1. Write a C program that will take two integers as input. The program will show the sum, difference, multiple, quotient and remainder of the inputs.
   Sample Input: 5 2
   Sample Output: The sum of 5 and 2 is 7
   The difference of 5 and 2 is 3
   The product of 5 and 2 is 10
   The quotient of 5 and 2 is 2
   The remainder of 5 and 2 is 1

2. Write a C program that will take "year" (integer type) as input from user. The program will decide whether the input "year" is leap year or not.
   Sample Input: 1704
   Sample Output: 1704 is a leap year

   Sample Input: 1700
   Sample Output: 1700 is not a leap year

   Sample Input: 2000
   Sample Output: 2000 is a leap year

3. Write a C program that will take an integer as input from user. The program will decide whether it is even or odd.
   Sample Input: 10
   Sample Output: 10 is an even number

   Sample Input: 11
   Sample Output: 11 is an odd number

4. Write a C program that will take an integer as input from user. The program will decide whether it is positive or negative.
   Sample Input: 10
   Sample Output: 10 is a positive number

   Sample Input: -5
   Sample Output: -5 is a negative number

5. Write a C program that will take an integer as input from user. The program will decide whether it is prime or not.
   Sample Input: 29
   Sample Output: 29 is a prime number

   Sample Input: 10
   Sample Output: 10 is not a prime number

6. Write a C program that will take a character as input from user. The program will decide whether it is vowel or not.
   Sample Input: a
   Sample Output: a is a vowel

   Sample Input: s
   Sample Output: s is a consonant

7. Write a C program that will take two integers, a and b, as input from user. The program will swap two values of the input variable.
   Sample Input: 10 12
   Sample Output: a=12, b=10

8. Write a C program that will take an integer as input from user. The program will show the Fibonacci series within this integer.
   Sample Input: 7
   Sample Output: 0 1 1 2 3 5 8

9. Write a C program that will take three integer as inputs. The program will decide which the largest number among the inputs is.
   Sample Input: 3 1 2
   Sample Output: 3 is largest

   Sample Input: 3 2 1
   Sample Output: 3 is largest

   Sample Input: 2 1 3
   Sample Output: 3 is largest

10. Write a C program that will take three integer as inputs. The program will decide which the smallest number among the inputs is.
    Sample Input: 3 1 2
    Sample Output: 1 is smallest

    Sample Input: 3 2 1
    Sample Output: 1 is smallest

    Sample Input: 2 1 3
    Sample Output: 1 is smallest

11. Write a C program that will take an integer as input from user. The program will print the sum of digits of the number.
    Sample Input: 1470
    Sample Output: Sum of digits = 12

12. Write a C program that will take an integer as input from user. The program will count the digits of the number.
    Sample Input: 1470
    Sample Output: No. of digits = 4

13. Write a C program that will take two integers as input from user. The program will provide the power of the provided inputs as output.
    Sample Input: 2 3
    Sample Output: 2 ^ 3 = 8

    Sample Input: 3 4
    Sample Output: 3 ^ 4 = 81

14. Write a C program that will take two integers as input from user. The program will provide the HCF (Highest Common Factor) of the provided inputs as output.
    Sample Input: 36 48
    Sample Output: The HCF of the numbers is 72

    Sample Input: 15 75
    Sample Output: The HCF of the numbers is 15

15. Write a C program that will take two integers as input from user. The program will provide the LCM (Least Common Multiple) of the provided inputs as output.
    Sample Input: 36 48
    Sample Output: The LCM of the numbers is 144

    Sample Input: 15 75
    Sample Output: The LCM of the numbers is 75

16. Write a C program that will take an integer as input from user. The program will decide whether the number is palindrome or not.
    Sample Input: 12321
    Sample Output: 12321 is a palindrome number

    Sample Input: 1323
    Sample Output: 1323 is not a palindrome number

17. Write a C program that will take an integer as input from user. The program will decide whether the number is armstrong or not.
    Sample Input: 153
    Sample Output: 153 is an armstrong number

    Sample Input: 1634

Sample Output: 1634 is an armstrong number

Sample Input: 1632
Sample Output: 1632 is not an armstrong number

18. Write a C program that will take an integer as input from user. The program will show the reverse of the number.
    Sample Input: 2694
    Sample Output: 4962

19. Write a C program that will take an integer as input from user. The program will show the factorial of the number.
    Sample Input: 5
    Sample Output: Factorial of 5 = 120

20. Write a C program that will take two integers as inputs from user. The program will show sum of all natural numbers within this range.
    Sample Input: 1 5
    Sample Output: 1 + 2 + 3 + 4 + 5 = 15

