PYTHON LAB EXCERCISES

1 Basic Syntax:

1. Write a programs that takes two numbers and prints them on the screen .

2. Write a program that prompts the user for their name and prints a welcome message to them .

3. Write a program that prints the squares of all the numbers less than or equal to a given number .

4. Write a program for swapping the values of two variables without using a third variable .

5. Write a program for swapping the values of two variables without using a third variable .

6. Write a program that finds GCD of two given numbers .

7. Write a python function SumOfList that takes a list of integers and return their sum .

2 Control Structures:

8. Write a python program that checks whether a given number is even or odd .

9. Write a python prorgam that find the largest among three numbers provoded by the user .

10. Write a prorgam that finds the largest number from the given numbers .

3 Loops:

11. Write a Python program that prints all the numbers between a given range.

12. Write a python program that prints all the even number between a given range.

13. Write a python program that prints all the odd numbers between a given range.

14. Write a python program that prints a table of a given number.

15. Write a python program to calculate the factorial of a number using a for loop.

16. write a python program to find if a given number is prime or not.

17. write a python program to find the mean, median,mode,variance and standard deviation of a given set of numbers.

18. write a python program to print the fibonacci sequesnce up to n terms, where n is the input by the user.

19. write a python program to display the sum of all the given number without using any string functions.

20. write a program that generates and returns all the prime factors of a given number.

21. write a program that displays the weights of all the digits in a given number without using any library functions

4 Strings:

22. Write a python program that counts the number of vowels and consonants in a given string.

23. write a python functions that counts the numbers of words in a string.

24. write a python functions that counts the numbers of lines in a given string.

25. write a python functions that prints the numbers of digits and punctuations marks that appear in a string.

26. write a python program to reverse a given string without using slicing.

5 Lists:

27. Write a python program that prints all the numbers in a list stored on a given range of indexes.

28. write a python program to remove all duplicates from a given list.

29. write a python functions FindMaxMin that returns the maximum values in a list.

6 Dictonaries:

30. write a python programs to count the frequency of each word in a given text.

31. write a python function that takes a dictonary as input and returns the key with the highest value.

7   Functions and Arguments:

32. Write a python function isPrime that checks if a number is prime number.

33. write a python function that accepts an arbitrary number of keyword arguments and prints the result as a dictonary.

34. write a function that takes a list of numbers and returns the square of all those numbers.

35. write a function that takes the radius of a circle and returns the diameter,area,and circumference of it.

36. write a function that takes a number as input and tells if it is divisible by 3 or not,without dividing it.

37. write a function that takes a number as input and tells if it is divisible by 11 or not,without dividing it.

8   List Comprehensions:

38. write a python program that takes a list of integers and return a new list that contains only the even numbers using list comprehensions.

39. write a python list comprehension to generate a list of squares of number between 1 and 10.

9   File Handeling:

40. Write a python program to read a text file and print the numbers of lines,words,and characters in it.

41. write a python program to write the contents of one file into another file.

42. write a program that finds a given string in a given file.

43. write a program that finds a given string in a file and returns the place where the string appears in the file.your prorgram should return the index of the first character of the given string in the file.

44. write a python program that finds a given word in a file and replaces all the instances of the given word with another given word(similiar to find and replace all functionality).

10 Exception Handling:

45. Write a python program that handles the ZeroDivisionError exception.

46. write a python function that raises a ValueError if a non-numeric values is passed as an argument

11 Classes and Objects:

47. Write a Python class Rectangle that has attributes for length and has attributes for length and width and methods to calculate the area and perimeter.

48. Write a python class BankAccount with methods to deposit,withdraw,and check the balance of the account.

49. Write a Python class with a method that behaves differently based on the number of arguments passed (simulate method overloading).

50. Implement a class with an add method that can add two or three numbers using method overloading techniques .

51. Create a method that performs different operations based on argument types (e.g. Multiply if both are ints , repeat if first is string and second is int).