

```
#include <stdio.h>

int main() {
    int n, i, j;
    float x, sum = 0.0, term;

    printf("Enter the value of X: ");
    scanf("%f", &x);
    printf("Enter the number of terms (n): ");
    scanf("%d", &n);

    for (i = 0; i <= n; i++) {
        term = 1.0;

        for (j = 0; j < i; j++) {
            term *= x;
        }
        sum += term;
    }

    printf("Sum of the series is: %.4f\n", sum);

    return 0;
}
```

ct1.dev] - [Executing] - Embarcadero Dev-C++ 6.3

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(globals)

using c.c

C:\Users\SRMAP\Documents\

```
enter the value of x:2
enter the number of terms:10
sum of the series is:2047.0000
```

```
-----
Process exited after 4.257 seconds with return value 0
Press any key to continue . . .
```

Here as we can see the time complexity is more it is n square.

```
#include <stdio.h>

int main() {
    int n, i;
    float x, sum = 0.0, term = 1.0;

    printf("Enter the value of X: ");
    scanf("%f", &x);
    printf("Enter the number of terms (n): ");
    scanf("%d", &n);

    sum = 1.0;

    for (i = 1; i <= n; i++) {
        term *= x;

        sum += term;
    }

    printf("Sum of the series is: %.4f\n", sum);

    return 0;
}
```


Project1 - [Project1.dev] - [Executing] - Embarcadero Dev-C++ 6.3

File

C:\Users\SRMAP\Documents\ X + v

```
enter the value of x:2
enter the number of terms:10
sum of the series is:2047.0000
```

Pro

```
-----
Process exited after 2.869 seconds with return value 0
Press any key to continue . . .
```

Compiler (3) Resources Compile Log Debug Find Results Console Close

Abort Compilation

Compilation results...

```
-----
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\SRMAP\Documents\Project1.exe
- Output Size: 322.7841796875 KiB
- Compilation Time: 0.28s
```

☐ Shorten compiler paths

As you can see here the time complexity is less as compare to the previous programme the time complexity is n