DEV SANSKRITI
VISHWAVIDYALAYA

Practical File

Year - 2018-2021

C#.NET

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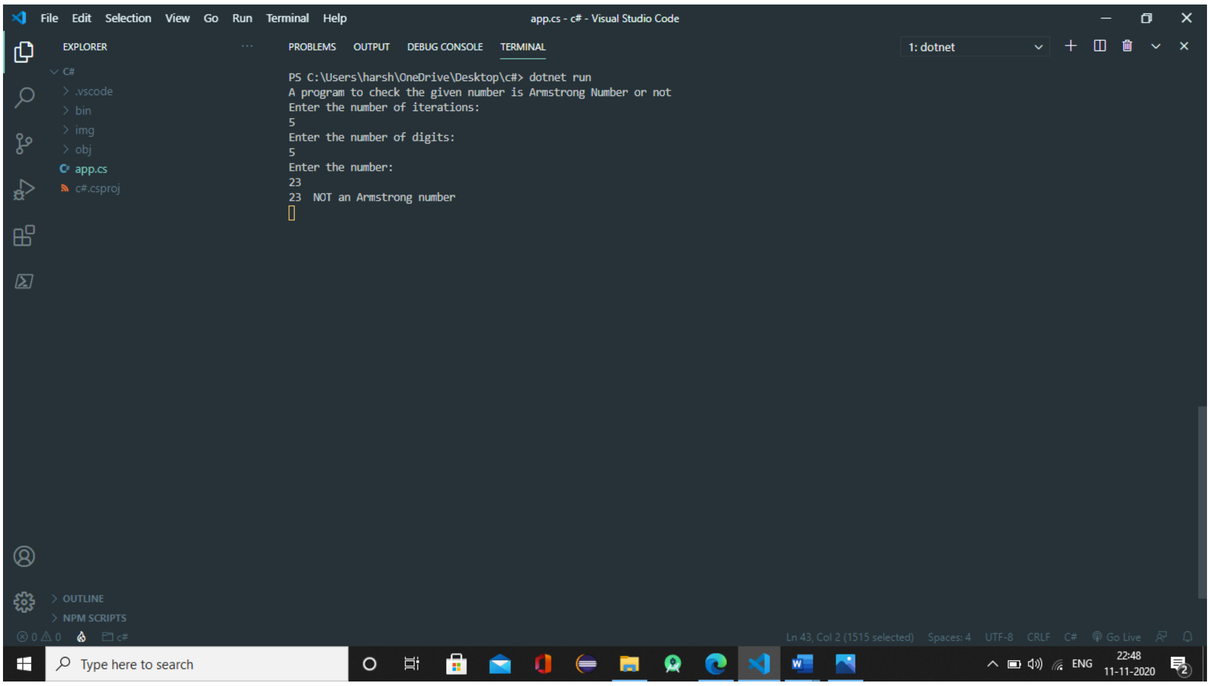
Signature

1. Write a program for Armstrong Numbers

```
using System;

namespace TestConsoleApp{
        public class Armstrong
    {
        public static void Main(string[] args)
        {
            Console.WriteLine("A program to check the given number is Armstrong Number or not");
            int n, m, num, d;
            double result = 0, number;

            Console.WriteLine("Enter the number of iterations: ");
            n = int.Parse(Console.ReadLine());
            for (m = 0; m < n; m++)
            {
                Console.WriteLine("Enter the number of digits: ");
                d = int.Parse(Console.ReadLine());
                Console.WriteLine("Enter the number: ");
                num = int.Parse(Console.ReadLine());
                number = num;
                for (int i = 0; i < d; i++)
                {
                    int rem = num % 10;  //split last digit from number
                    double power = Math.Pow(rem, d);
                    //Console.WriteLine(power);
                    result = result + power;
                    num = num / 10;
                }
                if (number == result)
                {
                    Console.WriteLine(number + "  Armstrong number.");
                    result = 0;
                }
                else
                {
                    Console.WriteLine(number + "  NOT an Armstrong number");
                    result = 0;
                    Console.ReadLine();
                }
            }
        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
A program to check the given number is Armstrong Number or not
Enter the number of iterations:
5
Enter the number of digits:
5
Enter the number:
23
23  NOT an Armstrong number
```

2. Write a program to print factorial of a number

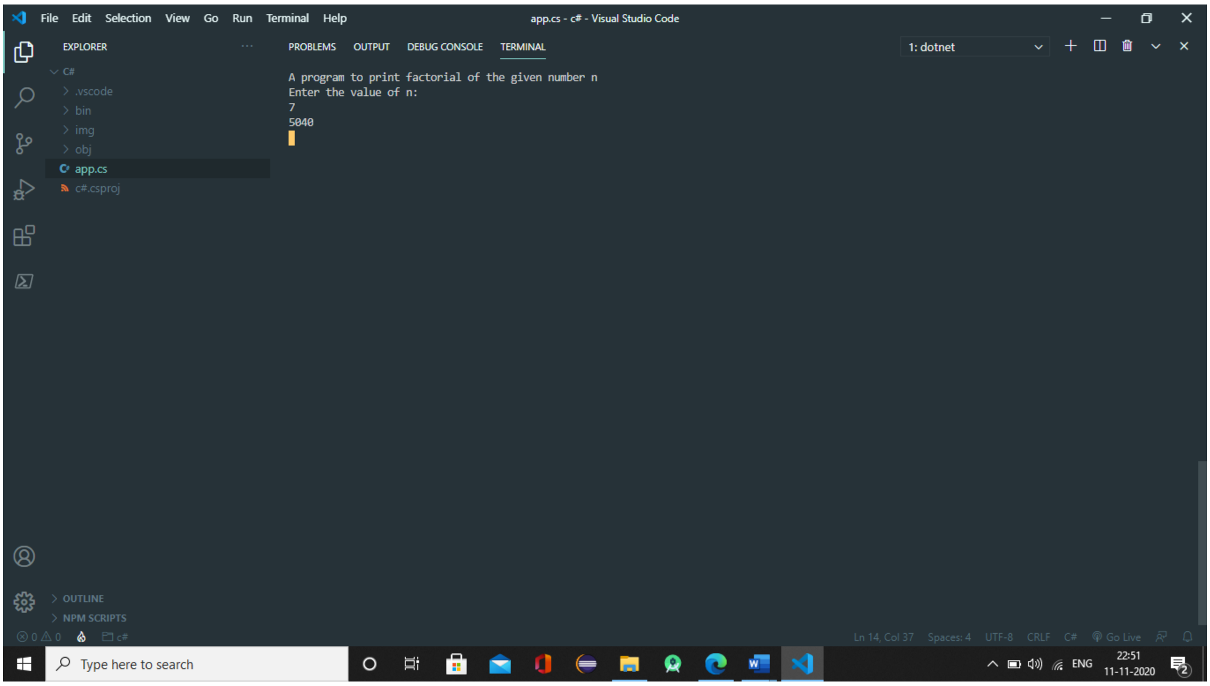
```
using System;

namespace TestConsoleApp{

    public class Factorial
    {
        public static void Main(string[] args)
        {
            Console.WriteLine("A program to print factorial of the given number n");
            int m, n, fact = 1;

            Console.WriteLine("Enter the value of n: ");
            n = int.Parse(Console.ReadLine());
            for (m = 1; m <= n; m++)
            {
                fact = fact * m;
            }
            Console.WriteLine(fact);
            Console.ReadLine();
        }
    }

}
```



```
A program to print factorial of the given number n
Enter the value of n:
7
5040
```

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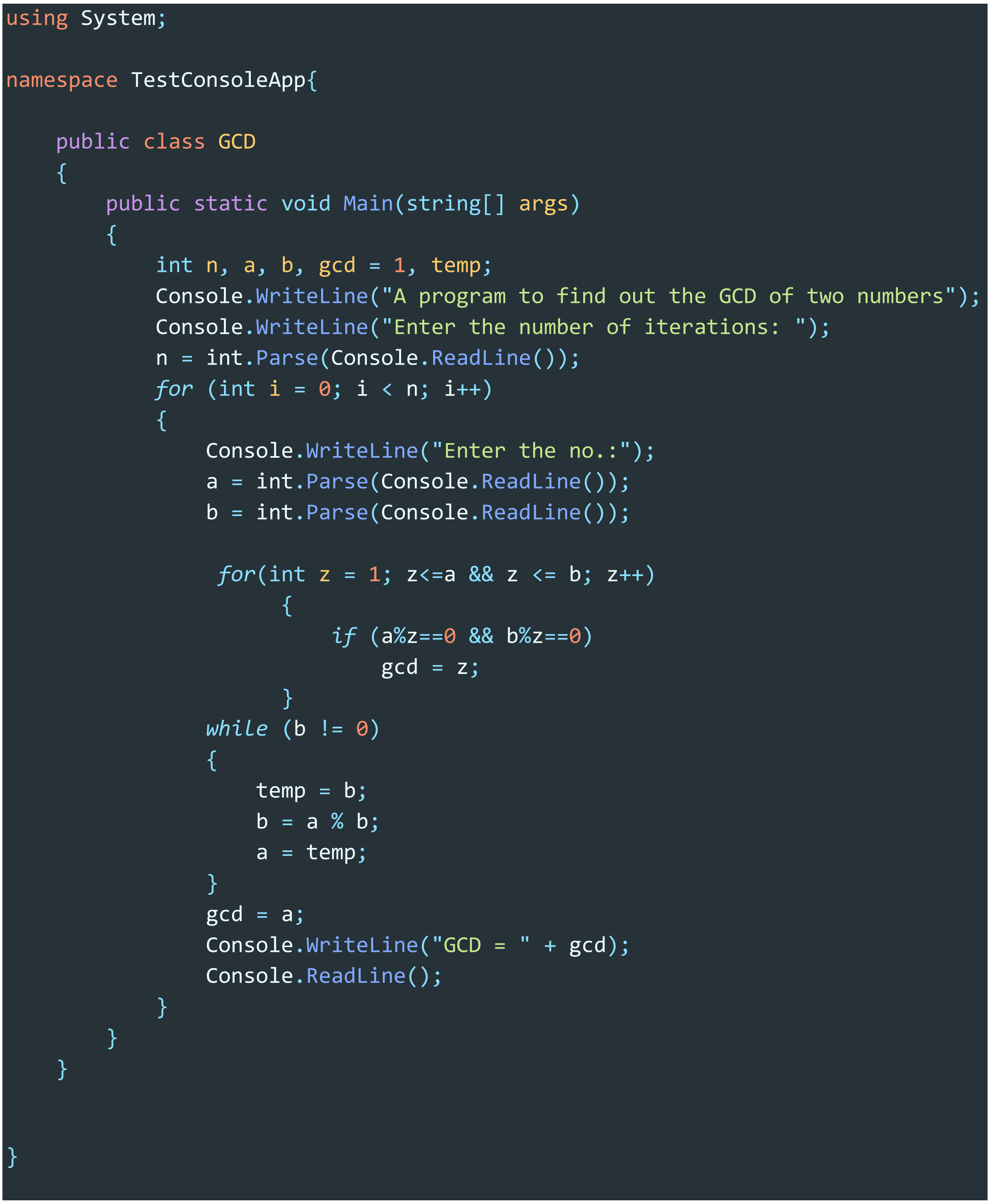
3. Write a program to find the GCD of two numbers



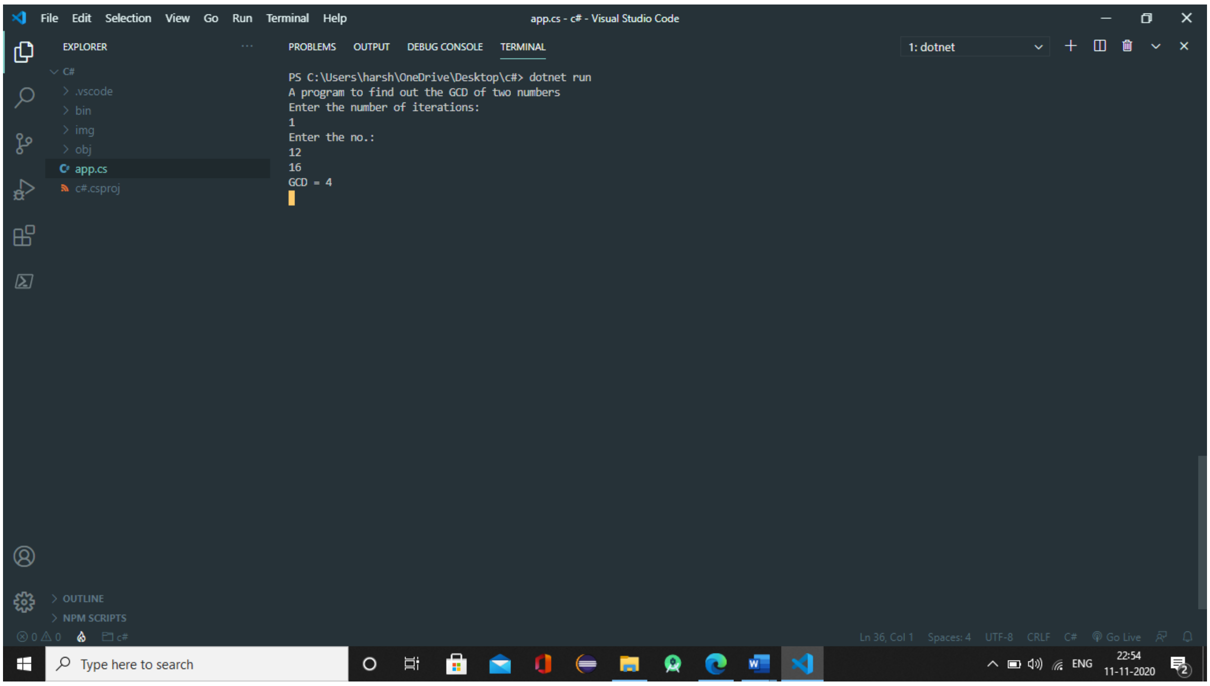
```
using System;

namespace TestConsoleApp{

    public class GCD
    {
        public static void Main(string[] args)
        {
            int n, a, b, gcd = 1, temp;
            Console.WriteLine("A program to find out the GCD of two numbers");
            Console.WriteLine("Enter the number of iterations: ");
            n = int.Parse(Console.ReadLine());
            for (int i = 0; i < n; i++)
            {
                Console.WriteLine("Enter the no.:");
                a = int.Parse(Console.ReadLine());
                b = int.Parse(Console.ReadLine());

                 for(int z = 1; z<=a && z <= b; z++)
                      {
                          if (a%z==0 && b%z==0)
                              gcd = z;
                      }
                while (b != 0)
                {
                    temp = b;
                    b = a % b;
                    a = temp;
                }
                gcd = a;
                Console.WriteLine("GCD = " + gcd);
                Console.ReadLine();
            }
        }
    }


}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
A program to find out the GCD of two numbers
Enter the number of iterations:
1
Enter the no.:
12
16
GCD = 4
```

