Assignment List

1. A. Python as a basic Calculator: add, subtract, multiply, and divide two numbers (of any type)
   B. Implement Calculator using Dictionary method.
2. A. Special arithmetic operators: modulus operator, power operator.
   B. Accept three numbers, prepare the list and find maximum and minimum of three.
   C. Accept the input as list and find the sum of numbers in the list.
3. String manipulations:
   A. Create a program that asks the user to enter their name and their age. Print out a message addressed to them that tells them the year that they will turn 100 years old.
   B. Python program to check whether the entered character is vowel or consonant.
   C. Entering Strings with Different Quotes, Using + to Combine Strings
4. String manipulation: String input: use build in function input( ) , Using a Format Specifier
5. A. Create a test using a single if statement that will tell you whether a value is between 0 and 9 inclusively.
   B. Python program to check whether an entered number is odd/even.
   C. Python program to check whether a person is eligible to vote or not.
   D. Python program to check whether a number is Prime or not
6. Python program demonstrating series of if statements: find the largest number in three.
7. Python program demonstrating if: elseif: and else:
   A. Python program to check whether a number is palindrome or not.
   B. Python program to check whether a number is Positive, Negative or Zero Using Nested if
   C. Factorial of a number using recursion Using if elseif else
8. Python program demonstrating for:
   A. Python program to find the factorial of a number provided by the user.
   B. Python Python program to check whether a number is palindrome or not using Using for loop
   C. Python Program for Fibonacci numbers
9. Python Program demonstrating while:
   A. Python program to check if the number is an Armstrong number or not.
   B. Python program that accepts a sequence of lines (blank line to terminate) as input and prints the lines as output (all characters in lower case).

C. Write a Python program to check the validity of a password (input from users).
Validation :

- At least 1 letter between [a-z] and 1 letter between [A-Z].
- At least 1 number between [0-9].
- At least 1 character from [$#@].
- Minimum length 6 characters.
- Maximum length 16 characters.

10. Python program demonstrating collections List and Tuples

A. Create a program that asks the user for a number and then prints out a list of all the divisors of that number. (If you don't know what a *divisor* is, it is a number that divides evenly into another number. For example, 13 is a divisor of 26 because 26 / 13 has no remainder.)

11. Python program demonstrating collection Set

A. Write a Python program to perform Counter arithmetic and set operations for aggregating results.

12. Python program demonstrating collection Dictionary

A. Write a Python script to sort (ascending and descending) a dictionary by value.
B. Write a Python program to multiply all the items in a dictionary.
C. Write a Python program to find the highest 3 values in a dictionary.