

## **FOR LOOP**

- 1) Write a program to calculate the average of first n natural numbers using for loop
- 2) Write a program to print the multiplication table of n, where n is entered by the user using for loop.
- 3) Write a program to print all the numbers from m-n thereby classify them as even or odd using for loop.
- 4) Write a program to classify a given number as prime or composite using for loop.
- 5) Write a program to calculate the factorial of a number using for loop.
- 6) Write a program using while loop to read the numbers until -1 is encountered. And using for loop also count the number of prime numbers and composite numbers entered by the user.
- 7) Write a program to calculate  $\text{pow}(x,n)$  using for loop.
- 8) Write a program to displays all leap year from 1900-2025 using for loop.
- 9) Write a program to calculate the sum of series  $1 + 1/2 + 1/3 + \dots + 1/n$  using for loop.
- 10) Write a program to calculate the sum of series  $1/1^2 + 1/2^2 + 1/3^2 + \dots + 1/n^2$  using for loop.
- 11) Write a program to calculate the sum of series  $1/2 + 2/3 + \dots + n/(n+1)$  using for loop..
- 12) Write a program to calculate the sum of series  $1/1 + 2^2/2 + 3^2/3 + \dots + n^2/n$  using for loop.
- 13) Write a program to calculate the sum of cubes of numbers from 1 - n using for loop.

14) Write a program to calculate the sum of squares of even numbers using for loop.

15) Write a program to calculate the value of an investment using for loop. Input an initial value of investment and annual interest, and calculate the value of investment over time.

16) Write a program to generate calendar of a month given the start\_day and the number of days in that month using for loop.

17) Write a program to print the following pattern.

Pass 1 – 1 2 3 4 5

Pass 2 – 1 2 3 4 5

Pass 3 – 1 2 3 4 5

Pass 4 – 1 2 3 4 5

Pass 5 – 1 2 3 4 5

18) Write a program to print the following pattern(50 Stars).

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

19) Write a program to print the following star pattern.

a) \*

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

b) \*

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\* \* \* \*

\* \* \* \* \*

c) \* \* \* \* \* \*

\* \* \* \* \*

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d)

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e)

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f)

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

g)

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

h)

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

i)

19) Write a program to print the following number pattern.

a)

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

b)

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

c)

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