4. Write a program to check if a number is prime number

```
using System;

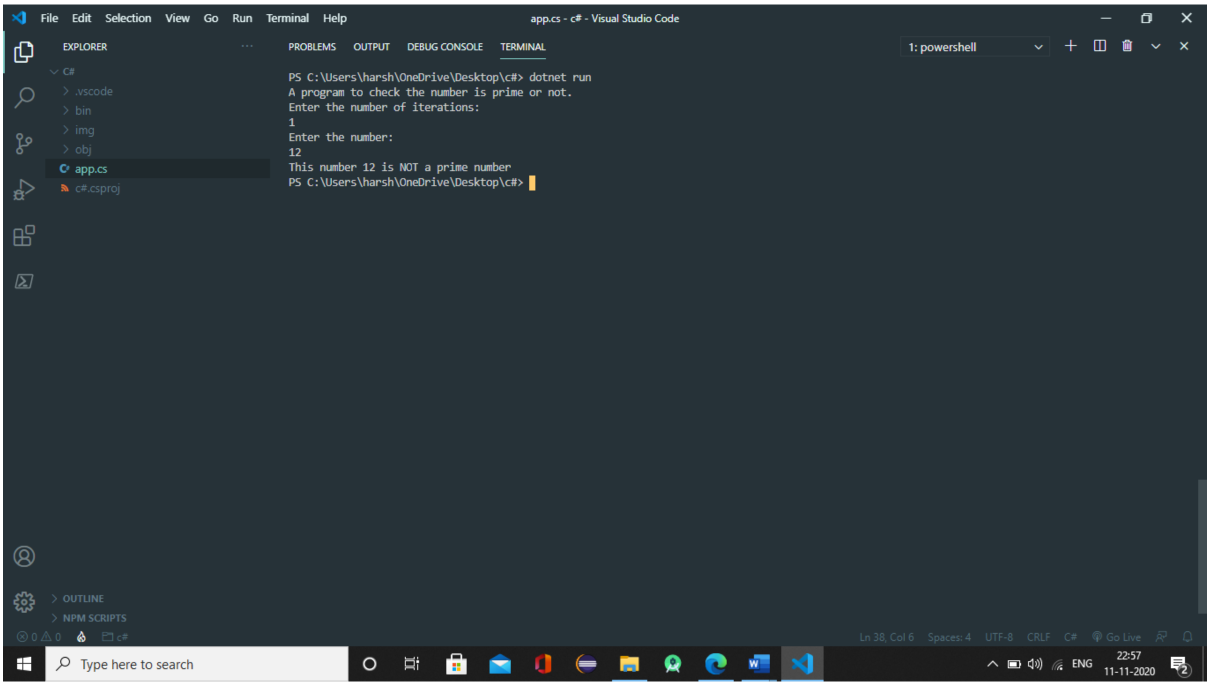
namespace TestConsoleApp{
    public class Prime
    {
        public static void Main(string[] args)
        {
            Console.WriteLine("A program to check the number is prime or not."
);
            int m, n, count = 0, i, j;

            Console.WriteLine("Enter the number of iterations: ");
            j = int.Parse(Console.ReadLine());

            for (i = 0; i < j; i++)
            {
                Console.WriteLine("Enter the number: ");
                n = int.Parse(Console.ReadLine());

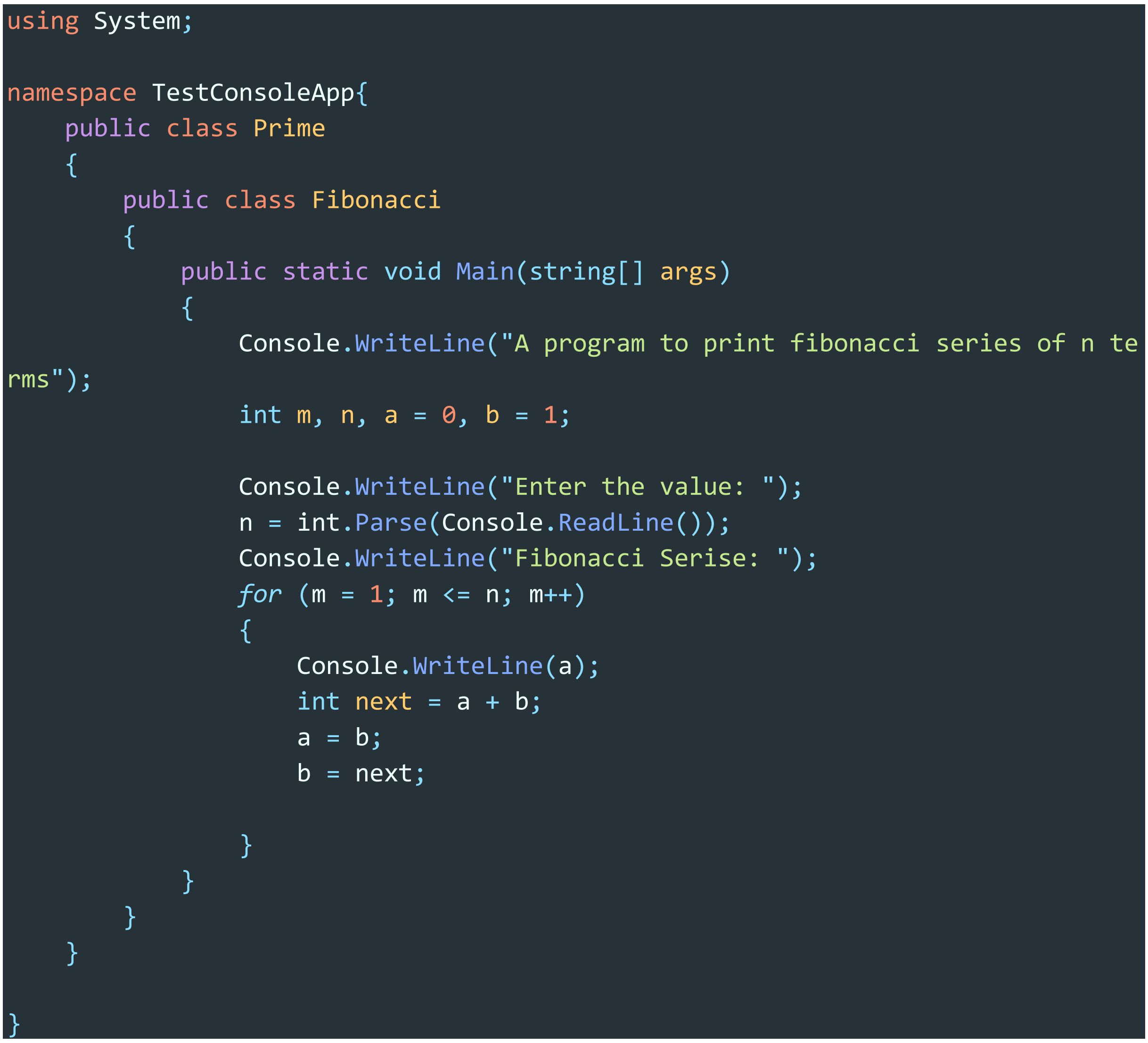
                for (m = 2; m <= n / 2; m++)
                {
                    if (n % m == 0)
                    {
                        count = count + 1;
                    }

                }
                if (count == 0)
                {
                    Console.WriteLine("This number " + n + " is a prime number
");
                }
                else
                {
                    Console.WriteLine("This number " + n + " is NOT a prime nu
mber");
                    count = 0;
                }
            }
        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
A program to check the number is prime or not.
Enter the number of iterations:
1
Enter the number:
12
This number 12 is NOT a prime number
PS C:\Users\harsh\OneDrive\Desktop\c#>
```

5. Write a program to print the fibonacci series



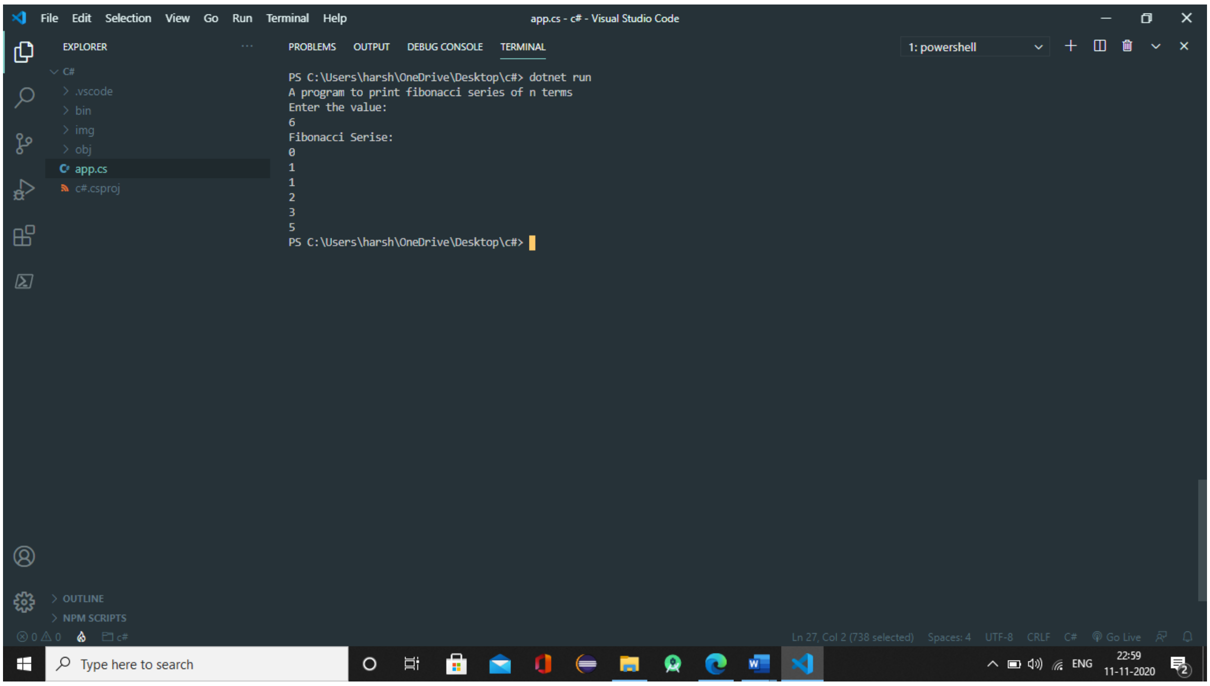
```
using System;

namespace TestConsoleApp{
    public class Prime
    {
        public class Fibonacci
        {
            public static void Main(string[] args)
            {
                Console.WriteLine("A program to print fibonacci series of n te
rms");
                int m, n, a = 0, b = 1;

                Console.WriteLine("Enter the value: ");
                n = int.Parse(Console.ReadLine());
                Console.WriteLine("Fibonacci Serise: ");
                for (m = 1; m <= n; m++)
                {
                    Console.WriteLine(a);
                    int next = a + b;
                    a = b;
                    b = next;

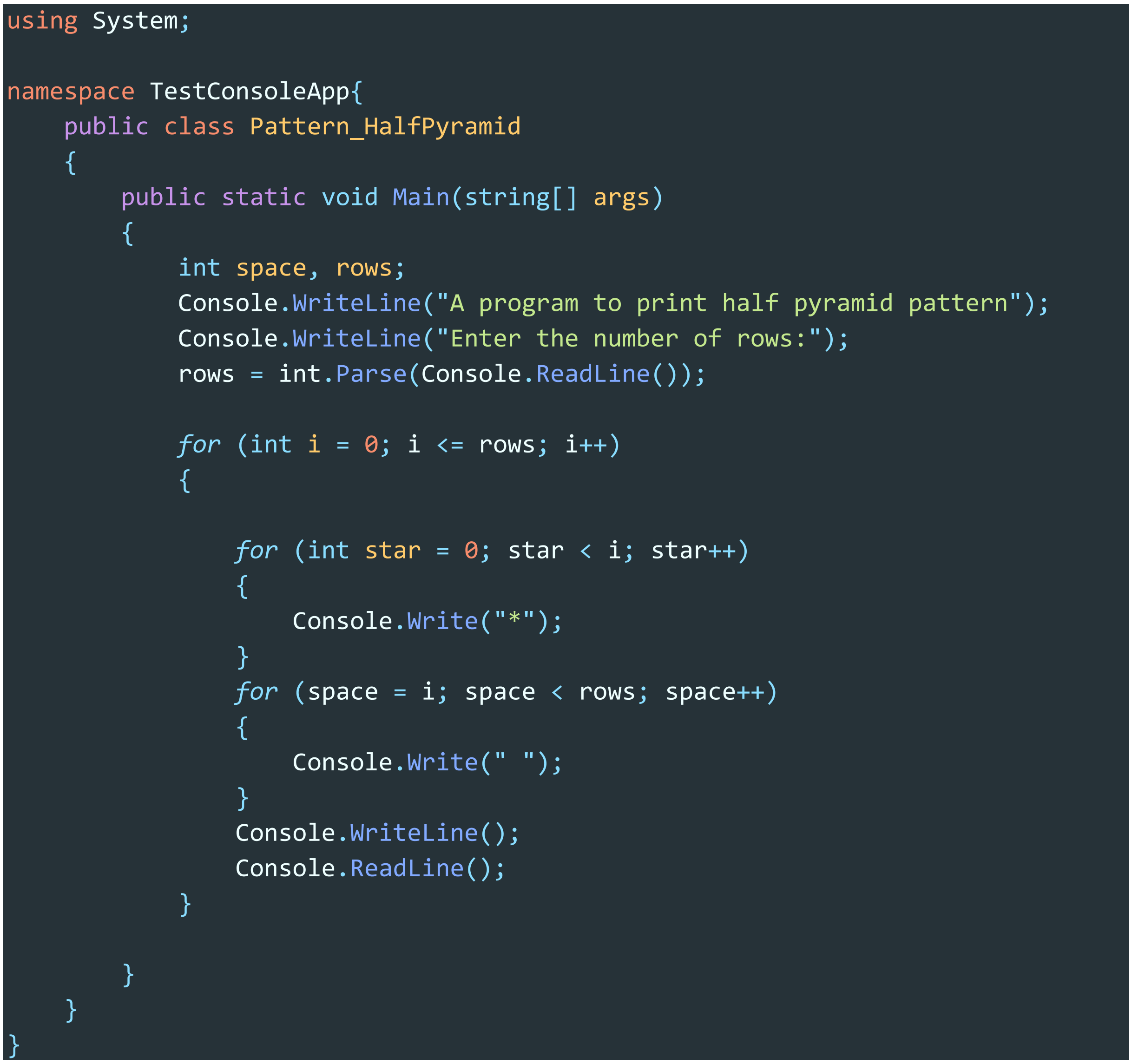
                }
            }
        }
    }

}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
A program to print fibonacci series of n terms
Enter the value:
6
Fibonacci Serise:
0
1
1
2
3
5
PS C:\Users\harsh\OneDrive\Desktop\c#>
```