21. Print the following pattern:

```
  *
 ***
*****
 ***
  *
```

22. Print the following pattern:

```
1
2 3
4 5 6
7 8 9 10
```

23. Print the following pattern:

```
1
2 2
3 3 3
4 4 4 4
```

24. Print the following pattern:

```
10
9 8
7 6 5
4 3 2 1
```

25. Print the following pattern:

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

26. Print the following pattern:

```
    4
   3 3
  2 2 2
1 1 1 1
```

27. Write a C program that will take two integers as inputs from user. The program will show sum of all even numbers within this range.
    Sample Input: 1 6
    Sample Output: 2 + 4 + 6 = 12

28. Write a C program that will take two integers as inputs from user. The program will show all the even numbers within this range.
    Sample Input: 1 6
    Sample Output: 2 4 6

29. Write a C program that will take two integers as inputs from user. The program will show sum of all prime numbers within this range.
    Sample Input: 1 6
    Sample Output: 2 + 3 + 5 = 10

30. Write a C program that will take no. of terms (integer type) as input from user. The program will show the Fibonacci series within this integer.
    Sample Input: 7
    Sample Output: 0 1 1 2 3 5 8

31. Write a C program that will take an integer as input from user. The program will show the Fibonacci series within this integer.
    Sample Input: 10
    Sample Output: 0 1 1 2 3 5 8

32. Write a C program that will take 10 integers as inputs from user. The program will show the sum of the inputs till a negative number is provided as input.
    Sample Input: 1 2 3 5 -6
    Sample Output: 11

33. Write a C program that will take 10 integers as inputs from user. The program will show the sum of the inputs except the negative numbers (if any) provided as input.
    Sample Input: 0 1 2 3 4 5 -6 7 8 9
    Sample Output: 39

34. Write a C program that will take an integer as input from user. The program will show the factors of the input.
    Sample Input: 15
    Sample Output: 1, 3, 5, 15

    Sample Input: 24
    Sample Output: 1, 2, 3, 4, 6, 8, 12, 24

35. Write a C program that will take an integer, n as input from user. The program will take 10 integers as inputs. The program will show the array without the element which is stored in n-th index. (Use array)
    Sample Input: 4
    0 1 2 3 4 5 6 7 8 9
    Sample Output: 0 1 2 4 5 6 7 8 9

    Sample Input: 7
    0 2 5 3 1 6 4 7 9 8
    Sample Output: 0 2 5 3 1 6 7 9 8

36. Write a C program that will take 10 integers as inputs. The program will show the average of the values provided as inputs. (Use array)
    Sample Input: 0 1 2 3 4 5 6 7 8 9
    Sample Output: 4.5

    Sample Input: 10 2 5 3 1 6 4 7 9 8
    Sample Output: 5.5

37. Write a C program that will take 10 integers as inputs. The program will show the maximum among the values provided as inputs. (Use array)
    Sample Input: 0 1 2 3 4 5 6 7 8 9
    Sample Output: 9

    Sample Input: 2 10 5 3 1 6 4 7 9 8
    Sample Output: 10

38. Write a C program that will take a string as input. The program will show how many vowels, consonants, spaces are there.
    Sample Input: This is my country
    Sample Output: vowels = 4

consonants = 11
spaces = 3

Sample Input: Programming
Sample Output: vowels = 3
consonants = 8
spaces = 0

39. Write a C program that will take a string as input. The program will show the length of the string.
Sample Input: This is my country
Sample Output: 18

Sample Input: Programming
Sample Output: 11

40. Write a C program that will take 2 strings as inputs. The program will concat the two strings.
Sample Input: Hello
world
Sample Output: Hello world

Sample Input: Programming is
fun
Sample Output: Programming is fun

41. Write a C program that will take a string as input. The program will show the reverse of the string.
Sample Input: This is my country
Sample Output: yrtnuoc ym si sihT

Sample Input: Programming
Sample Output: gnimmargorP

42. Write a C program that will take 2 strings as inputs. The program will compare the two strings and decide whether they match or not.
Sample Input: Hello
world
Sample Output: Not matched

Sample Input: Programming
Programming
Sample Output: Matched

43. Write a C program that will take two integers as inputs from user. The program will show sum of all even numbers within this range. (Use function)

Sample Input: 1 6
Sample Output: 2 + 4 + 6 = 12

44. Write a C program that will take two integers as inputs from user. The program will show sum of all even numbers within this range. (Use recursion)
    Sample Input: 1 6
    Sample Output: 2 + 4 + 6 = 12

45. Write a C program that will take two integers as input from user. The program will provide the power of the provided inputs as output. (Use recursion)
    Sample Input: 2 3
    Sample Output: 2 ^ 3 = 8

    Sample Input: 3 4
    Sample Output: 3 ^ 4 = 81

46. Write a C program that will take two integers as input from user. The program will provide the sum of all the integers within this range. (Use function)
    Sample Input: 1 3
    Sample Output: 6

    Sample Input: 3 6
    Sample Output: 18