ASSIGNMENT -3

1. Write a program to print numbers from 1 to 100.

Input : get input for the starting and ending nuber.

Process : using for loop to print output.

Output : based on condition the numbers from 1 to 100 is printed.

```
#include <stdio.h>
void main()
{
    for(int i = 1; i <= 100; i++)
    {
        printf("%d\n", i);
    }
}
```

Output

```
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
```

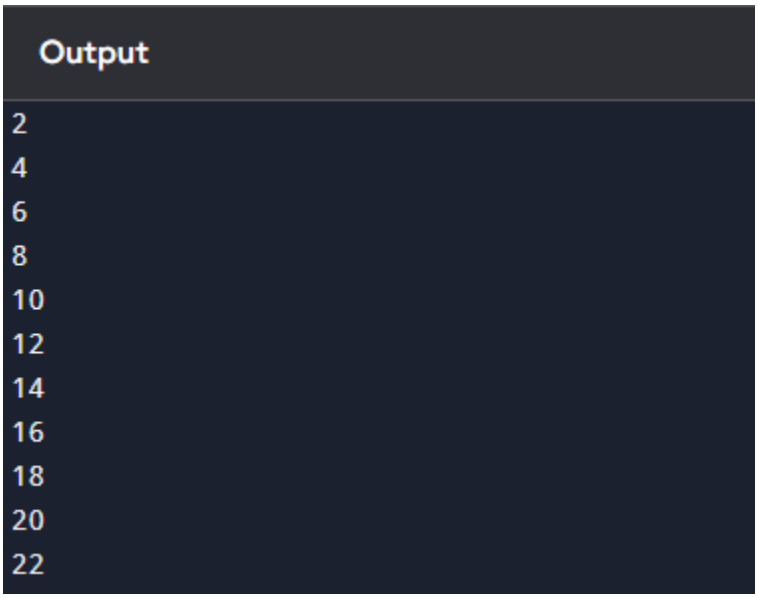
2. Write a program to print even numbers from 1 to 50.

Input : get the input for the Nth term from user.

Process : check if the condition is exactly divided by 2 .

Output : based on the condition the output is printed.

```
#include <stdio.h>
void main()
{
    for(int i = 2; i <= 50; i += 2)
    {
        printf("%d\n", i);
    }
}
```



3. Write a program to find the factorial of a number.

Input : get input for the number.

Process : using fact to find the factorial.

Output : based on the condition the output is printed.

```
#include <stdio.h>
void main()
{
    int n;
    unsigned long long factorial = 1;
    printf("Enter a number: ");
    scanf("%d", &n);
    for(int i = 1; i <= n; i++)
    {
        factorial *= i;
    }
    printf("Factorial of %d = %llu\n", n, factorial);
}
```

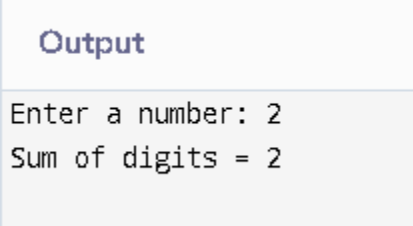
Output

```
Enter a number: 7
Factorial of 7 = 5040
```

4. Write a program to calculate the sum of digits of a number.Input : get the input for number to sum.

Process : calculate the sum of given numbers.

Output : based on the condition the output is printed.



5. Write a program to reverse a number.

Input : get the for the number.

Process : using the while loop to reverse the string.

Output : based on the condition the output is printed.

```
#include <stdio.h>
void main()
{
    int n, reverse = 0;
    printf("Enter a number: ");
    scanf("%d", &n);
    while(n != 0)
    {
        reverse = reverse * 10 + n % 10;  // Add last digit to reverse
        n = n / 10;                       // Remove last digit
    }
    printf("Reversed number = %d\n", reverse);
}
```

```
Output

Enter a number: 434
Reversed number = 434
```

6. Write a program to check whether a number is a palindrome.

Input : get the input for the number.

Process : using if condition to check the number is pallindrome.

Output : based on the condition the output is printed.

```
Output

Enter a number: 789
789 is not a palindrome.
```

7. Write a program to print multiplication table of a number.

Input : get the input for the i.

Process : using for loop to print the multipliyer.

Output : based on the condition the output is printed.

```
#include <stdio.h>
void main()
{
    int n;
    printf("Enter a number: ");
```

```
    scanf("%d", &n);
    printf("Multiplication table of %d:\n", n);
    for(int i = 1; i <= 10; i++)
    {
        printf("%d x %d = %d\n", n, i, n * i);
    }
}
```

Output

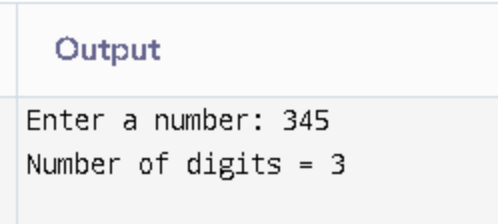
```
Enter a number: 8
Multiplication table of 8:
8 x 1 = 8
8 x 2 = 16
8 x 3 = 24
8 x 4 = 32
8 x 5 = 40
8 x 6 = 48
8 x 7 = 56
8 x 8 = 64
8 x 9 = 72
8 x 10 = 80
```

8. Write a program to count the number of digits in a number.

Input : get the input for the number .

Process : using if condition and count to count the digits of the given number.

Output : based on the condition the output is printed.



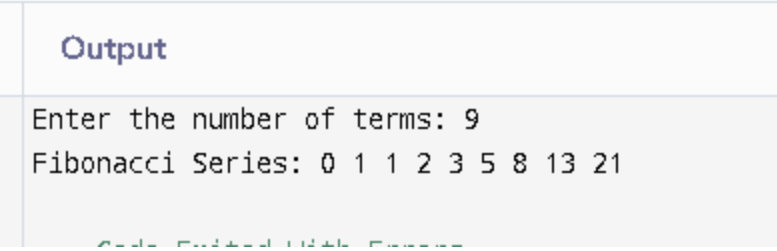
9. Write a program to print the Fibonacci series up to n terms.

Input : get the input for the starting number.

Process : using the for loop to print the series of the number.

Output : based on the condition the output is printed.

```
#include <stdio.h>
void main()
{
    int n, first = 0, second = 1, next;
    printf("Enter the number of terms: ");
    scanf("%d", &n);
    printf("Fibonacci Series: ");
    for(int i = 1; i <= n; i++)
    {
        printf("%d ", first);
        next = first + second;
        first = second;
        second = next;
    }
}
```



10. Write a program to calculate the sum of the first n natural numbers.

Input : get the input for the n numbers.

Process : calculate the sum of the given numbers.

Output : based on the condition the output is printed .

```
#include <stdio.h>

int main() {
    int n, sum = 0;

    printf("Enter the value of n: ");
    scanf("%d", &n);

    for(int i = 1; i <= n; i++) {
        sum += i;
    }

    printf("Sum of first %d natural numbers = %d\n", n, sum);

    return 0;
}
```

Output

```
Enter the value of n: 4
Sum of first 4 natural numbers = 10
```