6. Write a program to print the half pyramid pattern



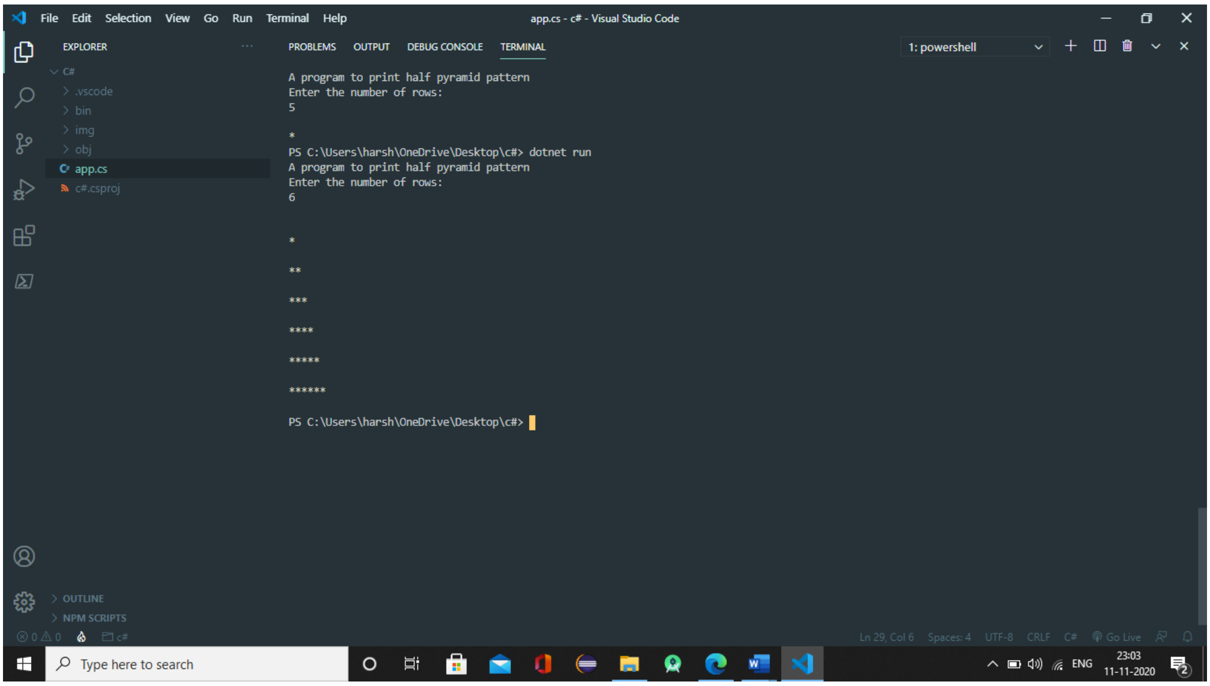
```
using System;

namespace TestConsoleApp{
    public class Pattern_HalfPyramid
    {
        public static void Main(string[] args)
        {
            int space, rows;
            Console.WriteLine("A program to print half pyramid pattern");
            Console.WriteLine("Enter the number of rows:");
            rows = int.Parse(Console.ReadLine());

            for (int i = 0; i <= rows; i++)
            {

                for (int star = 0; star < i; star++)
                {
                    Console.Write("*");
                }
                for (space = i; space < rows; space++)
                {
                    Console.Write(" ");
                }
                Console.WriteLine();
                Console.ReadLine();
            }

        }
    }
}
```



```
A program to print half pyramid pattern
Enter the number of rows:
5

*
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
A program to print half pyramid pattern
Enter the number of rows:
6


*

**

***

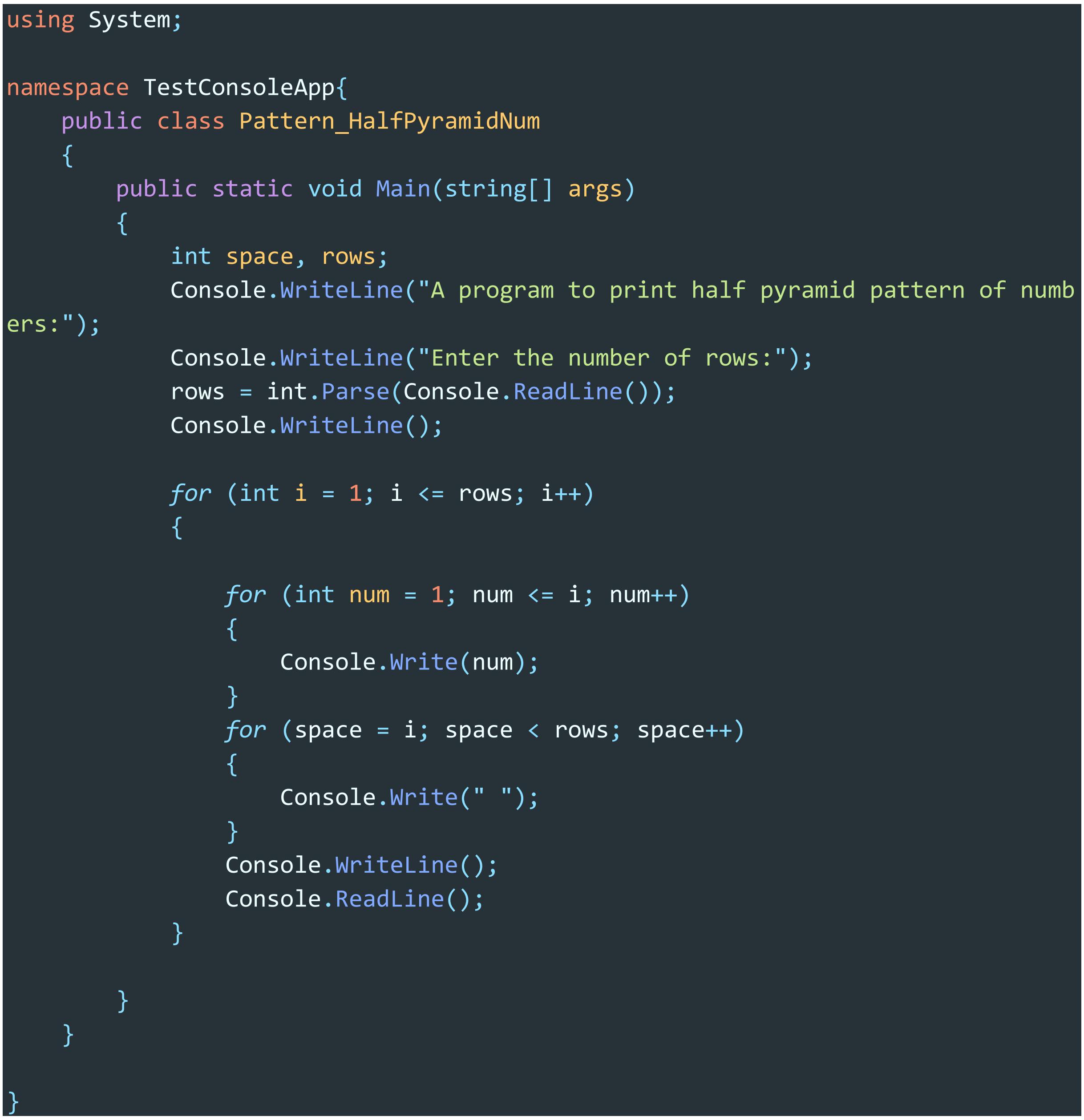
****

*****

******

PS C:\Users\harsh\OneDrive\Desktop\c#>
```

7. Write a program to print the half pyramid pattern with numbers



```
using System;

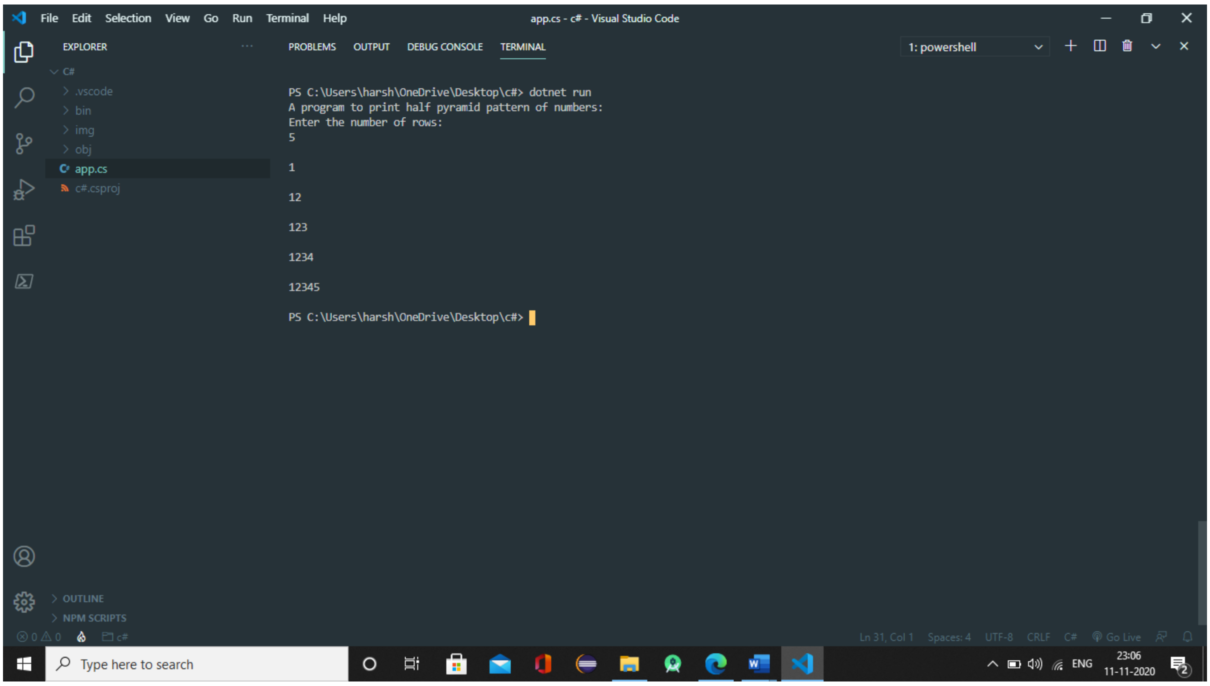
namespace TestConsoleApp{
    public class Pattern_HalfPyramidNum
    {
        public static void Main(string[] args)
        {
            int space, rows;
            Console.WriteLine("A program to print half pyramid pattern of numb
ers:");
            Console.WriteLine("Enter the number of rows:");
            rows = int.Parse(Console.ReadLine());
            Console.WriteLine();

            for (int i = 1; i <= rows; i++)
            {

                for (int num = 1; num <= i; num++)
                {
                    Console.Write(num);
                }
                for (space = i; space < rows; space++)
                {
                    Console.Write(" ");
                }
                Console.WriteLine();
                Console.ReadLine();
            }

        }
    }

}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
A program to print half pyramid pattern of numbers:
Enter the number of rows:
5

1

12

123

1234

12345

PS C:\Users\harsh\OneDrive\Desktop\c#>
```

8. Write a program to print the half pyramid inverse pattern

```
using System;

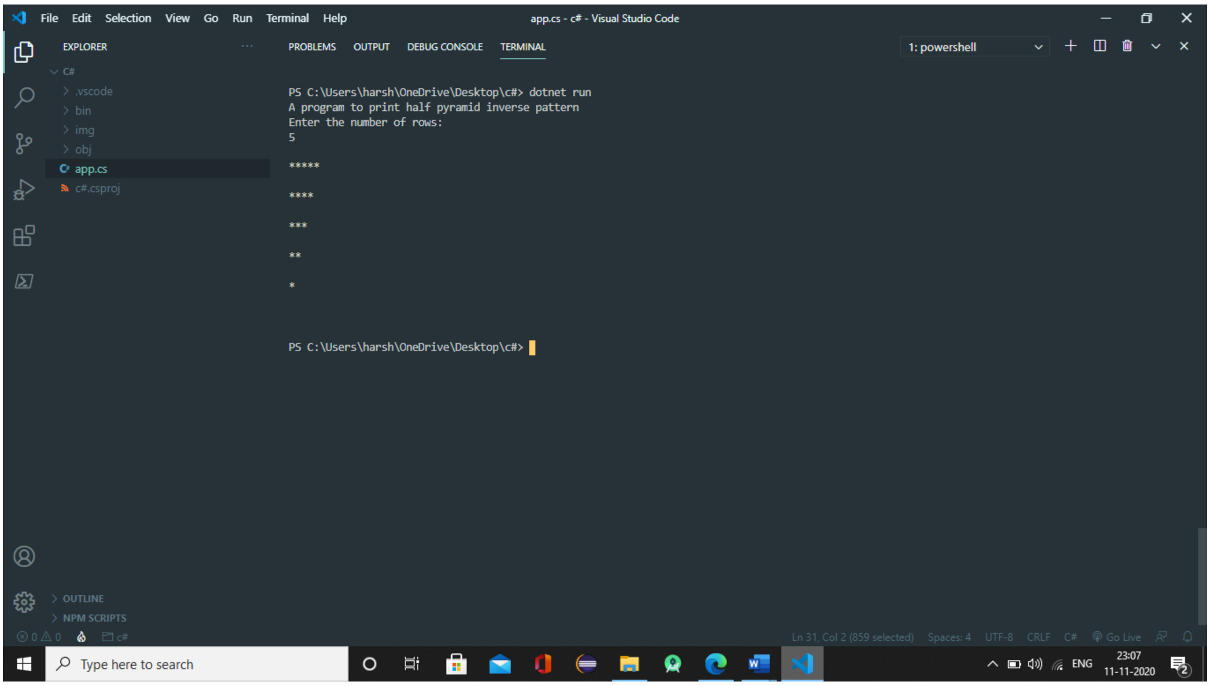
namespace TestConsoleApp{
   public class Pattern_HalfInversePyramid
    {
        public static void Main(string[] args)
        {
            int space, rows;
            Console.WriteLine("A program to print half pyramid inverse pattern
");

            Console.WriteLine("Enter the number of rows:");
            rows = int.Parse(Console.ReadLine());
            Console.WriteLine();

            for (int i = 0; i <= rows; i++)
            {

                for (int star = rows; star > i; star--)
                {
                    Console.Write("*");
                }
                for (space = i; space < rows; space++)
                {
                    Console.Write(" ");
                }
                Console.WriteLine();
                Console.ReadLine();
            }

        }
    }
}
```



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OUTLINE
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Ln 31, Col 2 (859 selected) Spaces: 4 UTF-8 CRLF C# Go Live
Type here to search
ENG
23:07
11-11-2020

```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
A program to print half pyramid inverse pattern
Enter the number of rows:
5

*****

****

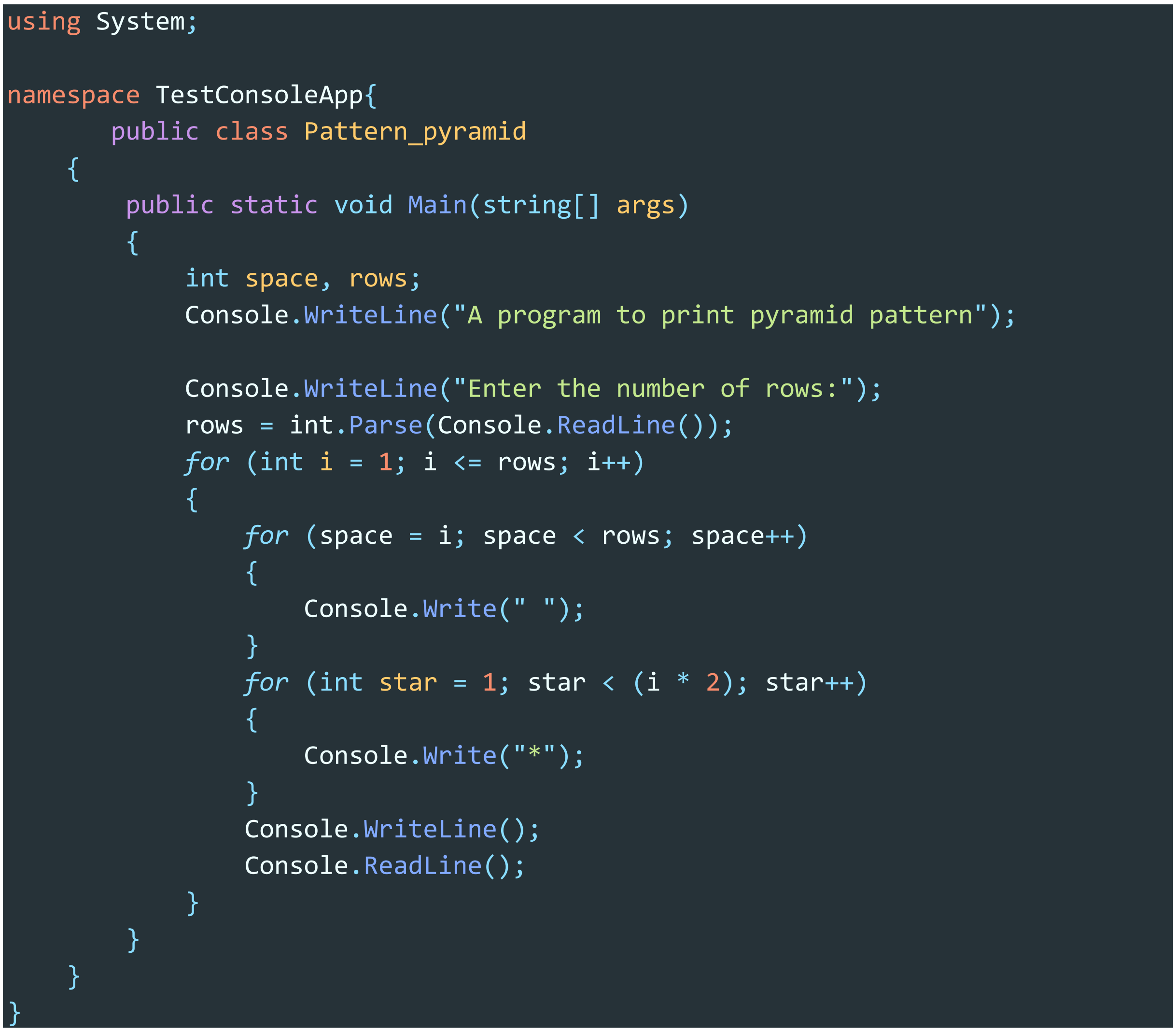
***

**

*


PS C:\Users\harsh\OneDrive\Desktop\c#>
```

