Date: 16/4/2025

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1. Sum of Numbers

Description: Write a program to calculate the sum of numbers from 1 to n.

- **Input**: `n = 5`
- **Output**: `15`

2. Factorial of a Number

Description: Write a program to compute the factorial of a given number n.

- **Input**: `n = 4`
- **Output**: `24`

3. Fibonacci Series

Description: Write a program to print the first n Fibonacci numbers.

- **Input**: `n = 5`
- **Output**: `0 1 1 2 3`

4. Prime Numbers

Description: Write a program to print all prime numbers up to a given number n.

- **Input**: `n = 10`
- **Output**: `2 3 5 7`

5. Palindrome Number

Description: Write a program to check if a number is a palindrome.

- **Input**: `n = 121`
- **Output**: `Palindrome`

6. Armstrong Number

Description: Write a program to check if a number is an Armstrong number.

- **Input**: `n = 153`
- **Output**: `Armstrong`

7. Reverse a Number

Description: Write a program to reverse the digits of a given number.

- **Input**: `n = 12345`
- **Output**: `54321`

8. Multiplication Table

Description: Write a program to print the multiplication table for a number `n`.

- **Input**: `n = 4`
- **Output**: `4 8 12 16 20`

9. Sum of Digits

Description: Write a program to calculate the sum of digits of a given number.

- **Input**: `n = 234`
- **Output**: `9`

10. Count Digits

Description: Write a program to count the number of digits in a number n.

- **Input**: `n = 12345`
- **Output**: `5`

11. Even Numbers

Description: Write a program to print all even numbers between 1 and n.

- **Input**: `n = 10`
- **Output**: `2 4 6 8 10`

12. Odd Numbers

Description: Write a program to print all odd numbers between 1 and n.

- **Input**: `n = 10`
- **Output**: `1 3 5 7 9`

13. Check for Prime Number

Description: Write a program to check if a number n is prime.

- **Input**: `n = 7`
- **Output**: `Prime`

14. Sum of Natural Numbers

Description: Write a program to find the sum of the first n natural numbers.

- **Input**: `n = 5`
- **Output**: `15`

15. Find Maximum Number

Description: Write a program to find the maximum number between two numbers.

- **Input**: `a = 10, b = 20`
- **Output**: `20`

16. Find Minimum Number

Description: Write a program to find the minimum number between two numbers.

- **Input**: `a = 10, b = 20`
- **Output**: `10`

17. Sum of First N Odd Numbers

Description: Write a program to calculate the sum of the first n odd numbers.

- **Input**: `n = 4`
- **Output**: `16`

18. Sum of First N Even Numbers

Description: Write a program to calculate the sum of the first n even numbers.

- **Input**: `n = 4`
- **Output**: `20`

19. Print Inverted Number Pattern

Description: Write a program to print an inverted number pattern.

- **Input**: `n = 5`

Output:

Copy
5 4 3 2 1
4 3 2 1
3 2 1
2 1
1

-

20. Sum of Squares of First N Natural Numbers

Description: Write a program to calculate the sum of squares of the first n natural numbers.

- **Input**: n = 3
- **Output**: 14

21. Reverse Pattern of Numbers

Description: Write a program to print numbers in reverse order.

- **Input**: n = 5

Output:
5 4 3 2 1

-

22. Print Triangle of Stars

Description: Write a program to print a triangle of stars.

- **Input**: n = 4

Output:
*
**
***

```
****
```

-

23. Print Inverted Star Pattern

Description: Write a program to print an inverted star pattern.

- **Input**: `n = 4`

Output:
```
 ****
***
**
*
```

-

24. Check Leap Year

Description: Write a program to check if a given year is a leap year.

- **Input**: `year = 2020`
- **Output**: `Leap Year`

25. Find the Second Largest Number

Description: Write a program to find the second largest number from a set of two numbers.

- **Input**: `a = 10, b = 20`
- **Output**: `10`

26. Multiplication of Two Numbers

Description: Write a program to multiply two numbers using loops.

- **Input**: `a = 3, b = 5`

- **Output**: `15`

27. Sum of All Numbers in a Range

Description: Write a program to calculate the sum of all numbers between `m` and `n`.

- **Input**: `m = 1, n = 5`
- **Output**: `15`

28. Sum of Digits Using While Loop

Description: Write a program to calculate the sum of digits using a while loop.

- **Input**: `n = 123`
- **Output**: `6`

29. Prime Factorization

Description: Write a program to perform prime factorization of a number `n`.

- **Input**: `n = 12`
- **Output**: `2 2 3`

30. Perfect Number

Description: Write a program to check if a number is perfect.

- **Input**: `n = 6`
- **Output**: `Perfect`

31. Sum of Cubes of First N Natural Numbers

Description: Write a program to calculate the sum of cubes of the first n natural numbers.

- **Input**: `n = 3`
- **Output**: `36`

32. Multiplication of Numbers from 1 to N

Description: Write a program to find the multiplication of all numbers from 1 to `n`.

- **Input**: `n = 4`
- **Output**: `24`

33. Print Square of a Number

Description: Write a program to print the square of a number.

- **Input**: `n = 4`
- **Output**: `16`

34. Find Sum of All Odd Numbers in a Range

Description: Write a program to find the sum of all odd numbers in a range from `m` to `n`.

- **Input**: `m = 1, n = 10`
- **Output**: `25`

35. Print Right-Angled Triangle Pattern of Numbers

Description: Write a program to print a right-angled triangle of numbers.

- **Input**: `n = 4`

Output:

```
1
```

12
123
1234

-

36. Check for Odd or Even

Description: Write a program to check whether a given number is odd or even.

