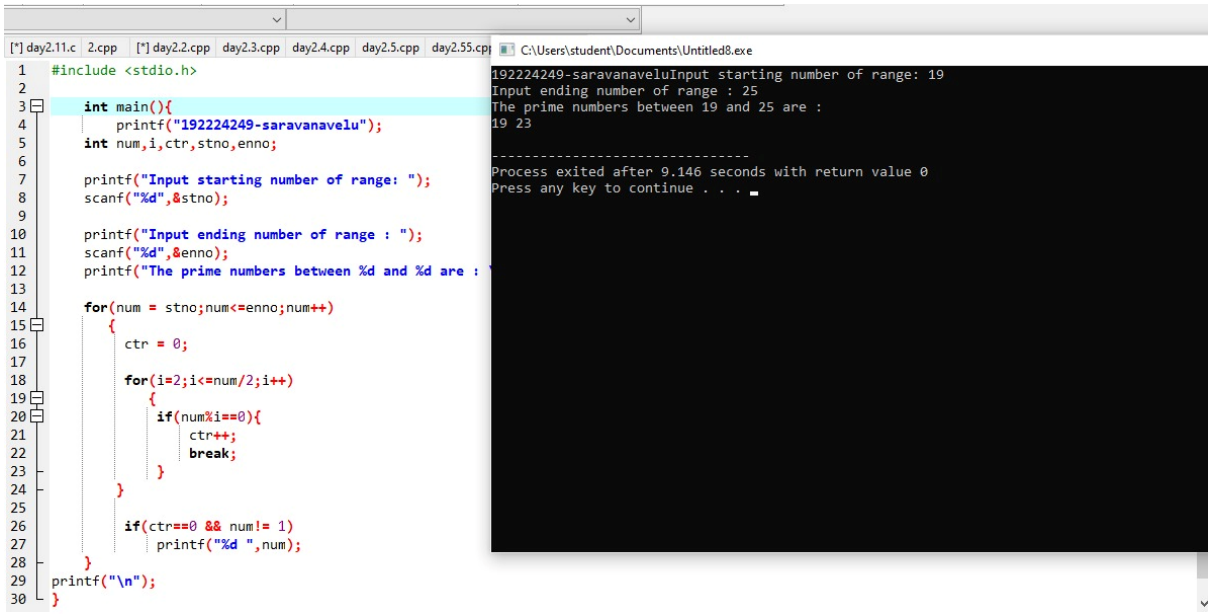
C programming 192224249 Saravanavelu.D

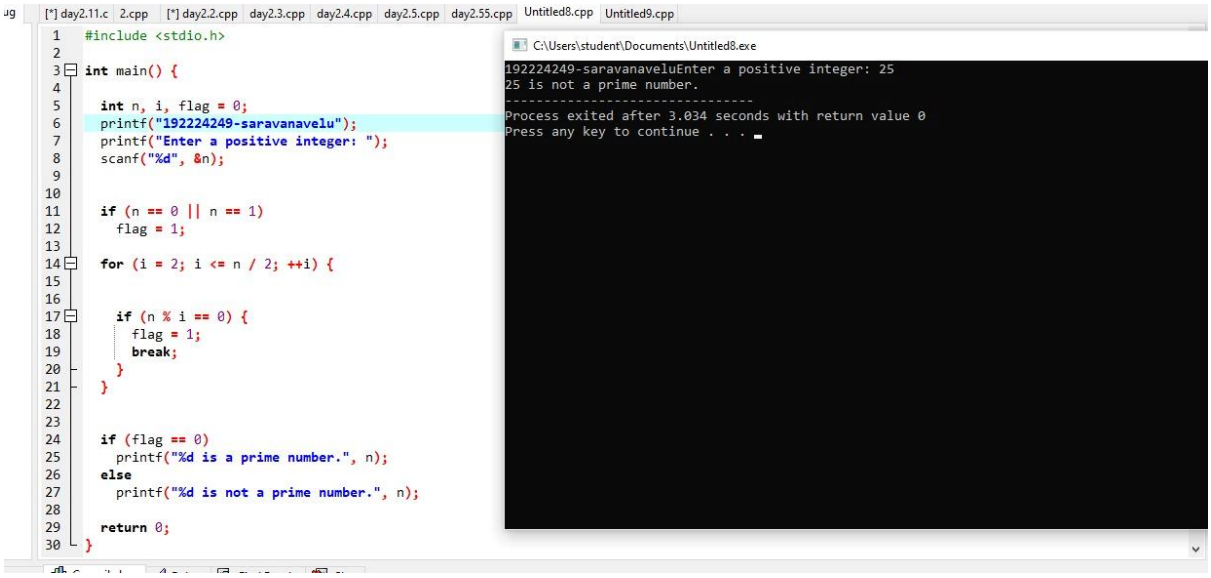
1.



```c
#include <stdio.h>

    int main(){
        printf("192224249-saravanavelu");
    int num,i,ctr,stno,enno;

    printf("Input starting number of range: ");
    scanf("%d",&stno);

    printf("Input ending number of range : ");
    scanf("%d",&enno);
    printf("The prime numbers between %d and %d are : ");

    for(num = stno;num<=enno;num++)
       {
        ctr = 0;

        for(i=2;i<=num/2;i++)
           {
            if(num%i==0){
                ctr++;
                break;
            }
        }

        if(ctr==0 && num!= 1)
            printf("%d ",num);
    }
printf("\n");
}
```

```
C:\Users\student\Documents\Untitled8.exe
192224249-saravanaveluInput starting number of range: 19
Input ending number of range : 25
The prime numbers between 19 and 25 are :
19 23

--------------------------------
Process exited after 9.146 seconds with return value 0
Press any key to continue . . .
```

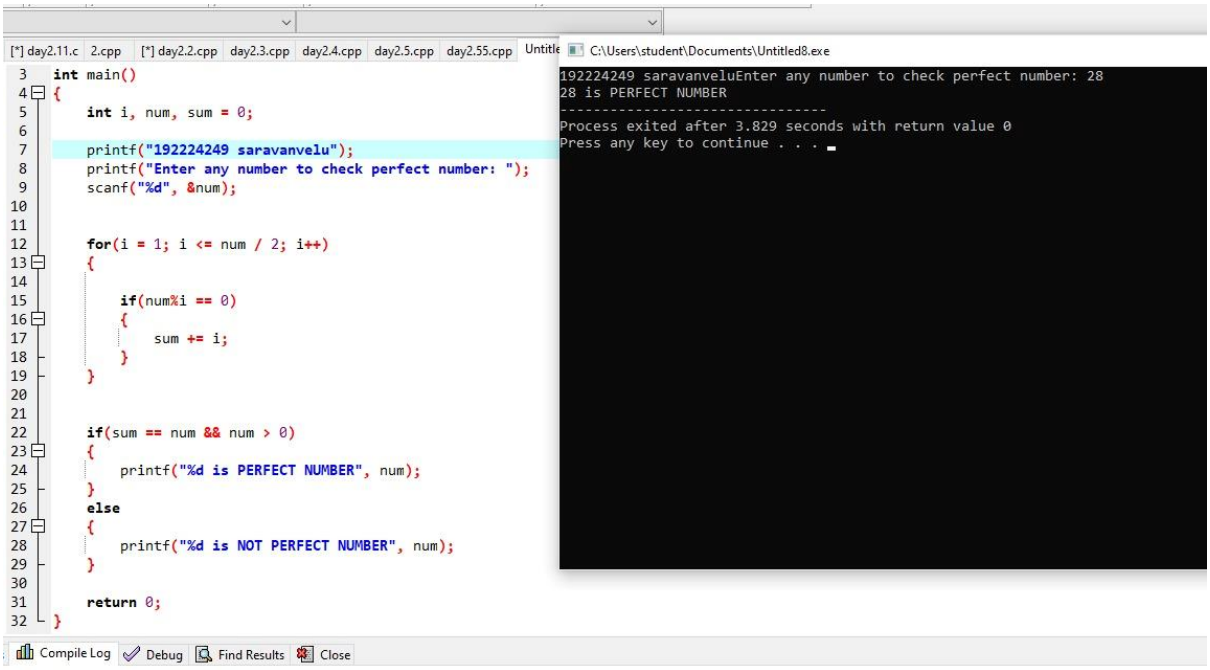
2.



```c
#include <stdio.h>

int main() {

  int n, i, flag = 0;
  printf("192224249-saravanavelu");
  printf("Enter a positive integer: ");
  scanf("%d", &n);


  if (n == 0 || n == 1)
    flag = 1;

  for (i = 2; i <= n / 2; ++i) {


    if (n % i == 0) {
      flag = 1;
      break;
    }
  }


  if (flag == 0)
    printf("%d is a prime number.", n);
  else
    printf("%d is not a prime number.", n);

  return 0;
}
```

```
C:\Users\student\Documents\Untitled8.exe
192224249-saravanaveluEnter a positive integer: 25
25 is not a prime number.
--------------------------------
Process exited after 3.034 seconds with return value 0
Press any key to continue . . .
```