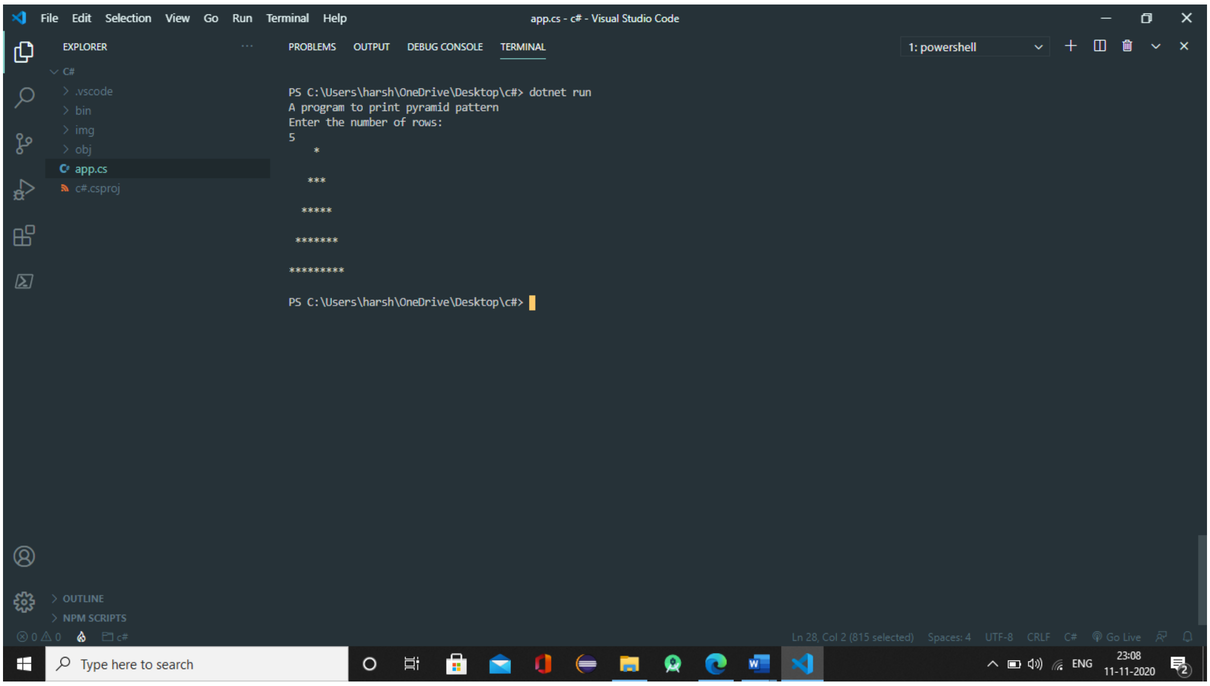
9. Write a program to print the pyramid pattern



```
using System;

namespace TestConsoleApp{
       public class Pattern_pyramid
    {
        public static void Main(string[] args)
        {
            int space, rows;
            Console.WriteLine("A program to print pyramid pattern");

            Console.WriteLine("Enter the number of rows:");
            rows = int.Parse(Console.ReadLine());
            for (int i = 1; i <= rows; i++)
            {
                for (space = i; space < rows; space++)
                {
                    Console.Write(" ");
                }
                for (int star = 1; star < (i * 2); star++)
                {
                    Console.Write("*");
                }
                Console.WriteLine();
                Console.ReadLine();
            }
        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
A program to print pyramid pattern
Enter the number of rows:
5
    *

   ***

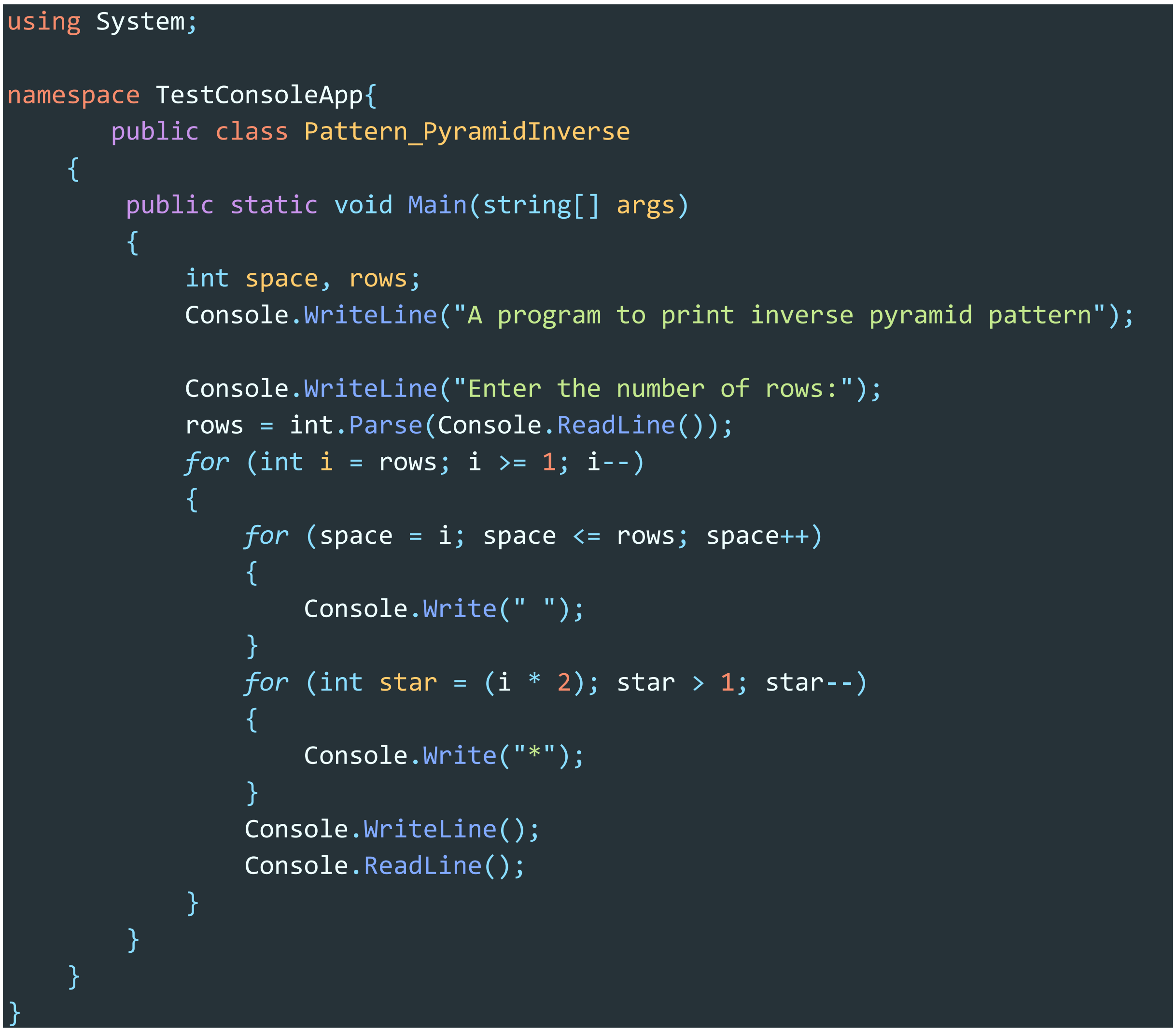
  *****

 *******

*********

PS C:\Users\harsh\OneDrive\Desktop\c#>
```

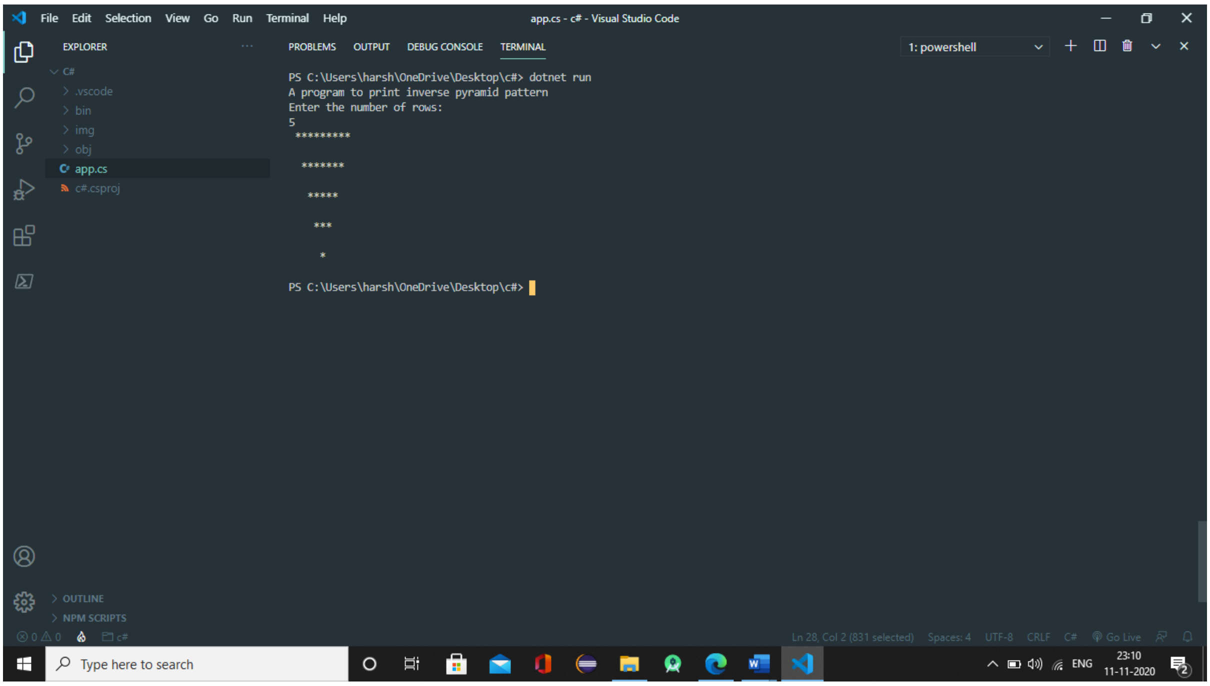
10. Write a program to print the inverse pyramid pattern



```
using System;

namespace TestConsoleApp{
       public class Pattern_PyramidInverse
    {
        public static void Main(string[] args)
        {
            int space, rows;
            Console.WriteLine("A program to print inverse pyramid pattern");

            Console.WriteLine("Enter the number of rows:");
            rows = int.Parse(Console.ReadLine());
            for (int i = rows; i >= 1; i--)
            {
                for (space = i; space <= rows; space++)
                {
                    Console.Write(" ");
                }
                for (int star = (i * 2); star > 1; star--)
                {
                    Console.Write("*");
                }
                Console.WriteLine();
                Console.ReadLine();
            }
        }
    }
}
```



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```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
A program to print inverse pyramid pattern
Enter the number of rows:
5
 *********

  *******

   *****

    ***

     *

PS C:\Users\harsh\OneDrive\Desktop\c#> 
```

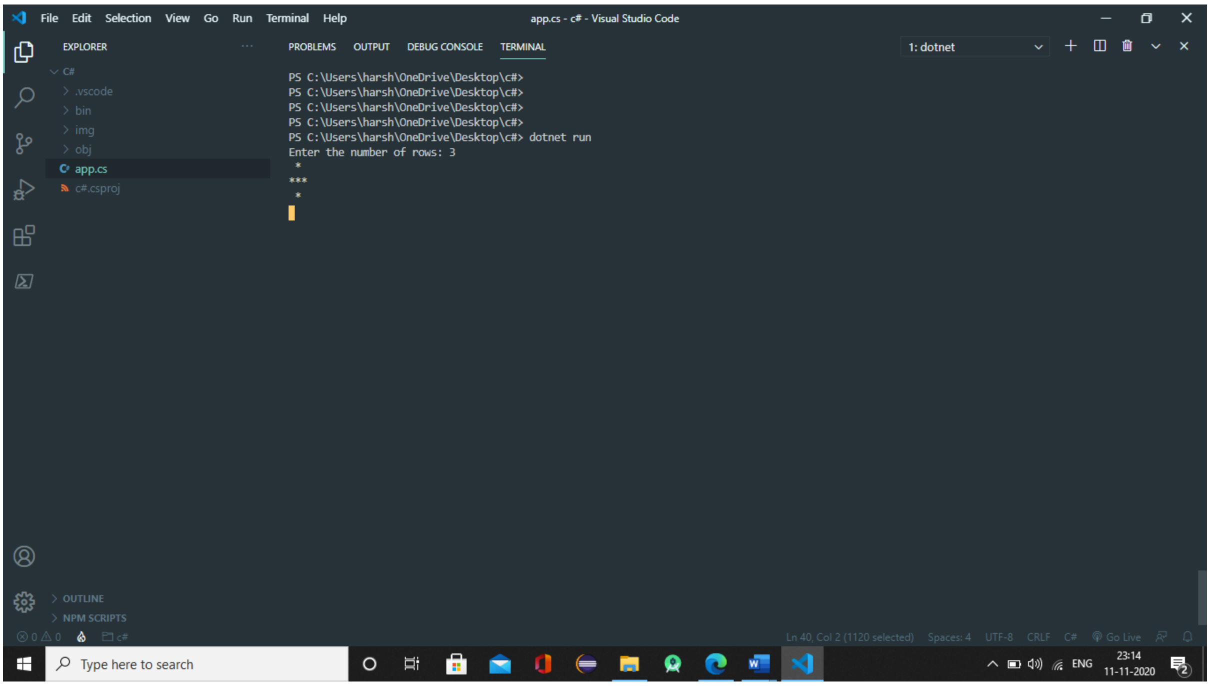
11. Write a program to print the diamond pattern

```
using System;

namespace TestConsoleApp{
        public class Pattern_diamond
    {
        public static void Main(string[] args)
        {
            int rows, i, j, space;

            Console.Write("Enter the number of rows: ");
            rows = int.Parse(Console.ReadLine());

            for (i = 0; i <= rows / 2; i++)
            {
                for (space = i; space < rows / 2; space++)
                {
                    Console.Write(" ");
                }
                for (j = 0; j <= i * 2; j++)
                {
                    Console.Write("*");
                }
                Console.WriteLine();
            }
            for (i = rows / 2 + 1; i >= 1; i--)
            {
                for (space = i; space <= rows / 2 + 1; space++)
                {
                    Console.Write(" ");
                }
                for (j = i * 2 - 4; j >= 0; j--)
                {
                    Console.Write("*");
                }
                Console.WriteLine();
                Console.ReadLine();
            }
        }
    }
}
```



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PS C:\Users\harsh\OneDrive\Desktop\c#>
PS C:\Users\harsh\OneDrive\Desktop\c#>
PS C:\Users\harsh\OneDrive\Desktop\c#>
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
Enter the number of rows: 3
 *
***
 *
```

