**Assignment - 6 A Job Ready Bootcamp in C++, DSA and IOT MySirG**

# Use any loop

1. Write a program to calculate sum of first N natural numbers

#include <stdio.h>

*int* main()

{

*int* i, n, s = 0;

    printf("Enter the number : ");

    scanf("%d", &n);

    printf("The first %d Naturals numbers are :-\n", n);

    for (i = 1; i <= n; i++)

    {

        printf("%d ", i);

        s = s + i;

    }

    printf("\nSUM=%d", s);

    return 0;

}

2. Write a program to calculate sum of first N even natural numbers

#include <stdio.h>

*int* main()

{

*int* i, n, s = 0;

    printf("Enter the number : ");

    scanf("%d", &n);

    printf("The first N even natural numbers are :-\n");

    for (i = 1; i <= n; i++)

    {

        printf("%d ", 2 \* i);

        s = s + 2 \* i;

    }

    printf("\nSUM = %d", s);

    return 0;

}

3. Write a program to calculate sum of first N odd natural numbers

#include <stdio.h>

*int* main()

{

*int* i, n, s = 0;

    printf("Enter the number : ");

    scanf("%d", &n);

    printf("The first N Odd natural numbers are :-\n");

    for (i = 1; i <= n; i++)

    {

        printf("%d ", 2 \* i - 1);

        s = s + 2 \* i - 1;

    }

    printf("\nSUM = %d", s);

    return 0;

}

4. Write a program to calculate sum of squares of first N natural numbers

#include <stdio.h>

*int* main()

{

*int* i, n,s=0;

    printf("Enter the number : ");

    scanf("%d", &n);

    printf("The squares of first N natural numbers are:-\n");

    for (i = 1; i <= n; i++)

    {

        printf("%d ", i \* i);

        s = s + i \* i;

    }

    printf("\nSUM = %d", s);

    return 0;

}

5. Write a program to calculate sum of cubes of first N natural numbers

#include <stdio.h>

*int* main()

{

*int* i, n, s = 0;

    printf("Enter the number : ");

    scanf("%d", &n);

    printf("The cube of first N natural numbers are:-\n");

    for (i = 1; i <= n; i++)

    {

        printf("%d ", i \* i \* i);

        s = s + i \* i \* i;

    }

    printf("\nSUM = %d", s);

    return 0;

}

6. Write a program to calculate factorial of a number

#include <stdio.h>

*int* main()

{

*int* i, n, f = 1;

    printf("Enter the number to calculate factorial :\n");

    scanf("%d", &n);

    for (i = n; i >= 1; i--)

    {

        f = f \* i;

    }

    printf("Factorial of %d is : %d", n, f);

    return 0;

}

7. Write a program to count digits in a given number

#include <stdio.h>

*int* main()

{

*int* n;         // variable declaration

*int* count = 0; // variable declaration

    printf("Enter a number : ");

    scanf("%d", &n);

    while (n != 0)

    {

        n = n / 10;

        count++;

    }

    printf("\nThe number of digits in an %d is : %d", n, count);

    return 0;

}

8. Write a program to check whether a given number is a Prime number or

not

#include <stdio.h>

*int* main()

{

*int* n;

    printf("Enter a number : ");

    scanf("%d", &n);

    if (n % 2 == 1)

    {

        printf("NOT PRIME");

    }

    else

        printf("PRIME");

    return 0;

}

9. Write a program to calculate LCM of two numbers

#include <stdio.h>

*int* main()

{

*int* a, b, max;

    printf("Enter 1st number : ");

    scanf("%d", &a);

    printf("Enter 2nd number : ");

    scanf("%d", &b);

    max = (a > b) ? a : b;

    while (1)

    {

        if (max % a == 0 && max % b == 0)

        {

            printf("The LCM of %d and %d is %d.", a, b, max);

            break;

        }

        max++;

    }

    return 0;

}

10. Write a program to reverse a given number.

#include <stdio.h>

*int* main()

{

*int* n, rem, rev = 0;

    printf("Enter an integer: ");

    scanf("%d", &n);

    while (n != 0)

    {

        rem = n % 10;

        rev = rev \* 10 + rem;

        n /= 10;

    }

    printf("Reversed number = %d", rev);

    return 0;

}