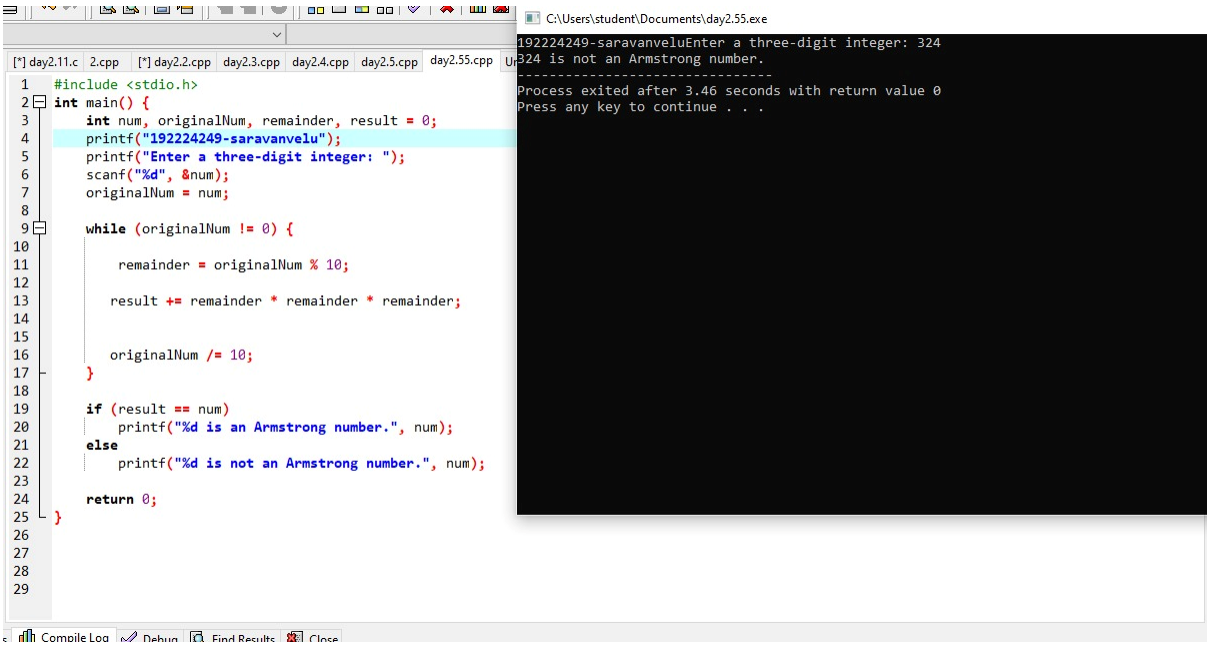
3.



```c
int main()
{
    int i, num, sum = 0;

    printf("192224249 saravanvelu");
    printf("Enter any number to check perfect number: ");
    scanf("%d", &num);


    for(i = 1; i <= num / 2; i++)
    {

        if(num%i == 0)
        {
            sum += i;
        }
    }


    if(sum == num && num > 0)
    {
        printf("%d is PERFECT NUMBER", num);
    }
    else
    {
        printf("%d is NOT PERFECT NUMBER", num);
    }

    return 0;
}
```

```
C:\Users\student\Documents\Untitled8.exe
192224249 saravanveluEnter any number to check perfect number: 28
28 is PERFECT NUMBER
--------------------------------
Process exited after 3.829 seconds with return value 0
Press any key to continue . . .
```

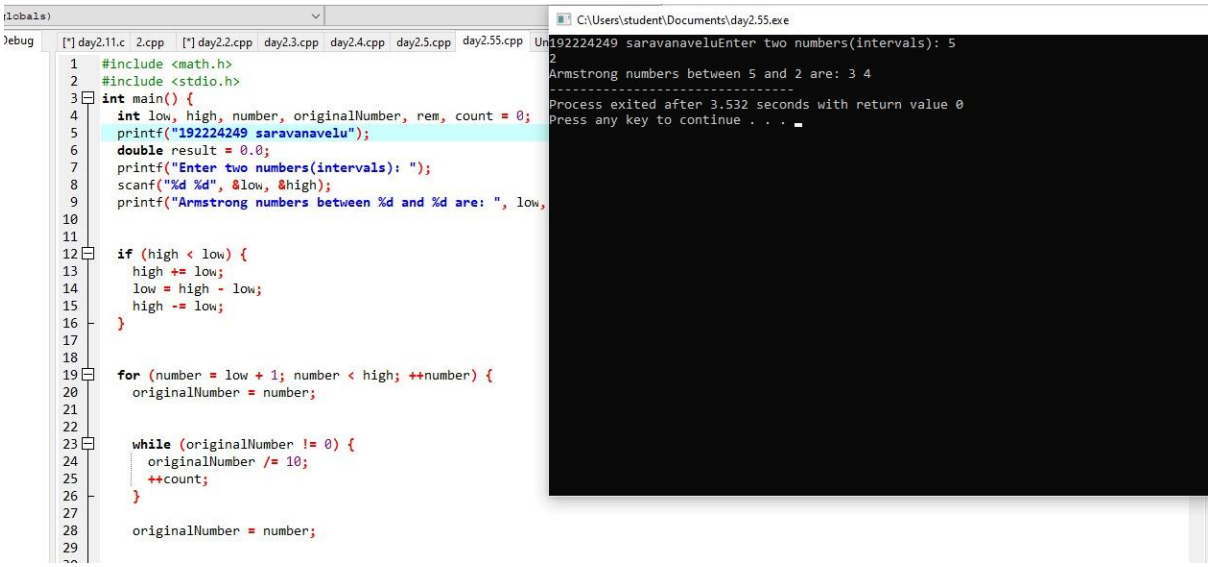
4.



```c
#include <stdio.h>
int main() {
    int num, originalNum, remainder, result = 0;
    printf("192224249-saravanvelu");
    printf("Enter a three-digit integer: ");
    scanf("%d", &num);
    originalNum = num;

    while (originalNum != 0) {

        remainder = originalNum % 10;

       result += remainder * remainder * remainder;


       originalNum /= 10;
    }

    if (result == num)
        printf("%d is an Armstrong number.", num);
    else
        printf("%d is not an Armstrong number.", num);

    return 0;
}
```

```
C:\Users\student\Documents\day2.55.exe
192224249-saravanveluEnter a three-digit integer: 324
324 is not an Armstrong number.
--------------------------------
Process exited after 3.46 seconds with return value 0
Press any key to continue . . .
```