12. Write a program to print the Pascal’s triangle

```
using System;

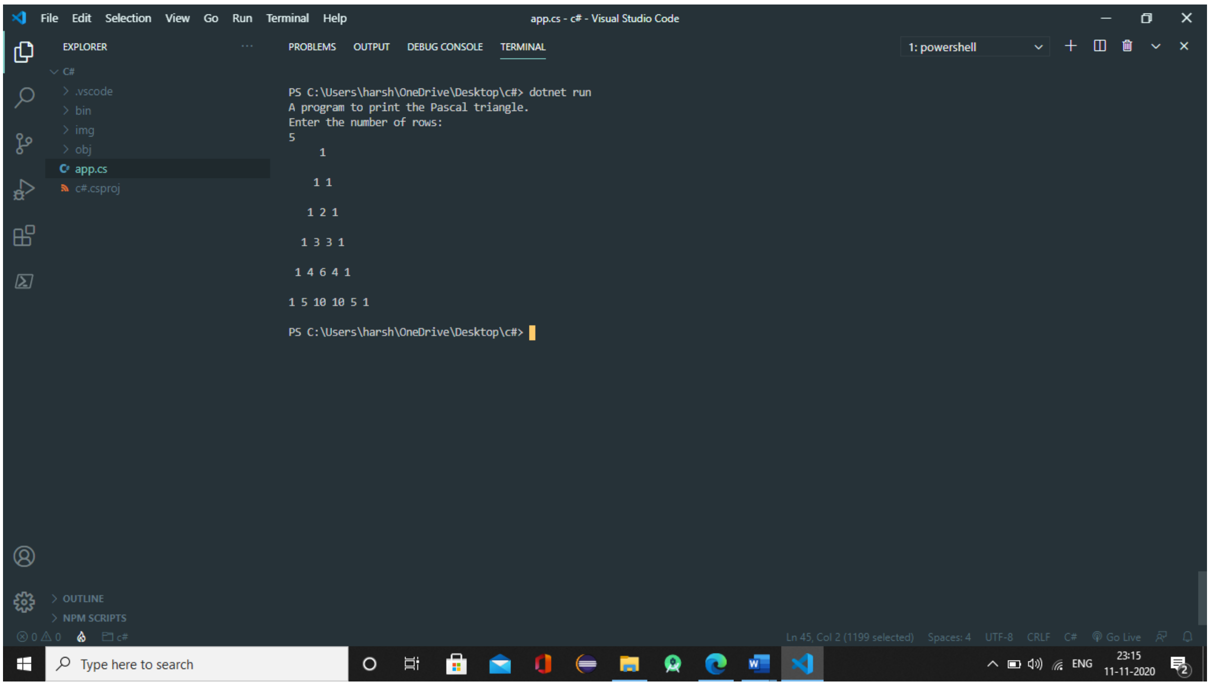
namespace TestConsoleApp{
       public class Pascal_Triangle
    {
        public static int Factorial(int fact)
        {
            int m, f = 1;
            for (m = 1; m <= fact; m++)
            {
                f = f * m;
            }
            return f;
        }

        public static int Ncr(int a, int b)
        {
            return Factorial(a) / (Factorial(b) * Factorial(a - b));
        }

        public static void Main(string[] args)
        {
            int space, rows, c;
            Console.WriteLine("A program to print the Pascal triangle.");
            Console.WriteLine("Enter the number of rows:");
            rows = int.Parse(Console.ReadLine());

            for (int i = 0; i <= rows; i++)
            {
                for (space = i; space < rows; space++)
                {
                    Console.Write(" ");
                }
                for (int j = 0; j <= i; j++)
                {
                    c = Ncr(i, j);
                    Console.Write(c + " ");
                }
                Console.WriteLine();
                Console.ReadLine();
            }
        }
    }

}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
A program to print the Pascal triangle.
Enter the number of rows:
5
     1

    1 1

   1 2 1

  1 3 3 1

 1 4 6 4 1

1 5 10 10 5 1

PS C:\Users\harsh\OneDrive\Desktop\c#> 
```

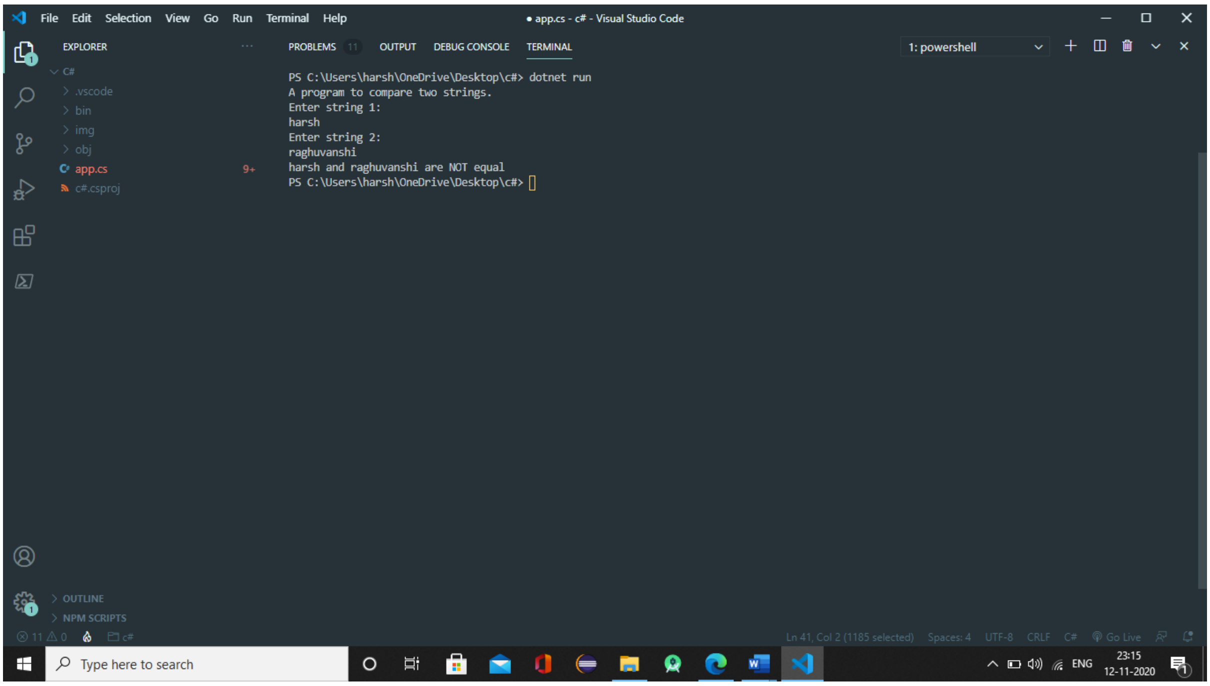
13. Write a program to compare two string without using string library functions

```
using System;

namespace TestConsoleApp
{
    class Program
    {
        public class StringCompare
        {
            public static void Main(string[] args)
            {
                string str1, str2; int flag = 0;
                Console.WriteLine("A program to compare two strings.");
                Console.WriteLine("Enter string 1: ");
                str1 = Console.ReadLine();
                Console.WriteLine("Enter string 2: ");
                str2 = Console.ReadLine();

                for (int i = 0; i < str1.Length; i++)
                {
                    if (str1[i] != str2[i])
                    {
                        flag = 0; break;
                    }
                    else
                    {
                        flag = 1;
                    }
                }

                if (flag == 0)
                {
                    Console.WriteLine(str1 + " and " + str2 + " are NOT equal"
);
                }
                else if (flag == 1)
                {
                    Console.WriteLine(str1 + " and " + str2 + " are Equal");
                }
            }
        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
A program to compare two strings.
Enter string 1:
harsh
Enter string 2:
raghuvanshi
harsh and raghuvanshi are NOT equal
PS C:\Users\harsh\OneDrive\Desktop\c#> 
```

14. Write a program to count a total number of alphabets, digits and special characters in a string

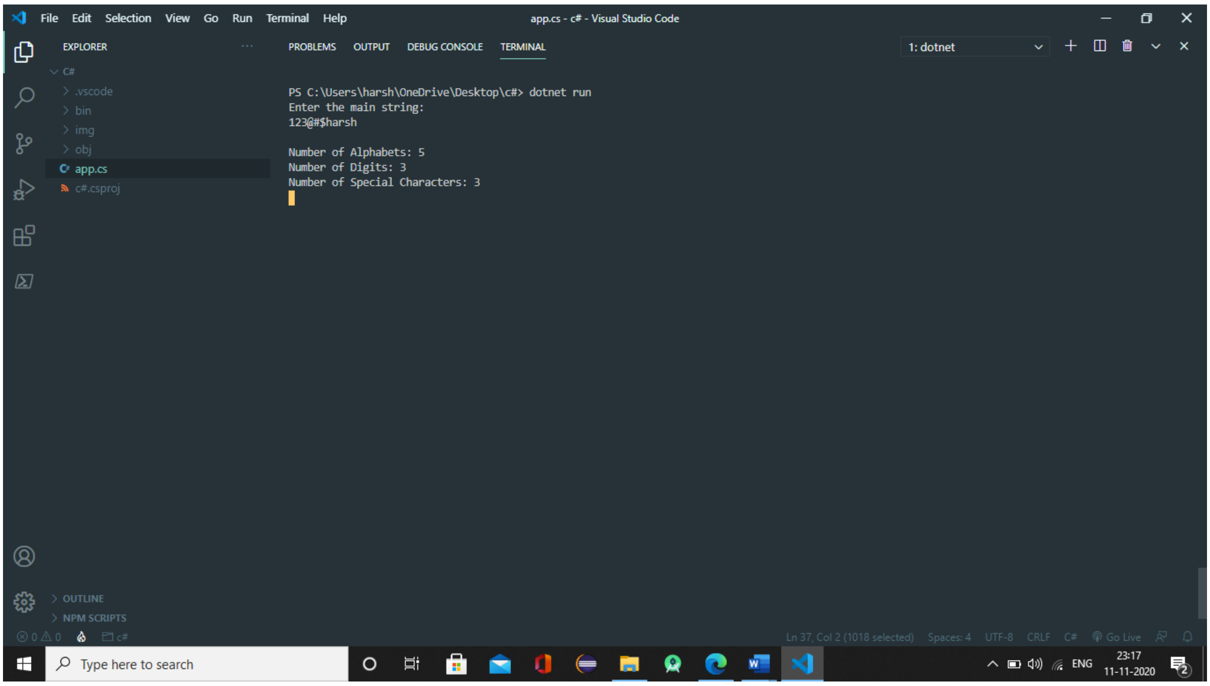
```
using System;

namespace TestConsoleApp{
        public class StringCount
    {
        public static void Main(string[] args)
        {
            string str;
            int alpha = 0, digit = 0, sym = 0;

            Console.WriteLine("Enter the main string: ");
            str = Console.ReadLine();

            foreach (char s in str)
            {
                if (s >= 65 && s <= 90 || s >= 97 && s <= 122)
                {
                    alpha += 1;
                }
                else if (s >= 48 && s <= 57)
                {
                    digit += 1;
                }
                else
                {
                    sym += 1;
                }
            }
            Console.WriteLine();
            Console.WriteLine("Number of Alphabets: " + alpha);
            Console.WriteLine("Number of Digits: " + digit);
            Console.WriteLine("Number of Special Characters: " + sym);
            Console.ReadLine();
        }
    }

}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
Enter the main string:
123@#$harsh

Number of Alphabets: 5
Number of Digits: 3
Number of Special Characters: 3
```

15. Write a program to copy one string to another string

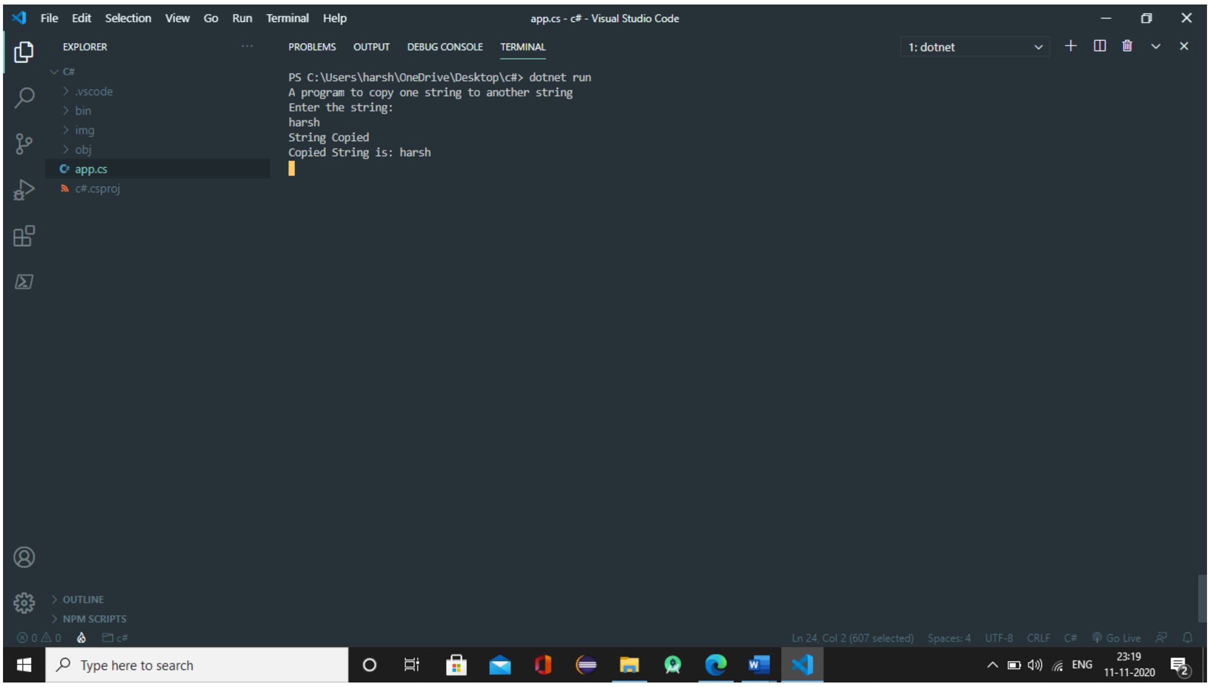
```
using System;

namespace TestConsoleApp{
       public class StringCopy
    {
        public static void Main(string[] args)
        {
            string s1, s2 = "";

            Console.WriteLine("A program to copy one string to another string"
);

            Console.WriteLine("Enter the string: ");
            s1 = Console.ReadLine();

            foreach (char a in s1)
            {
                s2 += a;
            }
            Console.WriteLine("String Copied");
            Console.WriteLine("Copied String is: " + s2);
            Console.ReadLine();
        }
    }
}
```



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Ln 24, Col 2 (607 selected) Spaces: 4 UTF-8 CRLF C# Go Live
Type here to search
ENG
23:19
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```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
A program to copy one string to another string
Enter the string:
harsh
String Copied
Copied String is: harsh
```

16. Write a program to find maximum occurring character in a string

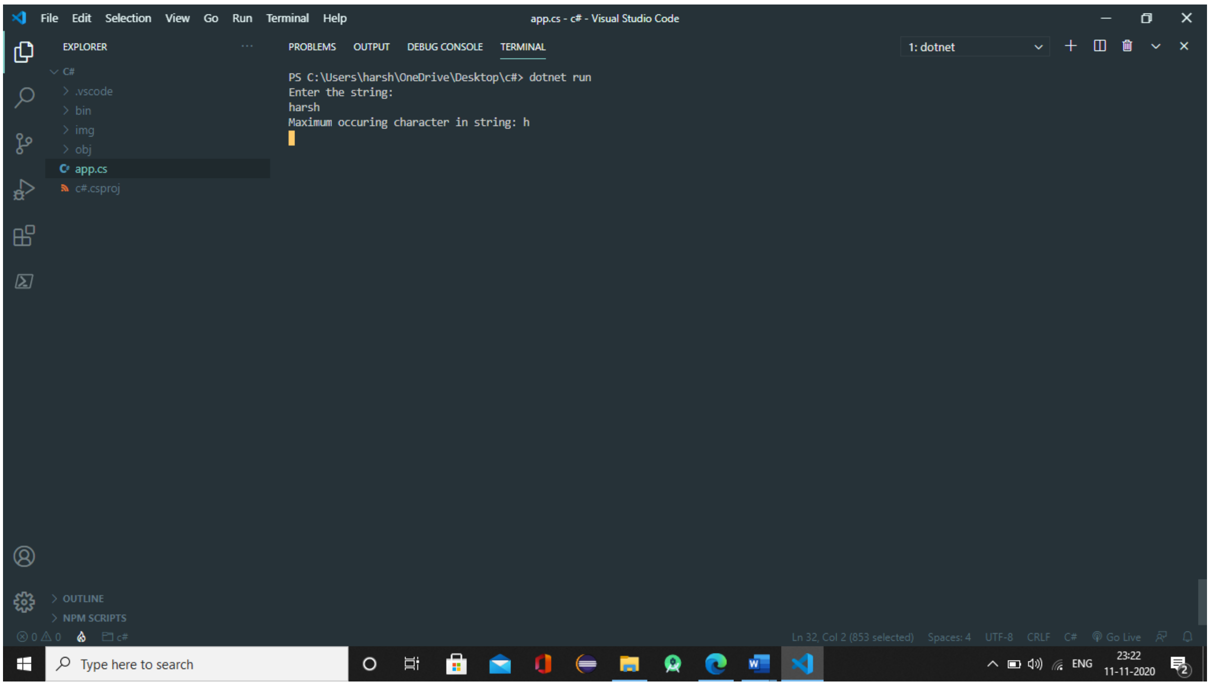
```
using System;

namespace TestConsoleApp{
        public class StringMax
    {
        public static void Main(string[] args)
        {
            string str;
            int[] count = new int[256];
            Console.WriteLine("Enter the string: ");
            str = Console.ReadLine();

            for (int i = 0; i < str.Length; i++)
            {
                count[str[i]]++;
            }
            int max = -1;
            char result = ' ';

            for (int i = 0; i < str.Length; i++)
            {
                if (max < count[str[i]])
                {
                    max = count[str[i]];
                    result = str[i];
                }
            }
            Console.WriteLine("Maximum occuring character in string: " + resul
t);