- **Input**: `n = 4`
- **Output**: `Even`

37. Print Square Star Pattern

Description: Write a program to print a square pattern using stars.

- **Input**: `n = 4`

Output:

markdown
Copy
```
****
****
****
****
```

-

38. Count the Number of Prime Numbers in a Range

Description: Write a program to count the number of prime numbers between `m` and `n`.

- **Input**: `m = 1, n = 10`
- **Output**: `4`

39. Calculate Average of First N Natural Numbers

Description: Write a program to calculate the average of the first n natural numbers.

- **Input**: `n = 5`
- **Output**: `3.0`

40. Number Pyramid Pattern

Description: Write a program to print a number pyramid pattern.

- **Input**: `n = 4`

Output:

```
   1
  121
 12321
1234321
```

-

41. Sum of Odd Numbers from 1 to N

Description: Write a program to calculate the sum of all odd numbers from 1 to n.

- **Input**: `n = 7`
- **Output**: `16`

42. Find the Factorial Using While Loop

Description: Write a program to calculate the factorial of a number using a while loop.

- **Input**: `n = 5`
- **Output**: `120`

43. Sum of First N Even Numbers

Description: Write a program to calculate the sum of first n even numbers.

- **Input**: `n = 4`
- **Output**: `20`

44. Print Star Pyramid

Description: Write a program to print a pyramid using stars.

- **Input**: `n = 5`

Output:

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

-

45. Multiplication of Digits

Description: Write a program to calculate the multiplication of digits of a number.

- **Input**: `n = 123`
- **Output**: `6`

46. Print Decreasing Number Pattern

Description: Write a program to print a decreasing number pattern.

- **Input**: `n = 5`

Output:

Copy

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

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

-

47. Count Non-Zero Digits

Description: Write a program to count the number of non-zero digits in a number.

- **Input**: `n = 1203`
- **Output**: 3

48. Sum of First N Divisible by 3

Description: Write a program to calculate the sum of the first n numbers divisible by 3.

- **Input**: `n = 4`
- **Output**: `18`

49. Perfect Square Numbers

Description: Write a program to find perfect square numbers up to n.

- **Input**: `n = 20`
- **Output**: `1 4 9 16`

50. Find Greatest Common Divisor (GCD)

Description: Write a program to find the greatest common divisor (GCD) of two numbers.

- **Input**: `a = 12, b = 15`
- **Output**: 3

51. Print Number Pattern

Description: Write a program to print a number pattern.

- **Input**: `n = 5`

Output:
```
 1
12
123
1234
12345
```

-

52. Find Least Common Multiple (LCM)

Description: Write a program to find the least common multiple (LCM) of two numbers.

- **Input**: `a = 12, b = 15`
- **Output**: `60`

53. Print Star Box

Description: Write a program to print a star box of size `n`.

- **Input**: `n = 4`

Output:
```
 ****
****
****
****
```

-

54. Check for Perfect Cube

Description: Write a program to check if a number is a perfect cube.

- **Input**: `n = 27`
- **Output**: `Perfect Cube`

55. Print Increasing Pattern of Numbers

Description: Write a program to print increasing pattern of numbers.

- **Input**: `n = 4`

Output:
```
 1
12
123
1234
```

-

56. Count Numbers Divisible by 5

Description: Write a program to count the numbers divisible by 5 between 1 and n.

- **Input**: `n = 20`
- **Output**: `4`

57. Sum of Divisors

Description: Write a program to calculate the sum of divisors of a number.

- **Input**: `n = 12`
- **Output**: `28`

58. Number of Factors

Description: Write a program to count the number of factors of a number.

- **Input**: `n = 12`
- **Output**: 6

59. Print Hollow Square

Description: Write a program to print a hollow square pattern.

- **Input**: `n = 5`

Output:

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

-

60. Power of a Number

Description: Write a program to calculate the power of a number `x^y`.

- **Input**: `x = 2, y = 3`
- **Output**: 8

61. Sum of First N Prime Numbers

Description: Write a program to calculate the sum of the first n prime numbers.

- **Input**: `n = 4`
- **Output**: 28

62. Sum of First N Perfect Squares

Description: Write a program to calculate the sum of the first n perfect squares.

- **Input**: `n = 4`
- **Output**: `30`

63. Count Digits Divisible by 3

Description: Write a program to count the digits divisible by 3 in a number.

- **Input**: `n = 123456`
- **Output**: 2

64. Print Right-Angle Triangle Pattern of Numbers

Description: Write a program to print a right-angle triangle of numbers.

- **Input**: `n = 4`

Output:

```
1
12
123
1234
```

-

65. Calculate Sum of All Divisors

Description: Write a program to calculate the sum of all divisors of a number.

- **Input**: `n = 12`
- **Output**: `28`

66. Print Number Pyramid

Description: Write a program to print a pyramid of numbers.

- **Input**: n = 4

Output:

```
   1
  121
 12321
1234321
```

-

67. Sum of All Divisors of a Number

Description: Write a program to calculate the sum of all divisors of a number.

- **Input**: n = 12
- **Output**: 28

68. Sum of Factors of a Number

Description: Write a program to calculate the sum of factors of a number.

- **Input**: n = 12
- **Output**: 28

69. Print Hollow Right-Angle Triangle Pattern

Description: Write a program to print a hollow right-angle triangle pattern.

- **Input**: n = 4

Output:

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

-

70. Number Pyramid with Numbers

Description: Write a program to print a number pyramid.

- **Input**: n = 5

Output:

```
    1
   121
  12321
 1234321
123454321
```