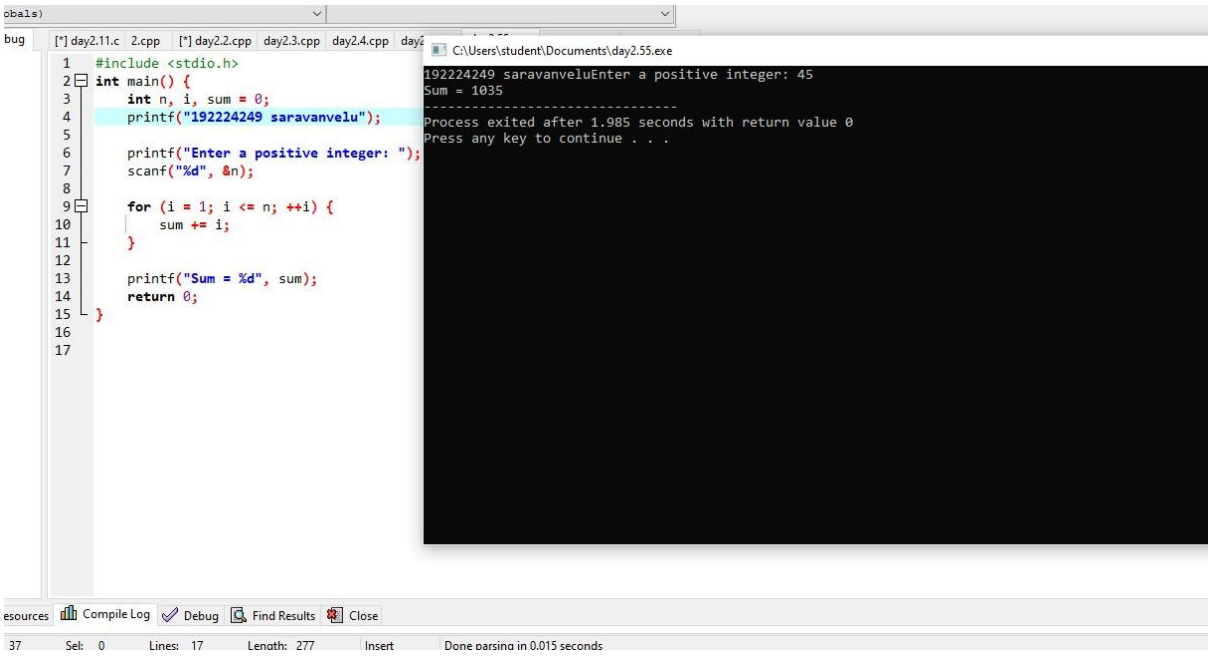
5.



```c
#include <math.h>
#include <stdio.h>
int main() {
  int low, high, number, originalNumber, rem, count = 0;
  printf("192224249 saravanavelu");
  double result = 0.0;
  printf("Enter two numbers(intervals): ");
  scanf("%d %d", &low, &high);
  printf("Armstrong numbers between %d and %d are: ", low,

  if (high < low) {
    high += low;
    low = high - low;
    high -= low;
  }

  for (number = low + 1; number < high; ++number) {
    originalNumber = number;

    while (originalNumber != 0) {
      originalNumber /= 10;
      ++count;
    }

    originalNumber = number;
```

```
C:\Users\student\Documents\day2.55.exe
192224249 saravanaveluEnter two numbers(intervals): 5
2
Armstrong numbers between 5 and 2 are: 3 4
--------------------------------
Process exited after 3.532 seconds with return value 0
Press any key to continue . . .
```

6.



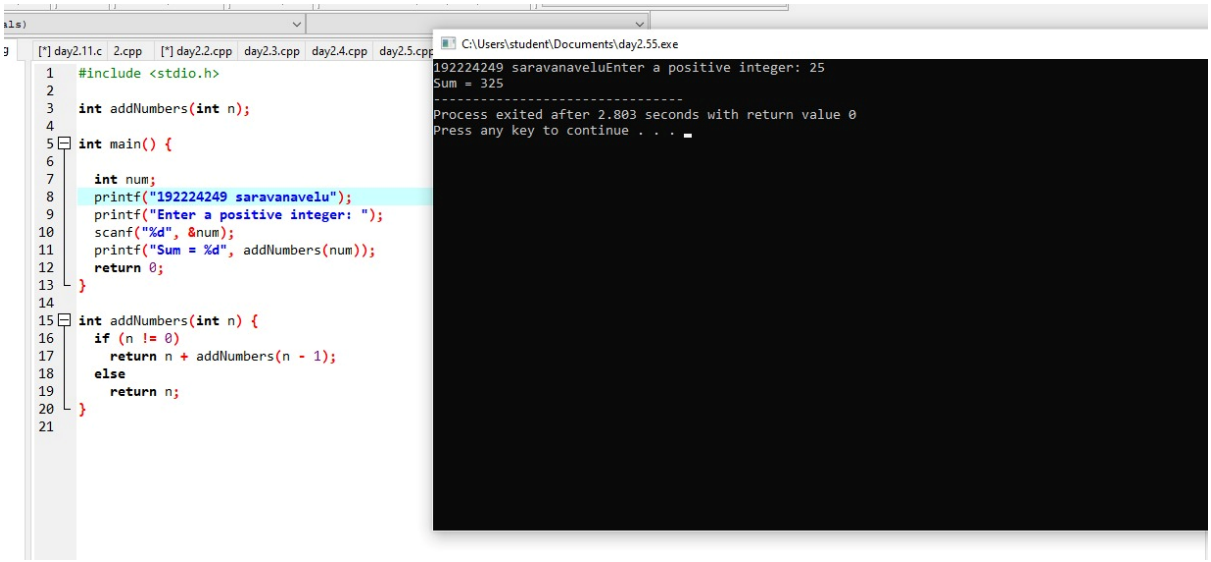
```c
#include <stdio.h>
int main() {
    int n, i, sum = 0;
    printf("192224249 saravanvelu");

    printf("Enter a positive integer: ");
    scanf("%d", &n);

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

    printf("Sum = %d", sum);
    return 0;
}
```

```
C:\Users\student\Documents\day2.55.exe
192224249 saravanveluEnter a positive integer: 45
Sum = 1035
--------------------------------
Process exited after 1.985 seconds with return value 0
Press any key to continue . . .
```

Compile Log | Debug | Find Results | Close

37 Sel: 0 Lines: 17 Length: 277 Insert Done parsing in 0.015 seconds

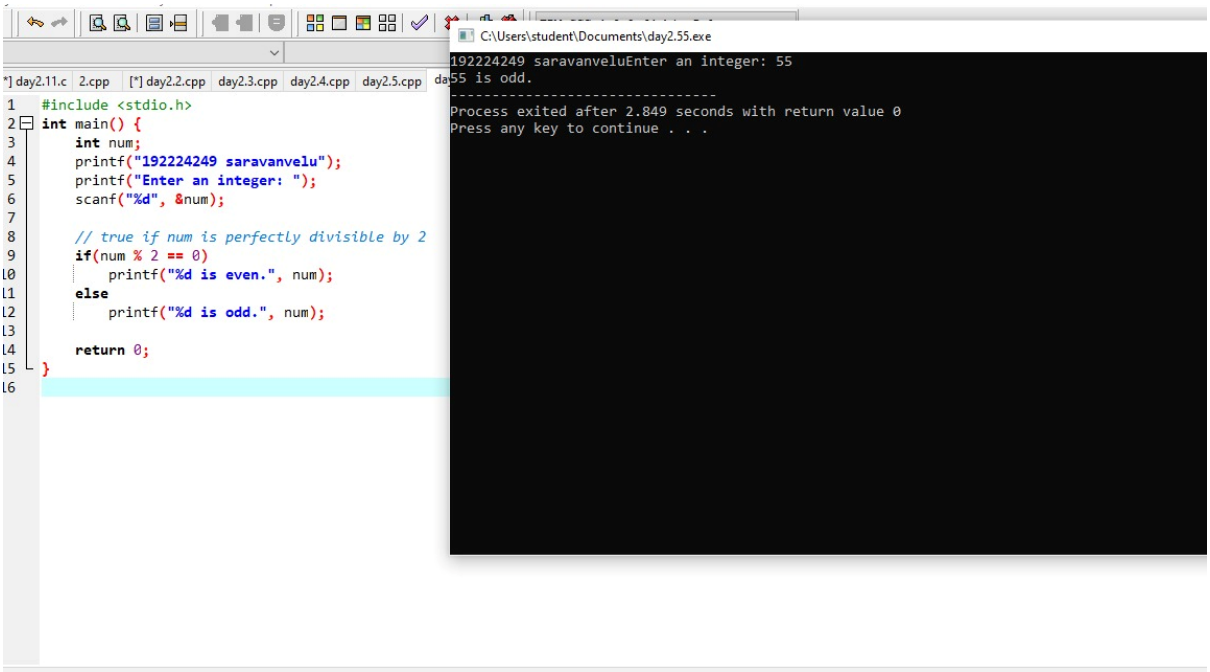
7.



```c
#include <stdio.h>

int addNumbers(int n);

int main() {

  int num;
  printf("192224249 saravanavelu");
  printf("Enter a positive integer: ");
  scanf("%d", &num);
  printf("Sum = %d", addNumbers(num));
  return 0;
}

int addNumbers(int n) {
  if (n != 0)
    return n + addNumbers(n - 1);
  else
    return n;
}
```

```
C:\Users\student\Documents\day2.55.exe
192224249 saravanaveluEnter a positive integer: 25
Sum = 325
--------------------------------
Process exited after 2.803 seconds with return value 0
Press any key to continue . . .
```