            Console.ReadLine();
        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
Enter the string:
harsh
Maximum occuring character in string: h
```

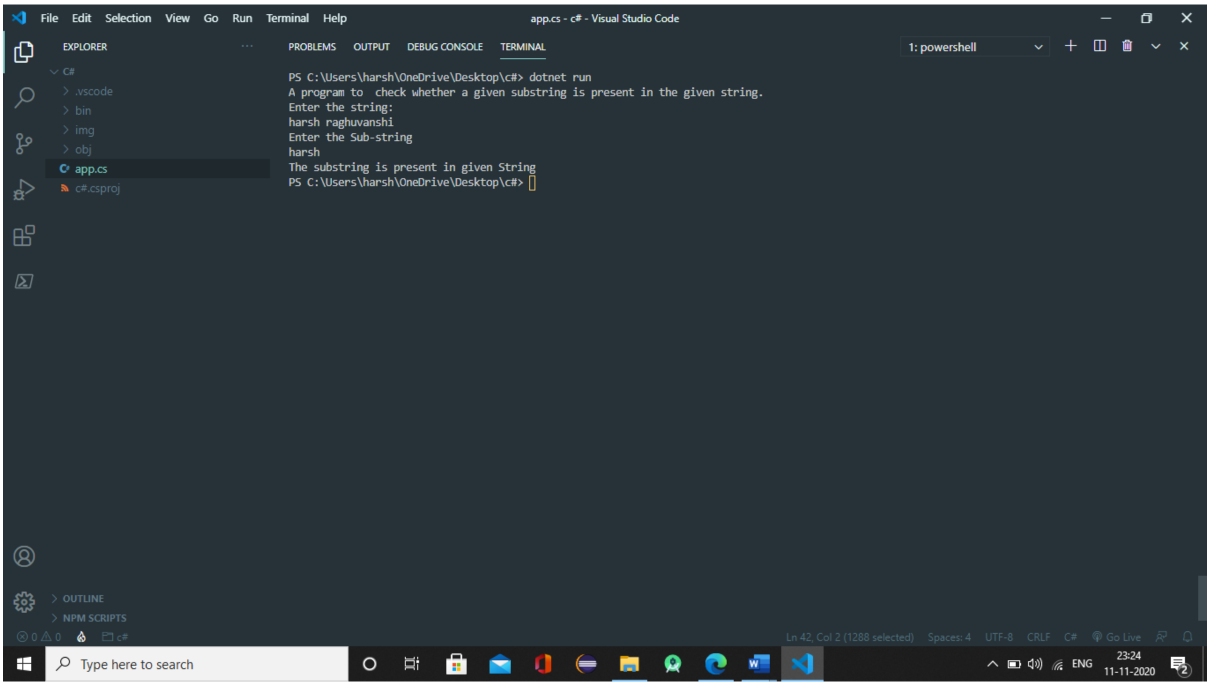
17. Write a program to check whether a given substring is present in the given string

```
using System;

namespace TestConsoleApp{
    public class StringSubString
    {
        public static void Main(string[] args)
        {
            string str, substr;
            Console.WriteLine("A program to  check whether a given substring i
s present in the given string.");
            Console.WriteLine("Enter the string: ");
            str = Console.ReadLine();
            Console.WriteLine("Enter the Sub-string");
            substr = Console.ReadLine();

            int flag = 0;
            for (int i = 0; i <= str.Length - substr.Length; i++)
            {
                for (int j = i; j < i + substr.Length; j++)
                {
                    flag = 1;
                    if (str[j] != substr[j - i])
                    {
                        flag = 0;
                        break;
                    }
                }
                if (flag == 1)
                    break;
            }

            if (flag == 1)
            {
                Console.WriteLine("The substring is present in given String");
            }
            else
            {
                Console.WriteLine("The substring is NOT present in given Strin
g");
                Console.ReadLine();
            }
        }
    }
}
```

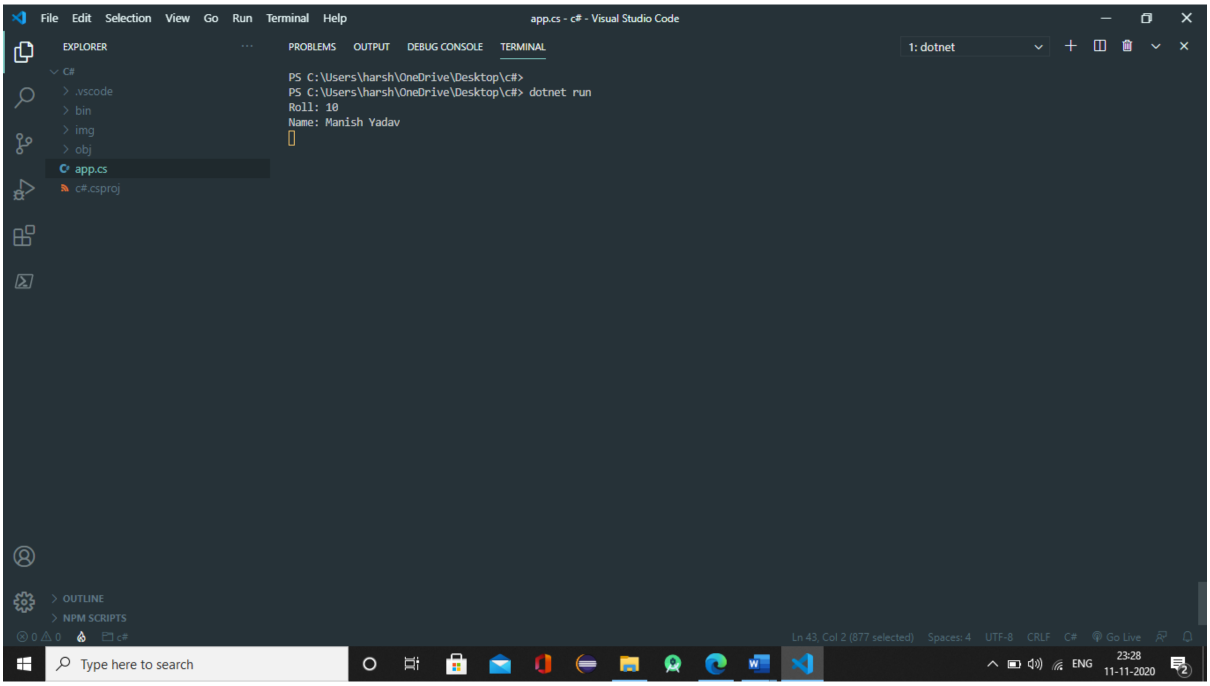


```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
A program to  check whether a given substring is present in the given string.
Enter the string:
harsh raghuvanshi
Enter the Sub-string
harsh
The substring is present in given String
PS C:\Users\harsh\OneDrive\Desktop\c#> 
```

18. Write a Program for Encapsulation

```
using System;

namespace TestConsoleApp{
    class Student
    {
        private int roll;
        private string name;
        public int Roll
        {
            get
            {
                return roll;
            }
            set
            {
                roll = value;
            }
        }
        public string Name
        {
            get
            {
                return name;
            }
            set
            {
                name = value;
            }
        }
    }
    class Program
    {
        static void Main(string[] args)
        {
            Student A = new Student();
            A.Roll = 10;
            A.Name = "Manish Yadav";
            Console.WriteLine("Roll: " + A.Roll);
            Console.WriteLine("Name: " + A.Name);
            Console.ReadLine();
        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#>
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
Roll: 10
Name: Manish Yadav
```

19. Write a program for Abstraction

```
using System;

namespace TestConsoleApp{
    public class Abstraction
    {
        abstract class Cs
        {
            public abstract void Fun();
        }

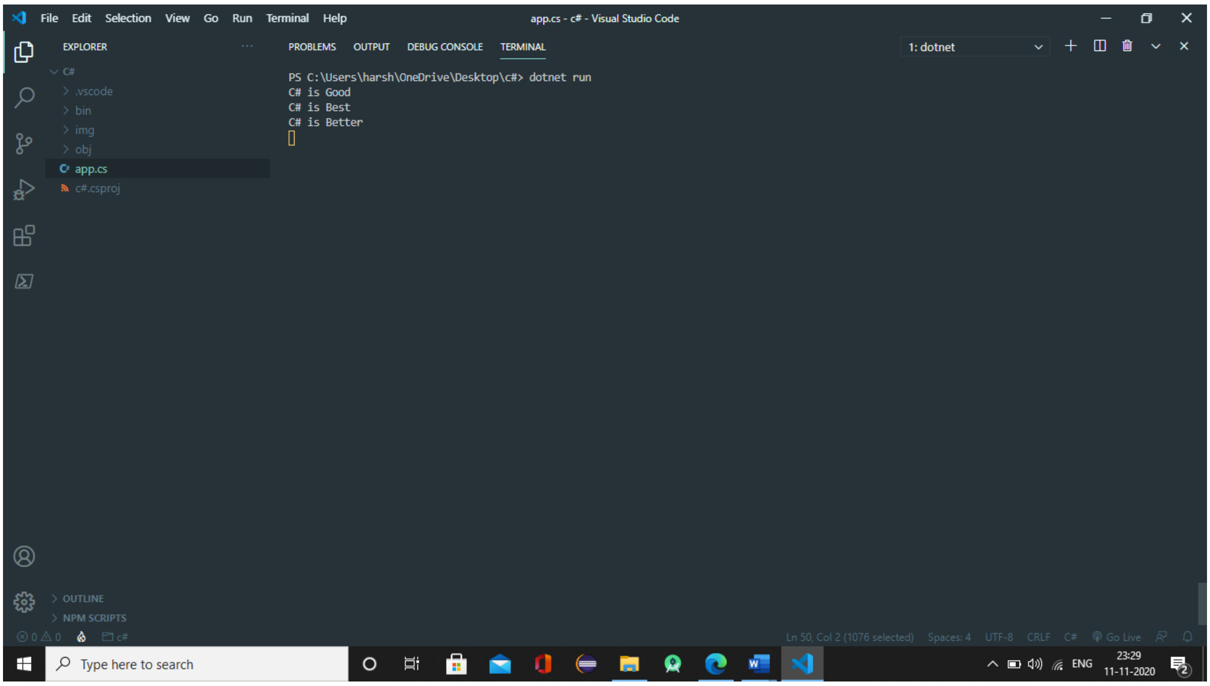
        private class Good : Cs
        {
            public override void Fun()
            {
                Console.WriteLine("C# is Good");
            }
        }

        private class Best : Cs
        {
            public override void Fun()
            {
                Console.WriteLine("C# is Best");
            }
        }

        private class Better : Cs
        {
            public override void Fun()
            {
                Console.WriteLine("C# is Better");
            }
        }

        public class MyClass
        {
            public static void Main()
            {
                Cs c;
                c = new Good();
                c.Fun();
                c = new Best();
                c.Fun();
                c = new Better();
                c.Fun();
                Console.ReadLine();
```

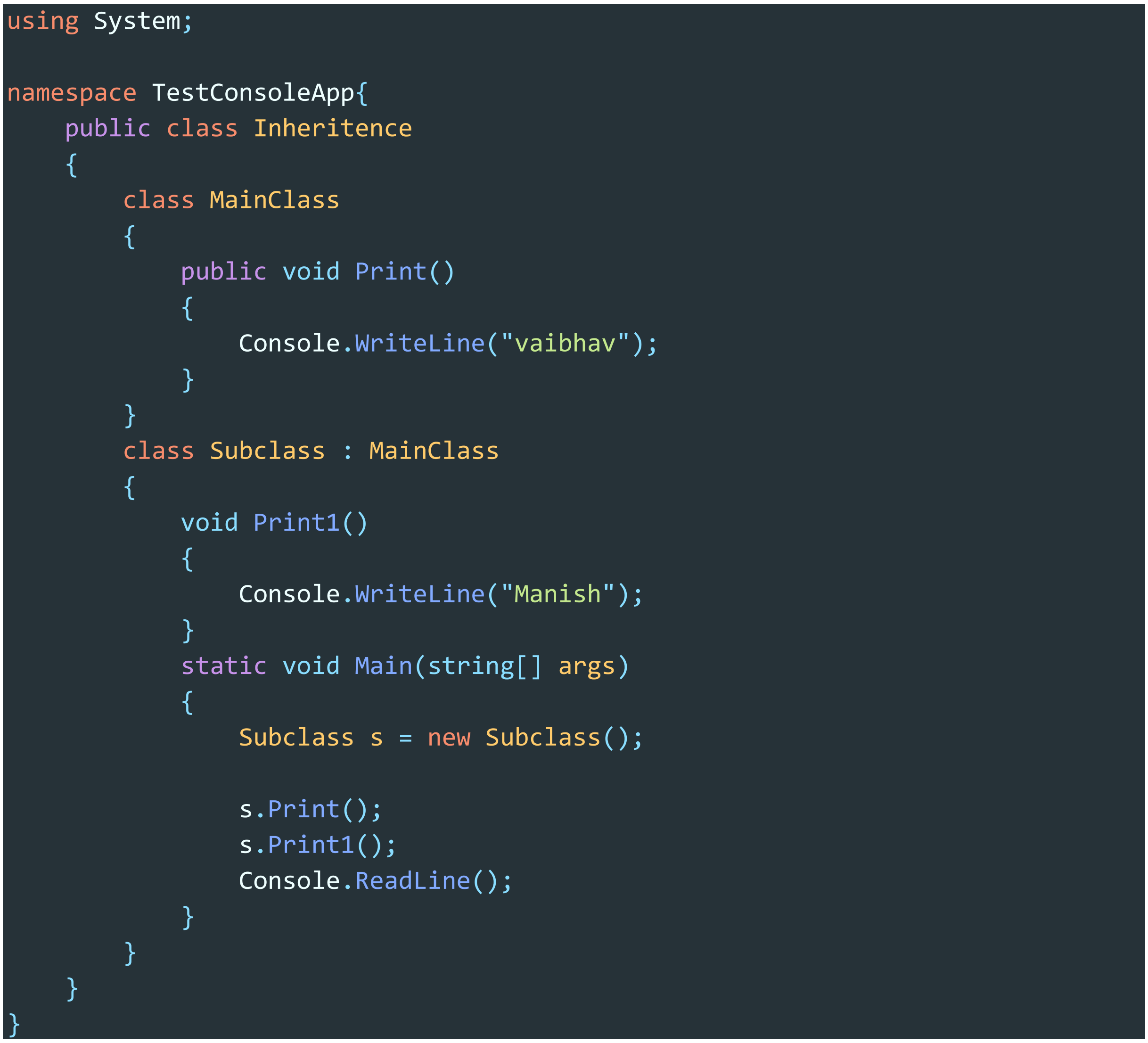
```
            }
        }
    }
}
```



File Edit Selection View Go Run Terminal Help
app.cs - c# - Visual Studio Code
EXPLORER
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
1: dotnet
C#
.vscode
bin
img
obj
app.cs
c#.csproj
OUTLINE
NPM SCRIPTS
Ln 50, Col 2 (1076 selected) Spaces: 4 UTF-8 CRLF C# Go Live
Type here to search
ENG
23:29
11-11-2020

