionary for library.
5. Write a python program to create computer accessory dictionary and replace dictionary value if price is less than 500.
6. Write a python program to match key values in two dictionary.

**Lab-7**

1. Write a function to calculate the power of number raised to other.
2. Write a password generator function in python which should generate random passwords every time the user ask for a new password. Strong password should be a mix of lower case, uppercase, number and symbol.
3. Write a method to compute addition of two matrices to get a resultant matrix. Call this method in main to have A= B+C+D(where A,B,C,D are matrices).

**Lab-8**

1. Write a python program to read file contain and store that information in another file.
2. Write a python program to read two files and concate it output and write it in third file.

i.e

**12.txt**

World

bye

**11.txt**

hello

hi

**output.txt**

helloWorld

hibye

**Lab-9**

1. Write a python class named circle constructed by a radius and two methods which will compute area and perometer.

## Create a class Demo and also create method test () in it. Overload test () in four ways. First version takes no parameter, the second takes one integer parameter, and the third takes two integer parameters and fourth takes one double parameter.

## create an abstract class shape and derive rectangle and circle from shape class. Implement abstract method of shape class in rectangle and circle class. Shape class contains: origin (x,y) as data member Display() and area() as abstract methods.Circle contains : radious, Rectangle contains : length & width ( user inheritance , overloading and overriding concept.)

**Lab-10**

1. Design any application related to your field using Python.