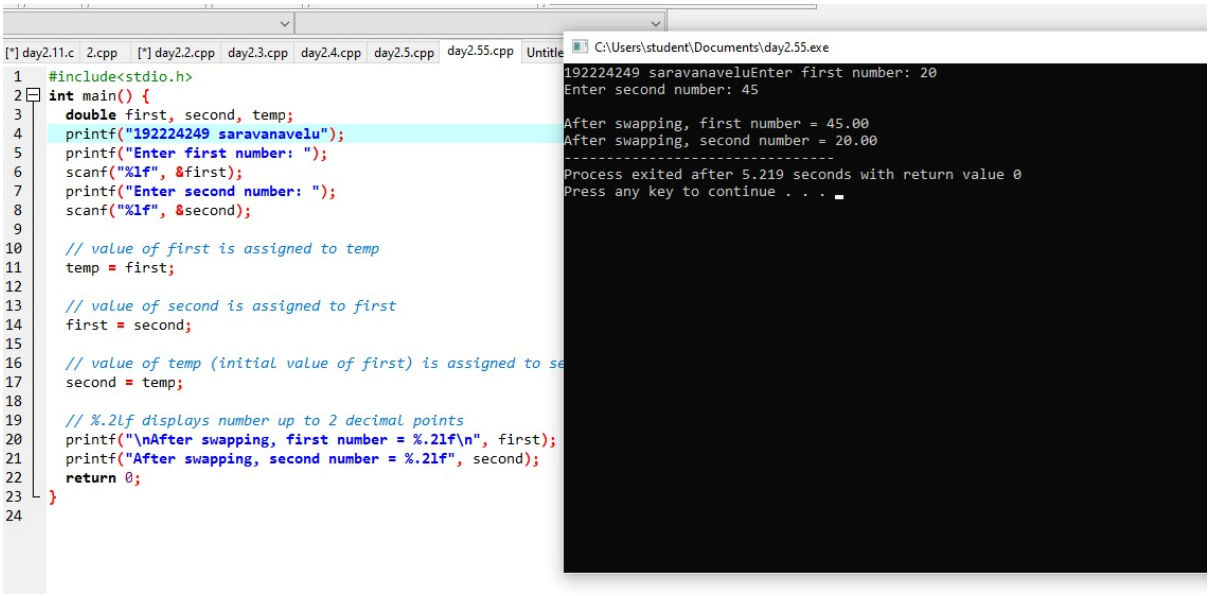
8.



```c
#include <stdio.h>
int main() {
    int num;
    printf("192224249 saravanvelu");
    printf("Enter an integer: ");
    scanf("%d", &num);

    // true if num is perfectly divisible by 2
    if(num % 2 == 0)
        printf("%d is even.", num);
    else
        printf("%d is odd.", num);

    return 0;
}
```

```
C:\Users\student\Documents\day2.55.exe
192224249 saravanveluEnter an integer: 55
55 is odd.
--------------------------------
Process exited after 2.849 seconds with return value 0
Press any key to continue . . .
```

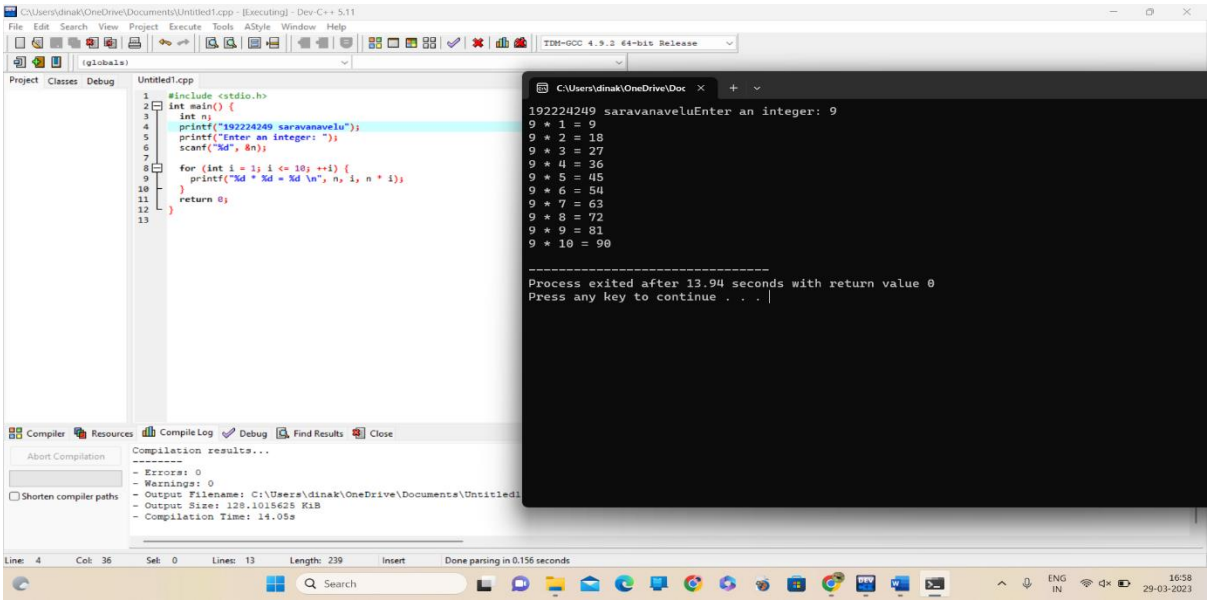
9.



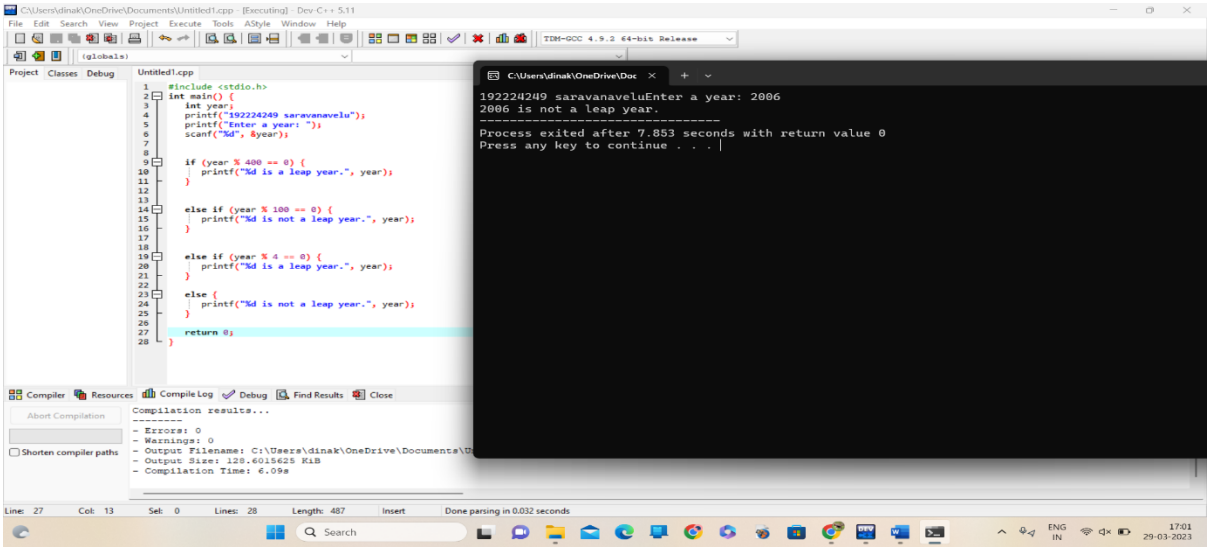
```c
#include<stdio.h>
int main() {
   double first, second, temp;
   printf("192224249 saravanavelu");
   printf("Enter first number: ");
   scanf("%lf", &first);
   printf("Enter second number: ");
   scanf("%lf", &second);

   // value of first is assigned to temp
   temp = first;

   // value of second is assigned to first
   first = second;

   // value of temp (initial value of first) is assigned to se
   second = temp;

   // %.2lf displays number up to 2 decimal points
   printf("\nAfter swapping, first number = %.2lf\n", first);
   printf("After swapping, second number = %.2lf", second);
   return 0;
}
```

```
C:\Users\student\Documents\day2.55.exe
192224249 saravanaveluEnter first number: 20
Enter second number: 45

After swapping, first number = 45.00
After swapping, second number = 20.00
--------------------------------
Process exited after 5.219 seconds with return value 0
Press any key to continue . . .
```