```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
C# is Good
C# is Best
C# is Better
```

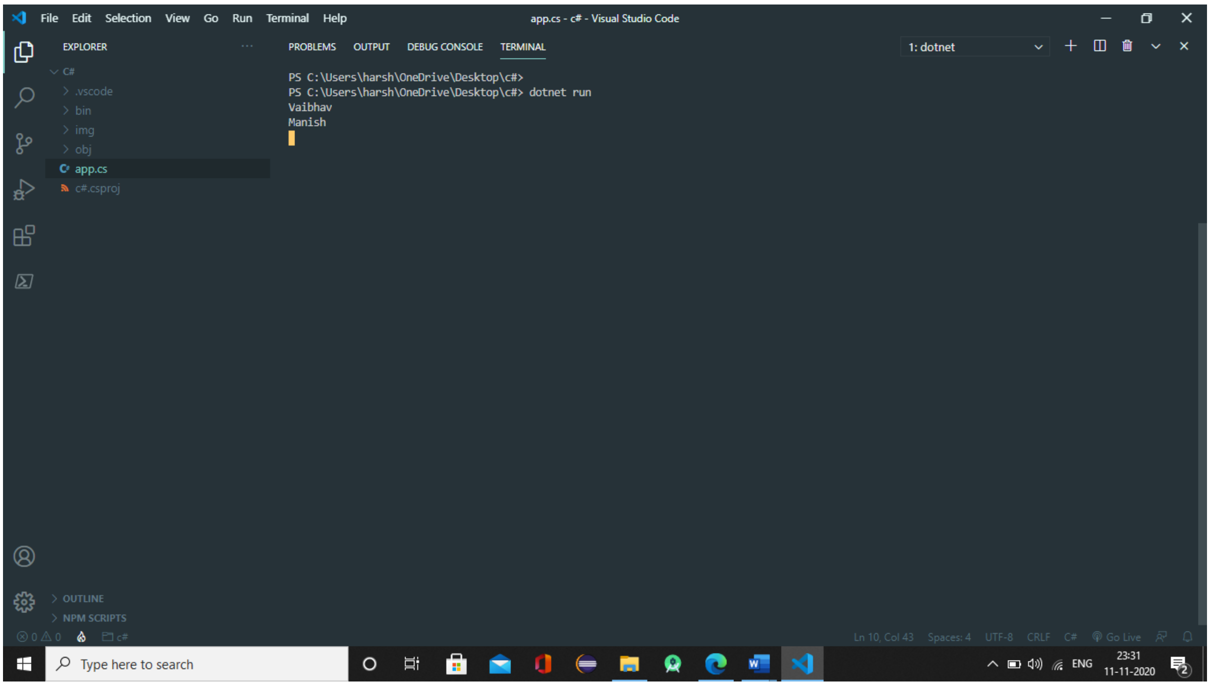
20. Write a program for single Inheritence



```
using System;

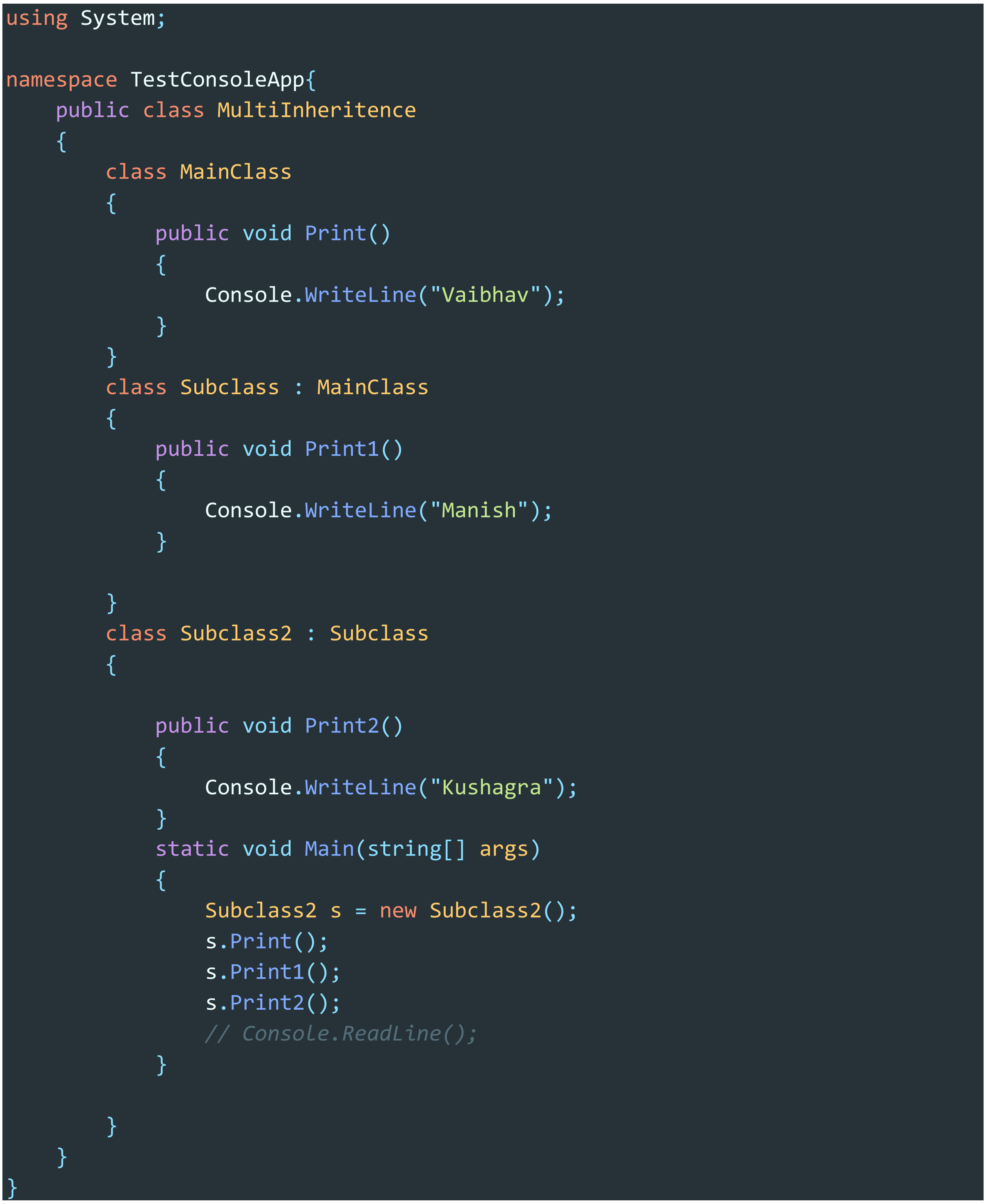
namespace TestConsoleApp{
    public class Inheritence
    {
        class MainClass
        {
            public void Print()
            {
                Console.WriteLine("vaibhav");
            }
        }
        class Subclass : MainClass
        {
            void Print1()
            {
                Console.WriteLine("Manish");
            }
            static void Main(string[] args)
            {
                Subclass s = new Subclass();

                s.Print();
                s.Print1();
                Console.ReadLine();
            }
        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#>
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
Vaibhav
Manish
```

21. Write a program for Multilevel Inheritence



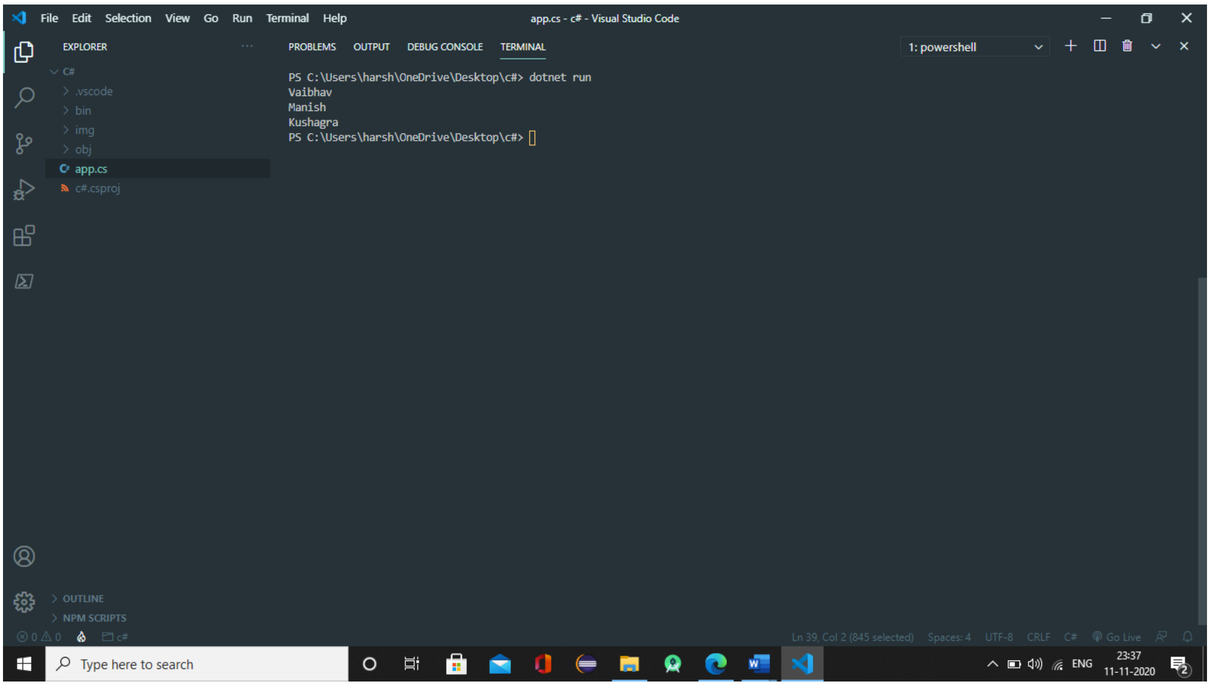
```
using System;

namespace TestConsoleApp{
    public class MultiInheritence
    {
        class MainClass
        {
            public void Print()
            {
                Console.WriteLine("Vaibhav");
            }
        }
        class Subclass : MainClass
        {
            public void Print1()
            {
                Console.WriteLine("Manish");
            }

        }
        class Subclass2 : Subclass
        {

            public void Print2()
            {
                Console.WriteLine("Kushagra");
            }
            static void Main(string[] args)
            {
                Subclass2 s = new Subclass2();
                s.Print();
                s.Print1();
                s.Print2();
                // Console.ReadLine();
            }

        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
Vaibhav
Manish
Kushagra
PS C:\Users\harsh\OneDrive\Desktop\c#>
```

File Edit Selection View Go Run Terminal Help
app.cs - c# - Visual Studio Code
EXPLORER
C#
.vscode
bin
img
obj
app.cs
c#.csproj
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
1: powershell
OUTLINE
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ENG
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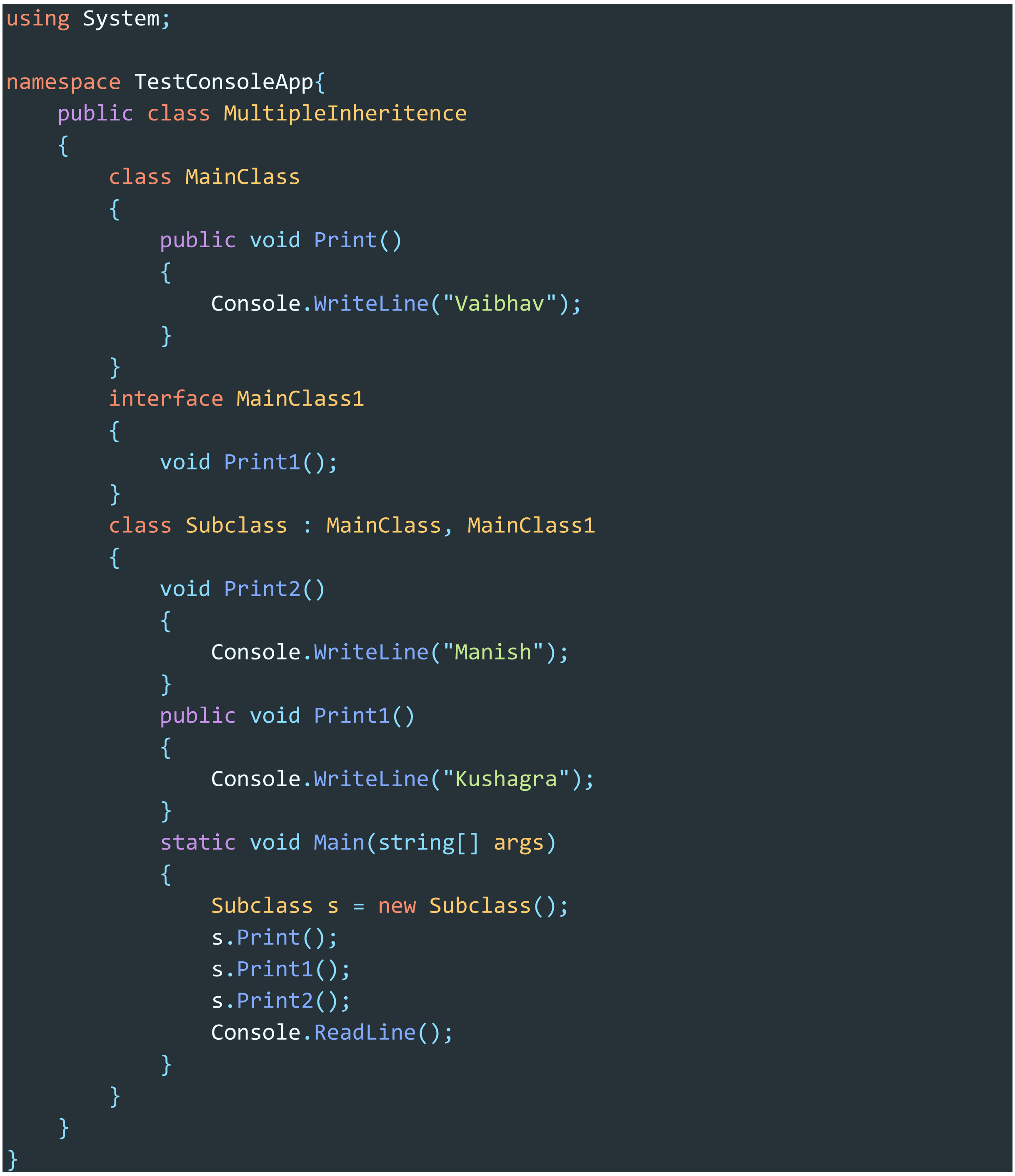
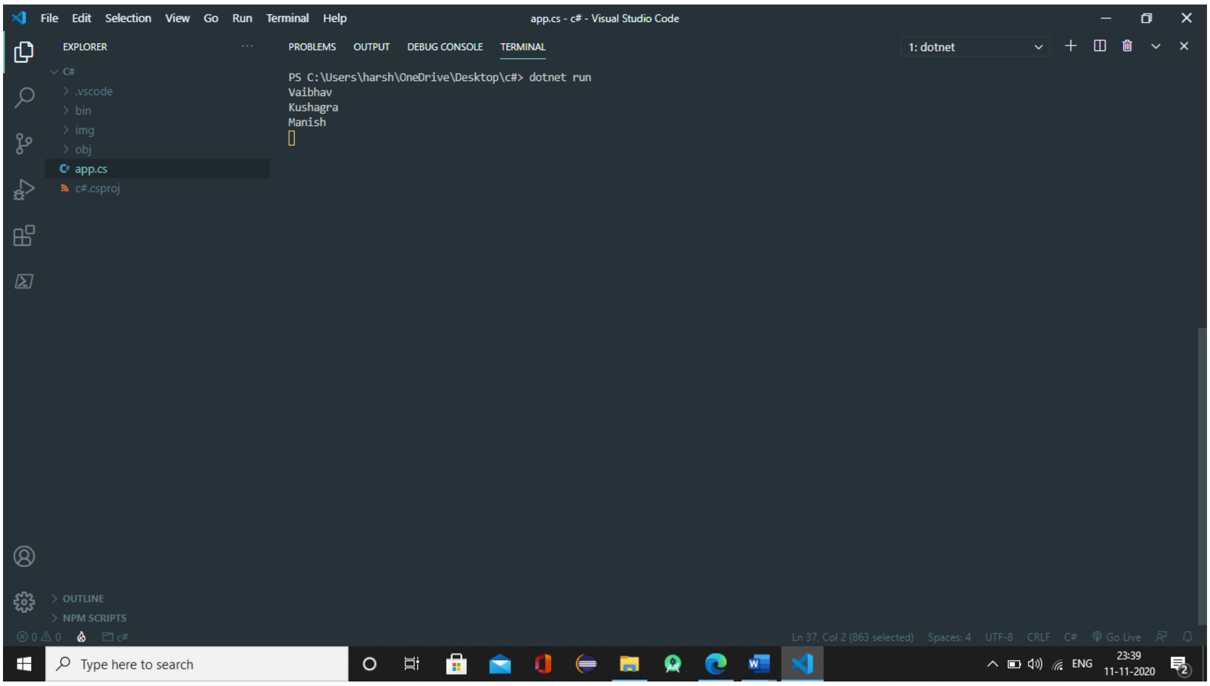
22. Write a program for multiple Inheritence



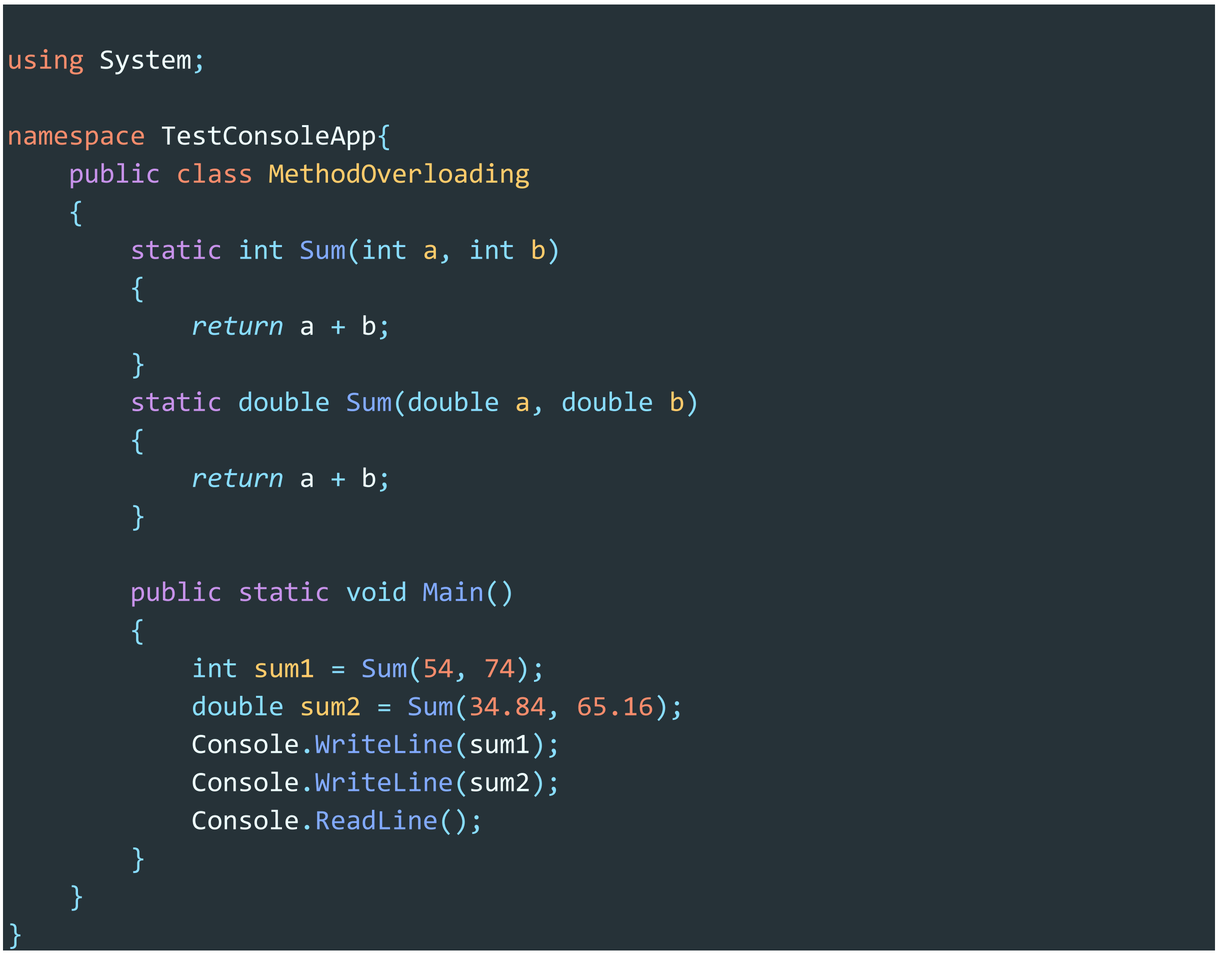
```
using System;

