U23CS382- Python Programming

Basic Programs

1. Use the print() function to format the given words in the n mentioned format. Display the ** separator between each string.

   Input: Welcome to python programming

   Expected output: welcome ** to ** python ** programming
2. Python program to check whether the given number is even or not.
3. Python program to convert the temperature in degree centigrade to Fahrenheit
4. Python program to find the area of a triangle whose sides are given
5. Python program to find the circumference and area of a circle with a given radius
6. Python program to calculate the quadratic equation
7. Python program to find square root of given number.
8. Python program to check whether the given integer is a multiple of 5
9. Python program to check whether the given integer is a multiple of both 5 and 7
10. Write a Python program to swap two numbers.
11. Write a program to add two numbers using Python.
12. Accept a list of 5 float numbers as an input from the user
13. Write a basic Python program for finding the factorial of a number.
14. Write a program to determine the sum of the first n natural numbers, Write a Python program.
15. Python program to find random numbers.
16. Python program to display calendar
17. Python program to check given number is positive or not
18. Python program to check the largest among 3 nos

19. Python program to display multiplication table
20. Write a Python program to check whether a string is a palindrome.
21. Write a Python program to reverse a string.
22. Write a Python program to check whether a year is a Leap Year.
23. Write a Python program to calculate the square of a given number.
24. Write a Python Program to check whether the given character is a vowel or consonant.
25. Write a Python program to remove spaces from a string without using inbuilt functions.
26. Python program to make a simple calculator
27. Write a Python code to display numbers from a list divisible by 5
28. Write a Python program to input two numbers and perform the following operations:
    Addition (+)
    Subtraction (-)
    Multiplication (*)
    Division (/)
    Floor Division (//)
    Modulus (%)
    Exponentiation (**)

29. Write a Python program to compare two numbers and display whether they are equal or which one is greater.
30. Write a Python program to check if a given year is a leap year using comparison operators
31. Write a Python program to check if a number is in the range of 10 to 50 using logical operators.
32. Write a Python program to check if a number is both even and greater than 10 using logical operators.

33. Write a Python program to input two integers and perform bitwise operations: &, |, ^, ~, <<, and >>
34. Write a Python program to check if a given number is even or odd using bitwise & operator.
35. Write a Python program to demonstrate all assignment operators (+=, -=, *=, /=, //=, %=, **=) using a variable initialized with 1
36. Write a Python program to keep doubling a number using *= 2 until it reaches or exceeds 1000.
37. Write a Python program to check if two lists are stored in the same memory location using the is and is not operators.
38. Write a Python program to check if a particular character is present in a given string using the in and not in operators.
39. Write a Python program to swap two numbers without using a third variable, only using arithmetic operators
40. Write a Python program to find the largest of three numbers using a single line of code with a ternary (conditional) operator.
41. Write a Python program to calculate the monthly installment for a loan given the principal, rate of interest, and time in years using the formula

    EMI = (P * R * (1+R)^N) / ((1+R)^N - 1)
42. Write a Python program to check if a user's age qualifies them for voting (age ≥ 18) using a conditional operator.
43. Write a Python program to calculate the sum of the digits of a number using arithmetic operators
44. Write a Python program to determine if a given number is a power of 2 using bitwise operators
45. Write a Python program to calculate the perimeter of a rectangle given its length and width
46. Write a Python program to compute the simple interest given principal, rate, and time using the formula:

SI = (P * R * T) / 100

47. Write a Python program to check whether a person is eligible for a senior citizen discount (age ≥ 60)
48. Write a Python program to check if a given number is divisible by both 3 and 5 using logical operators.
49. Write a Python program to check if a given number is positive, negative, or zero using bitwise operators.
50. Write a Python program to take a number and successively divide it by 2 using //= 2 until it becomes 1.
51. Write a Python program to calculate the total cost of a shopping bill where a discount of 10% is applied if the total purchase amount exceeds $500.
52. Write a Python program to calculate the electricity bill based on the following rates:
    First 100 units: $5 per unit
    Next 200 units: $7 per unit
    Beyond 300 units: $10 per unit
53. Write a Python program to reverse a given number using arithmetic operators.
54. Write a Python program that calculates the net salary of an employee after deducting income tax (10%) and provident fund (12%) from the gross salary.
55. Write a Python program to calculate the grade of a student based on marks:

    90+ → A
    80-89 → B
    70-79 → C
    60-69 → D
    Below 60 → Fail

56. Write a Python program to calculate BMI using the formula:

$$BMI = weight(kg)/height(m)^2$$

57.