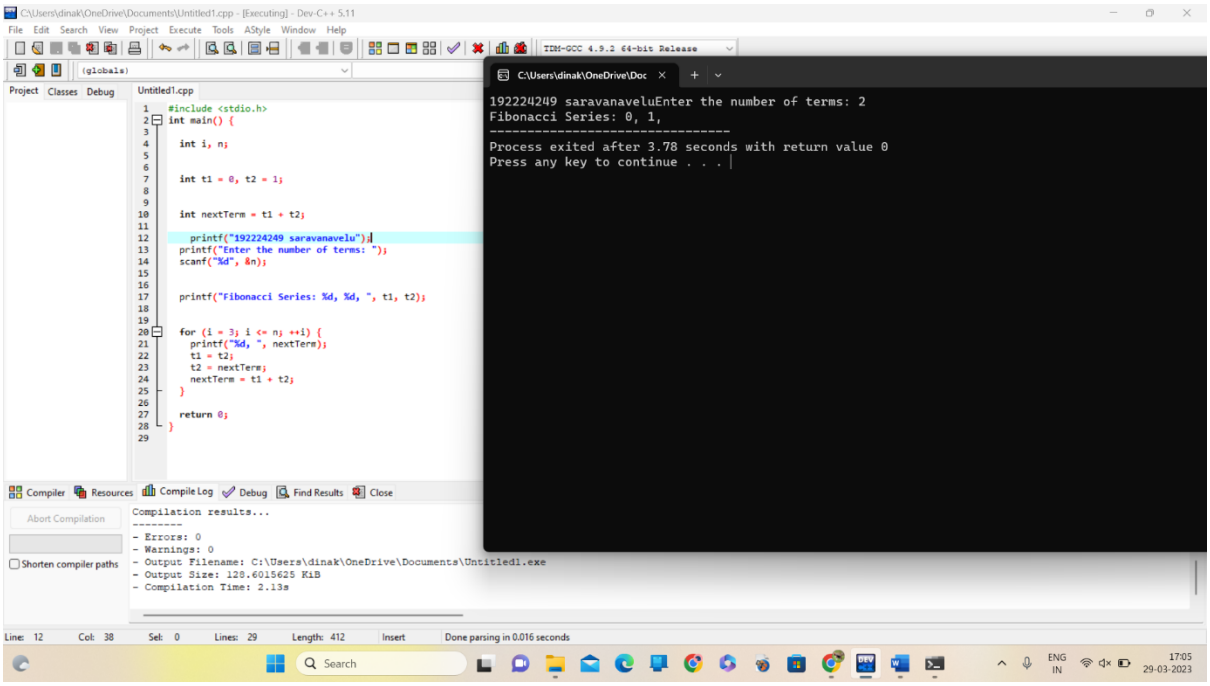
10.


#include <stdio.h>
int main() {
int n;
printf("192224249 saravanavelu");
printf("Enter an integer: ");
scanf("%d", &n);
for (int i = 1; i <= 10; ++i) {
printf("%d * %d = %d \n", n, i, n * i);
}
return 0;
}
C:\Users\dinak\OneDrive\Doc
192224249 saravanaveluEnter an integer: 9
9 * 1 = 9
9 * 2 = 18
9 * 3 = 27
9 * 4 = 36
9 * 5 = 45
9 * 6 = 54
9 * 7 = 63
9 * 8 = 72
9 * 9 = 81
9 * 10 = 90
Process exited after 13.94 seconds with return value 0
Press any key to continue . . .
Compilation results...
- Errors: 0
- Warnings: 0
- Compilation Time: 14.05s

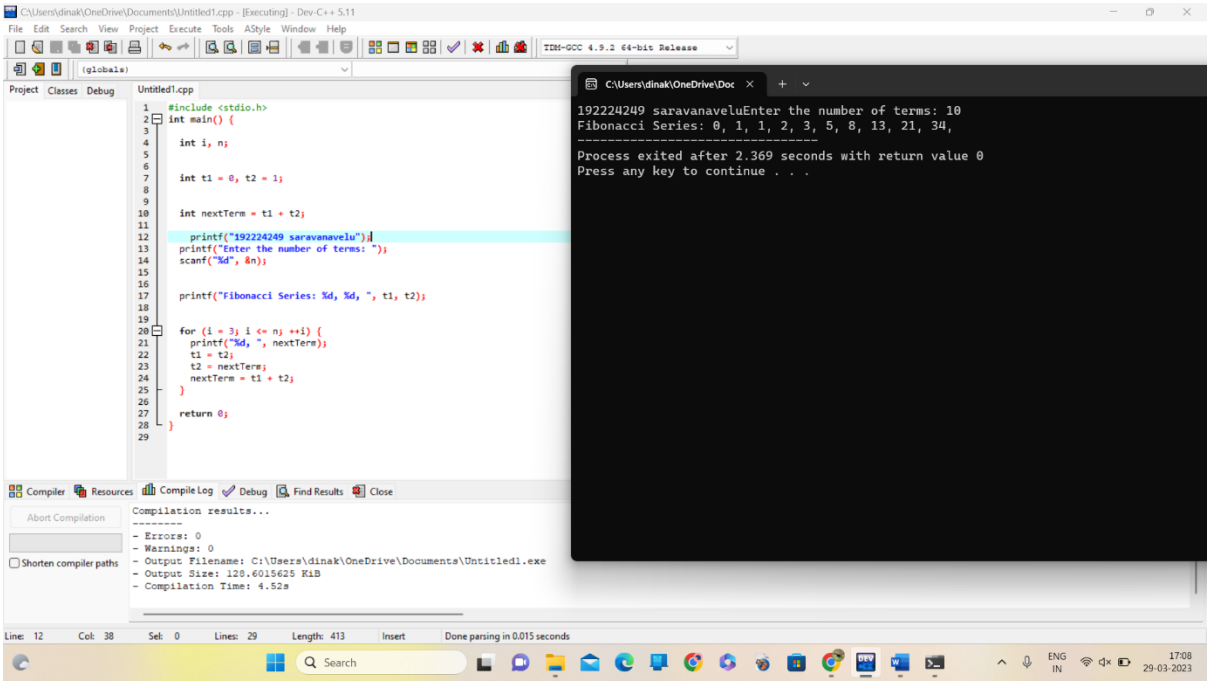
11.


#include <stdio.h>
int main() {
int year;
printf("192224249 saravanavelu");
printf("Enter a year: ");
scanf("%d", &year);
if (year % 400 == 0) {
printf("%d is a leap year.", year);
}
else if (year % 100 == 0) {
printf("%d is not a leap year.", year);
}
else if (year % 4 == 0) {
printf("%d is a leap year.", year);
}
else {
printf("%d is not a leap year.", year);
}
return 0;
}
C:\Users\dinak\OneDrive\Doc
192224249 saravanaveluEnter a year: 2006
2006 is not a leap year.
Process exited after 7.853 seconds with return value 0
Press any key to continue . . .
Compilation results...
- Errors: 0
- Warnings: 0
- Compilation Time: 6.09s

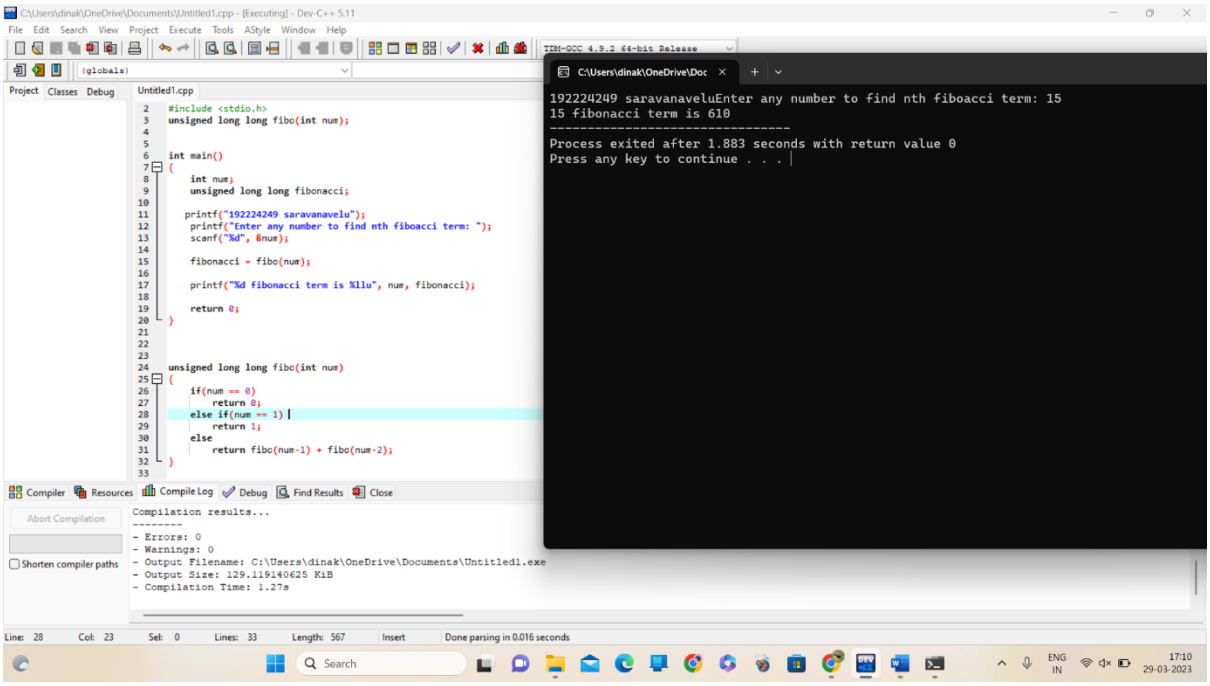
12.


#include <stdio.h>
int main() {
int i, n;
int t1 = 0, t2 = 1;
int nextTerm = t1 + t2;
printf("192224249 saravanavelu");
printf("Enter the number of terms: ");
scanf("%d", &n);
printf("Fibonacci Series: %d, %d, ", t1, t2);
for (i = 3; i <= n; ++i) {
printf("%d, ", nextTerm);
t1 = t2;
t2 = nextTerm;
nextTerm = t1 + t2;
}
return 0;
}
192224249 saravanaveluEnter the number of terms: 2
Fibonacci Series: 0, 1,
Process exited after 3.78 seconds with return value 0
Press any key to continue . . .

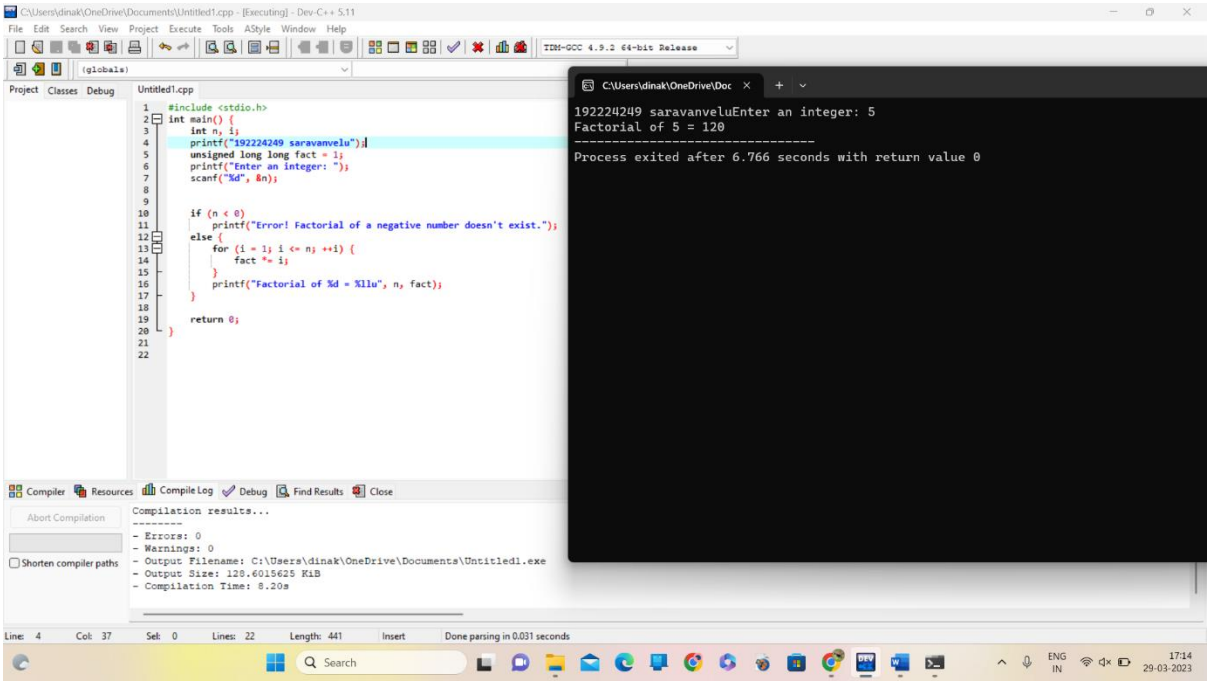
13.


#include <stdio.h>
int main() {
int i, n;
int t1 = 0, t2 = 1;
int nextTerm = t1 + t2;
printf("192224249 saravanavelu");
printf("Enter the number of terms: ");
scanf("%d", &n);
printf("Fibonacci Series: %d, %d, ", t1, t2);
for (i = 3; i <= n; ++i) {
printf("%d, ", nextTerm);
t1 = t2;
t2 = nextTerm;
nextTerm = t1 + t2;
}
return 0;
}
192224249 saravanaveluEnter the number of terms: 10
Fibonacci Series: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34,
Process exited after 2.369 seconds with return value 0
Press any key to continue . . .

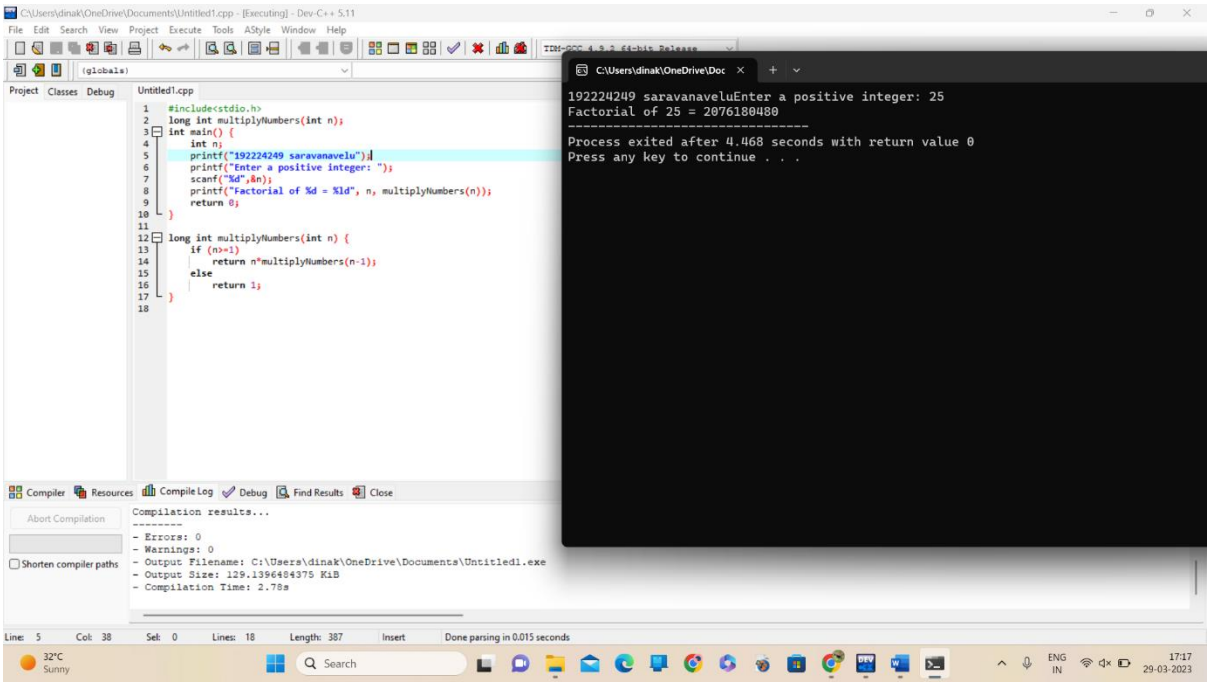
14.


C:\Users\dinak\OneDrive\Documents\Untitled1.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
Project Classes Debug
Untitled1.cpp
#include <stdio.h>
unsigned long long fibo(int num);
int main()
{
int num;
unsigned long long fibonacci;
printf("192224249 saravanavelu");
printf("Enter any number to find nth fiboacci term: ");
scanf("%d", &num);
fibonacci = fibo(num);
printf("%d fibonacci term is %llu", num, fibonacci);
return 0;
}
unsigned long long fibo(int num)
{
if(num == 0)
return 0;
else if(num == 1)
return 1;
else
return fibo(num-1) + fibo(num-2);
}
C:\Users\dinak\OneDrive\Doc
192224249 saravanaveluEnter any number to find nth fiboacci term: 15
15 fibonacci term is 610
Process exited after 1.883 seconds with return value 0
Press any key to continue . . .
Compiler Resources Compile Log Debug Find Results Close
Abort Compilation
Shorten compiler paths
Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\dinak\OneDrive\Documents\Untitled1.exe
- Output Size: 129.119140625 KiB
- Compilation Time: 1.27s
Line: 28 Col: 23 Sel: 0 Lines: 33 Length: 567 Insert Done parsing in 0.016 seconds
Search
ENG IN
17:10
29-03-2023

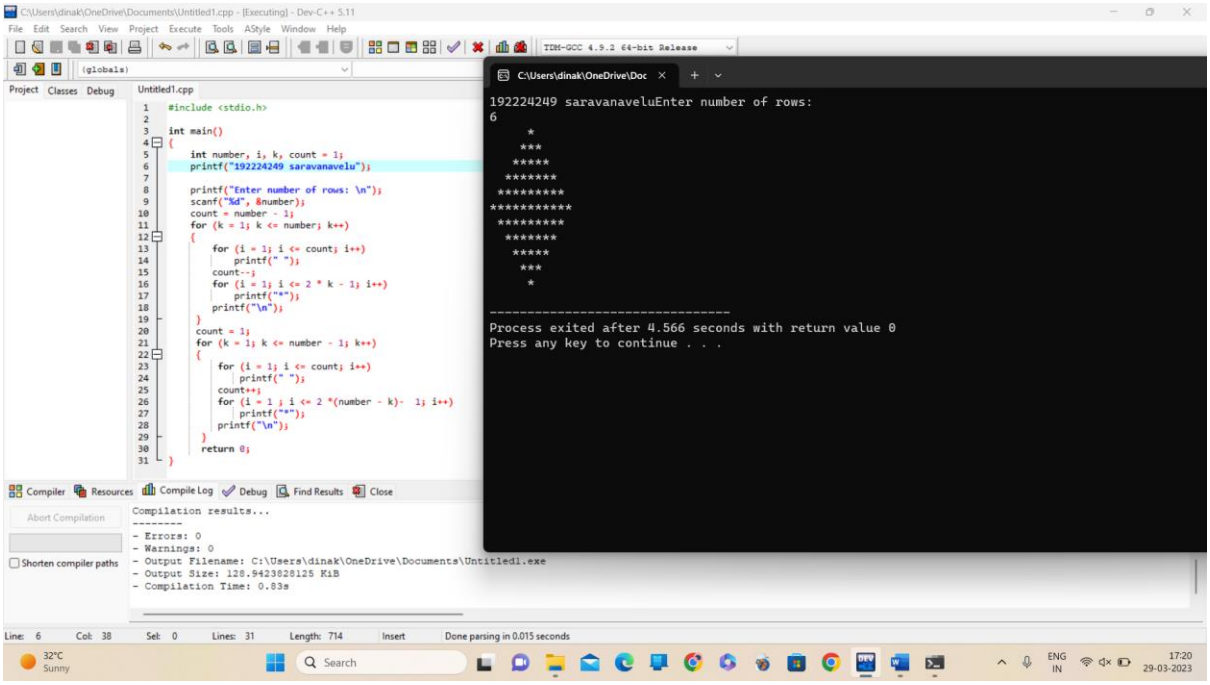
15.


C:\Users\dinak\OneDrive\Documents\Untitled1.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
Project Classes Debug
Untitled1.cpp
#include <stdio.h>
int main() {
int n, i;
printf("192224249 saravanvelu");
unsigned long long fact = 1;
printf("Enter an integer: ");
scanf("%d", &n);
if (n < 0)
printf("Error! Factorial of a negative number doesn't exist.");
else {
for (i = 1; i <= n; ++i) {
fact *= i;
}
printf("Factorial of %d = %llu", n, fact);
}
return 0;
}
C:\Users\dinak\OneDrive\Doc
192224249 saravanveluEnter an integer: 5
Factorial of 5 = 120
Process exited after 6.766 seconds with return value 0
Compiler Resources Compile Log Debug Find Results Close
Abort Compilation
Shorten compiler paths
Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\dinak\OneDrive\Documents\Untitled1.exe
- Output Size: 128.6015625 KiB
- Compilation Time: 8.20s
Line: 4 Col: 37 Sel: 0 Lines: 22 Length: 441 Insert Done parsing in 0.031 seconds
Search
ENG IN
17:14
29-03-2023

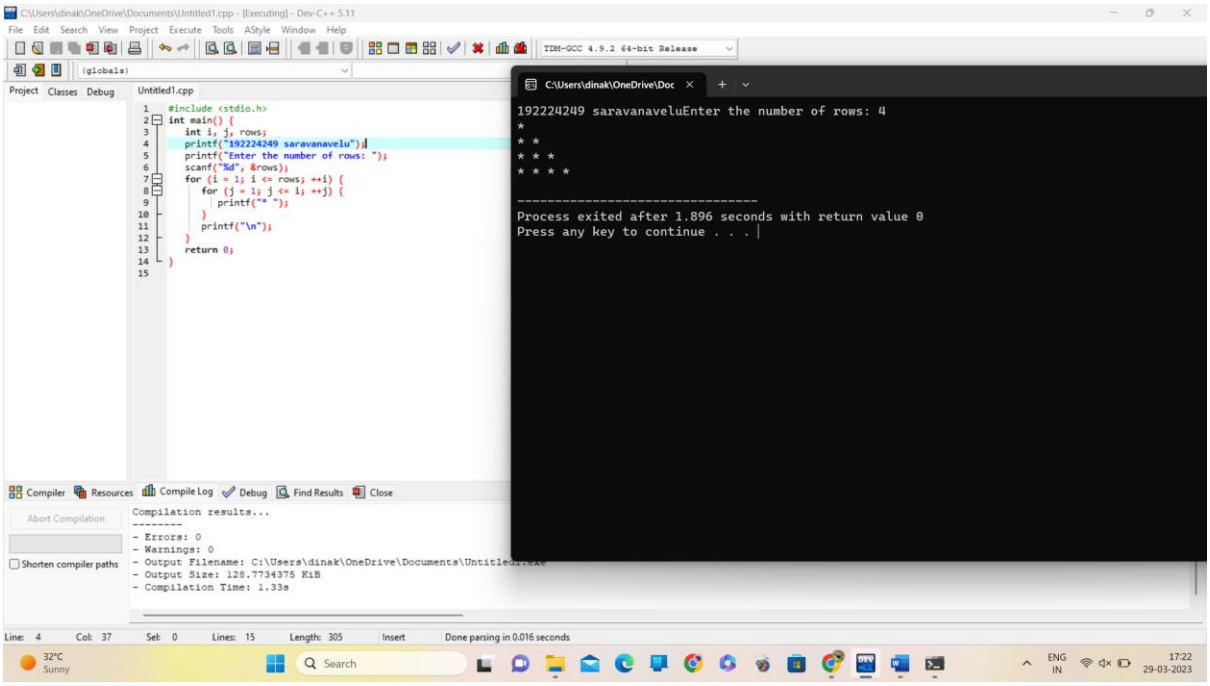
16.


#include<stdio.h>
long int multiplyNumbers(int n);
int main() {
int n;
printf("192224249 saravanavelu");
printf("Enter a positive integer: ");
scanf("%d",&n);
printf("Factorial of %d = %ld", n, multiplyNumbers(n));
return 0;
}
long int multiplyNumbers(int n) {
if (n>=1)
return n*multiplyNumbers(n-1);
else
return 1;
}
192224249 saravanaveluEnter a positive integer: 25
Factorial of 25 = 2076180480
Process exited after 4.468 seconds with return value 0
Press any key to continue . . .

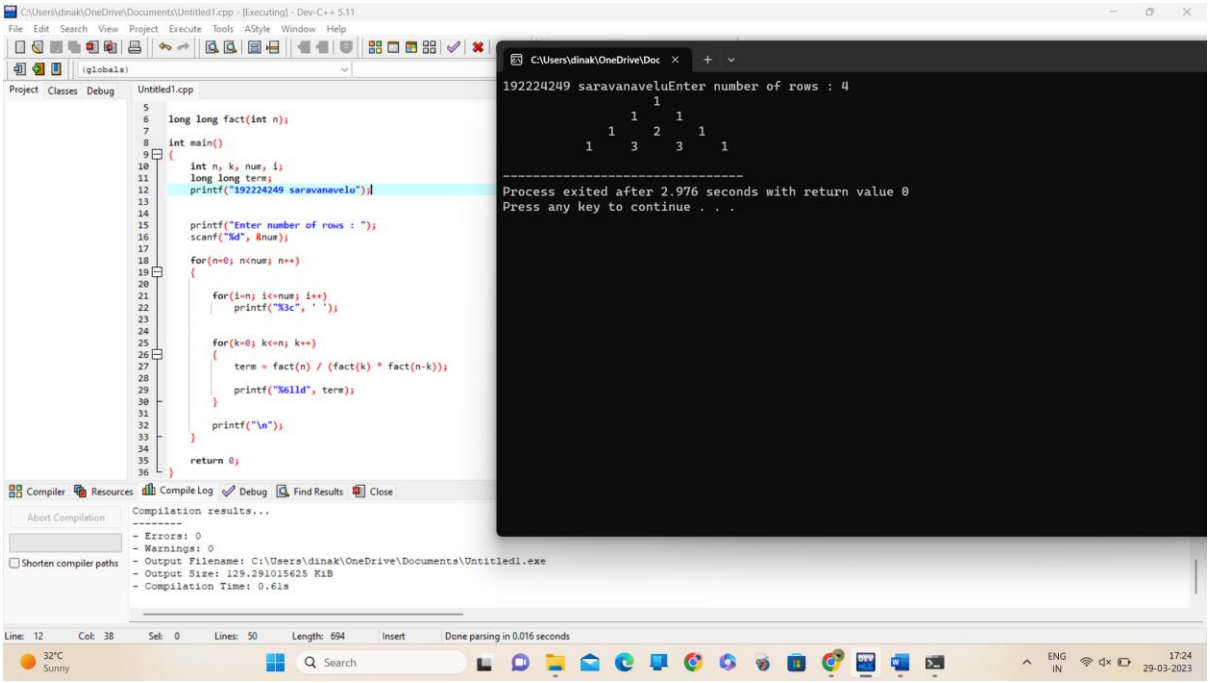
17.


#include <stdio.h>
int main()
{
int number, i, k, count = 1;
printf("192224249 saravanavelu");
printf("Enter number of rows: \n");
scanf("%d", &number);
count = number - 1;
for (k = 1; k <= number; k++)
{
for (i = 1; i <= count; i++)
printf(" ");
count--;
for (i = 1; i <= 2 * k - 1; i++)
printf("*");
printf("\n");
}
count = 1;
for (k = 1; k <= number - 1; k++)
{
for (i = 1; i <= count; i++)
printf(" ");
count++;
for (i = 1 ; i <= 2 *(number - k)- 1; i++)
printf("*");
printf("\n");
}
return 0;
}
192224249 saravanaveluEnter number of rows:
6
Process exited after 4.566 seconds with return value 0
Press any key to continue . . .

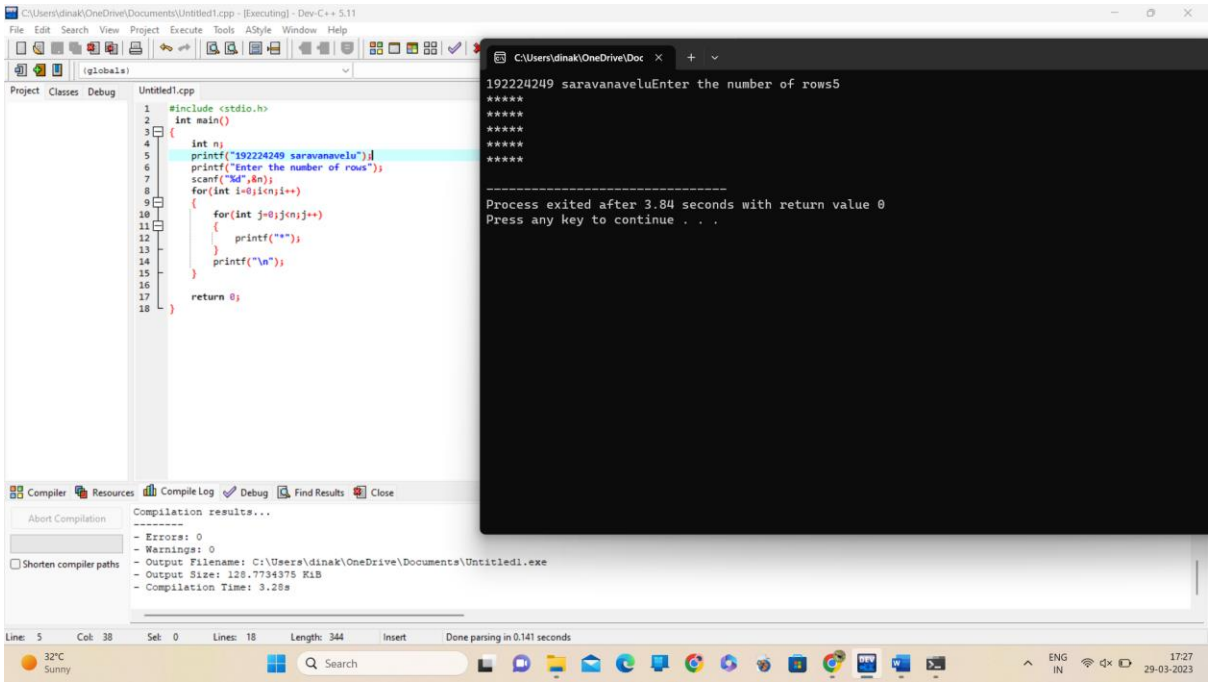
18.


C:\Users\dinak\OneDrive\Documents\Untitled1.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
Project Classes Debug
Untitled1.cpp
#include <stdio.h>
int main() {
int i, j, rows;
printf("192224249 saravanavelu");
printf("Enter the number of rows: ");
scanf("%d", &rows);
for (i = 1; i <= rows; ++i) {
for (j = 1; j <= i; ++j) {
printf("* ");
}
printf("\n");
}
return 0;
}
C:\Users\dinak\OneDrive\Doc
192224249 saravanaveluEnter the number of rows: 4
*
* *
* * *
* * * *
Process exited after 1.896 seconds with return value 0
Press any key to continue . . .
Compiler Resources Compile Log Debug Find Results Close
Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\dinak\OneDrive\Documents\Untitled1.exe
- Output Size: 128.7734375 KiB
- Compilation Time: 1.33s
Shorten compiler paths
Line: 4 Col: 37 Sel: 0 Lines: 15 Length: 305 Insert Done parsing in 0.016 seconds
32°C Sunny
Search
ENG IN
17:22 29-03-2023

19.


C:\Users\dinak\OneDrive\Documents\Untitled1.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
Project Classes Debug
Untitled1.cpp
long long fact(int n);
int main()
{
int n, k, num, i;
long long term;
printf("192224249 saravanavelu");
printf("Enter number of rows : ");
scanf("%d", &num);
for(n=0; n<num; n++)
{
for(i=n; i<=num; i++)
printf("%3c", ' ');
for(k=0; k<=n; k++)
{
term = fact(n) / (fact(k) * fact(n-k));
printf("%6lld", term);
}
printf("\n");
}
return 0;
}
C:\Users\dinak\OneDrive\Doc
192224249 saravanaveluEnter number of rows : 4
1
1 1
1 2 1
1 3 3 1
Process exited after 2.976 seconds with return value 0
Press any key to continue . . .
Compiler Resources Compile Log Debug Find Results Close
Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\dinak\OneDrive\Documents\Untitled1.exe
- Output Size: 129.291015625 KiB
- Compilation Time: 0.61s
Shorten compiler paths
Line: 12 Col: 38 Sel: 0 Lines: 50 Length: 694 Insert Done parsing in 0.016 seconds
32°C Sunny
Search
ENG IN
17:24 29-03-2023

20.


C:\Users\dinak\OneDrive\Documents\Untitled1.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
Project Classes Debug
Untitled1.cpp
#include <stdio.h>
int main()
{
int n;
printf("192224249 saravanavelu");
printf("Enter the number of rows");
scanf("%d",&n);
for(int i=0;i<n;i++)
{
for(int j=0;j<n;j++)
{
printf("*");
}
printf("\n");
}
return 0;
}
C:\Users\dinak\OneDrive\Doc
192224249 saravanaveluEnter the number of rows5
*****
*****
*****
*****
*****
Process exited after 3.84 seconds with return value 0
Press any key to continue . . .
Compiler Resources Compile Log Debug Find Results Close
Abort Compilation
Shorten compiler paths
Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\dinak\OneDrive\Documents\Untitled1.exe
- Output Size: 128.7734375 KiB
- Compilation Time: 3.28s
Line: 5 Col: 38 Sel: 0 Lines: 18 Length: 344 Insert Done parsing in 0.141 seconds
32°C Sunny
Search
ENG IN
17:27 29-03-2023