namespace TestConsoleApp{
    public class MultipleInheritence
    {
        class MainClass
        {
            public void Print()
            {
                Console.WriteLine("Vaibhav");
            }
        }
        interface MainClass1
        {
            void Print1();
        }
        class Subclass : MainClass, MainClass1
        {
            void Print2()
            {
                Console.WriteLine("Manish");
            }
            public void Print1()
            {
                Console.WriteLine("Kushagra");
            }
            static void Main(string[] args)
            {
                Subclass s = new Subclass();
                s.Print();
                s.Print1();
                s.Print2();
                Console.ReadLine();
            }
        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
Vaibhav
Kushagra
Manish
```

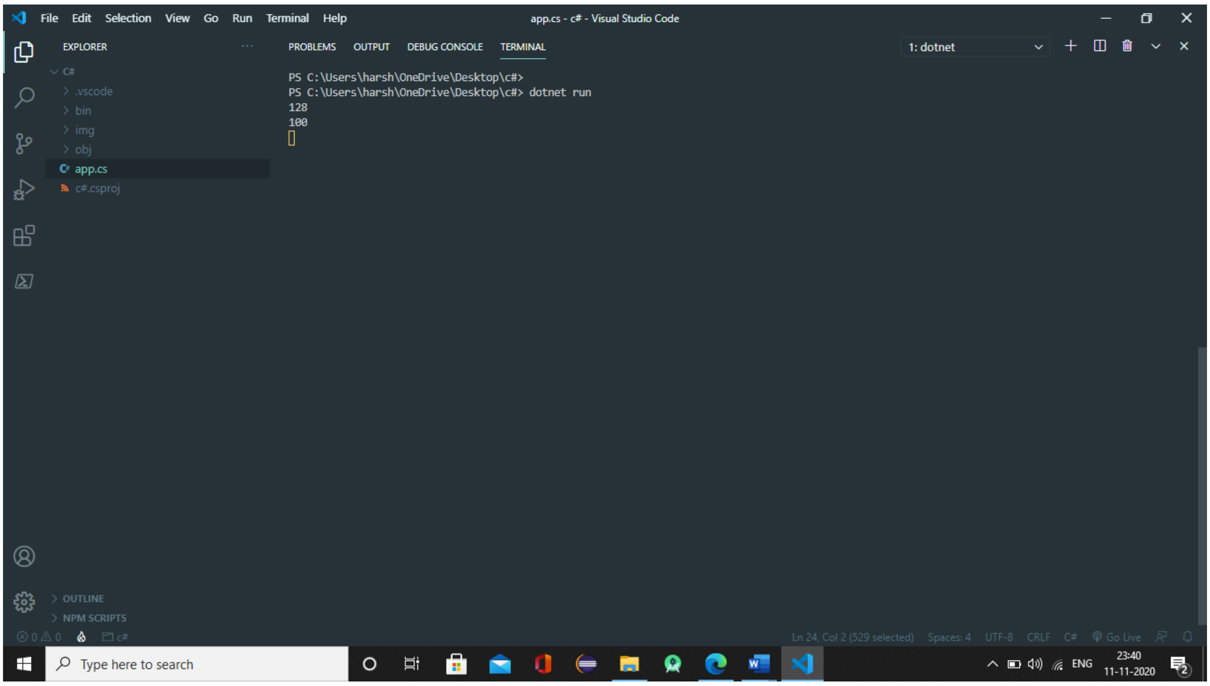
23. Write a program for method overloading



```
using System;

namespace TestConsoleApp{
    public class MethodOverloading
    {
        static int Sum(int a, int b)
        {
            return a + b;
        }
        static double Sum(double a, double b)
        {
            return a + b;
        }

        public static void Main()
        {
            int sum1 = Sum(54, 74);
            double sum2 = Sum(34.84, 65.16);
            Console.WriteLine(sum1);
            Console.WriteLine(sum2);
            Console.ReadLine();
        }
    }
}
```



File Edit Selection View Go Run Terminal Help
app.cs - c# - Visual Studio Code
EXPLORER
C#
.vscode
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img
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app.cs
c#.csproj
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
1: dotnet
OUTLINE
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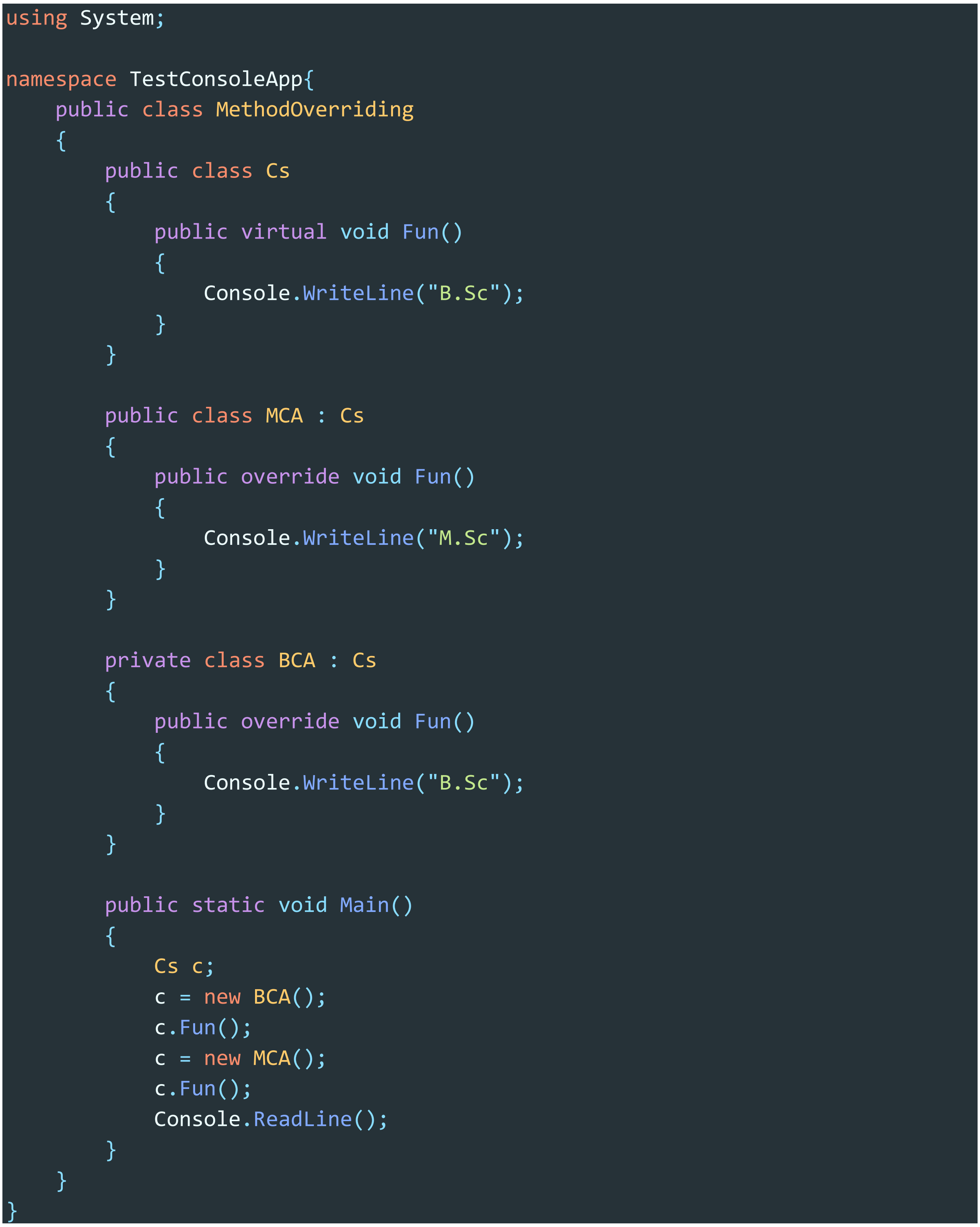
Ln 24, Col 2 (529 selected) Spaces: 4 UTF-8 CRLF C# Go Live
Type here to search
ENG
23:40
11-11-2020

```
PS C:\Users\harsh\OneDrive\Desktop\c#>
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
128
100
```

24. Write a program for method overriding



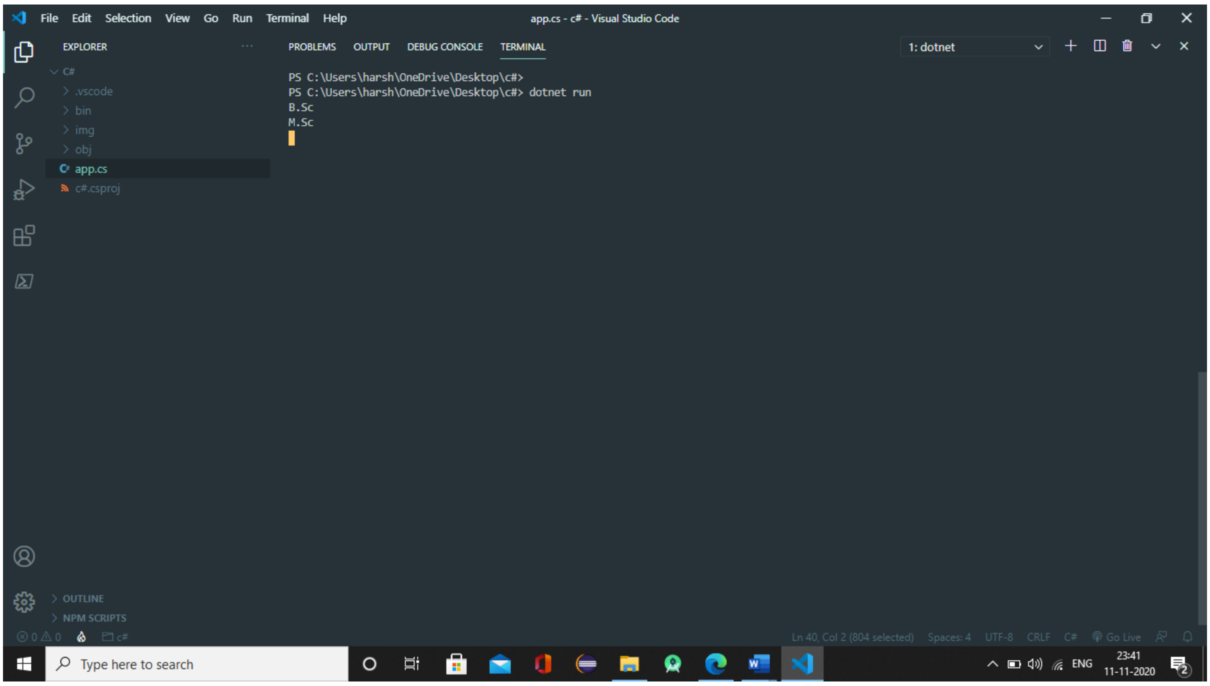
```
using System;

namespace TestConsoleApp{
    public class MethodOverriding
    {
        public class Cs
        {
            public virtual void Fun()
            {
                Console.WriteLine("B.Sc");
            }
        }

        public class MCA : Cs
        {
            public override void Fun()
            {
                Console.WriteLine("M.Sc");
            }
        }

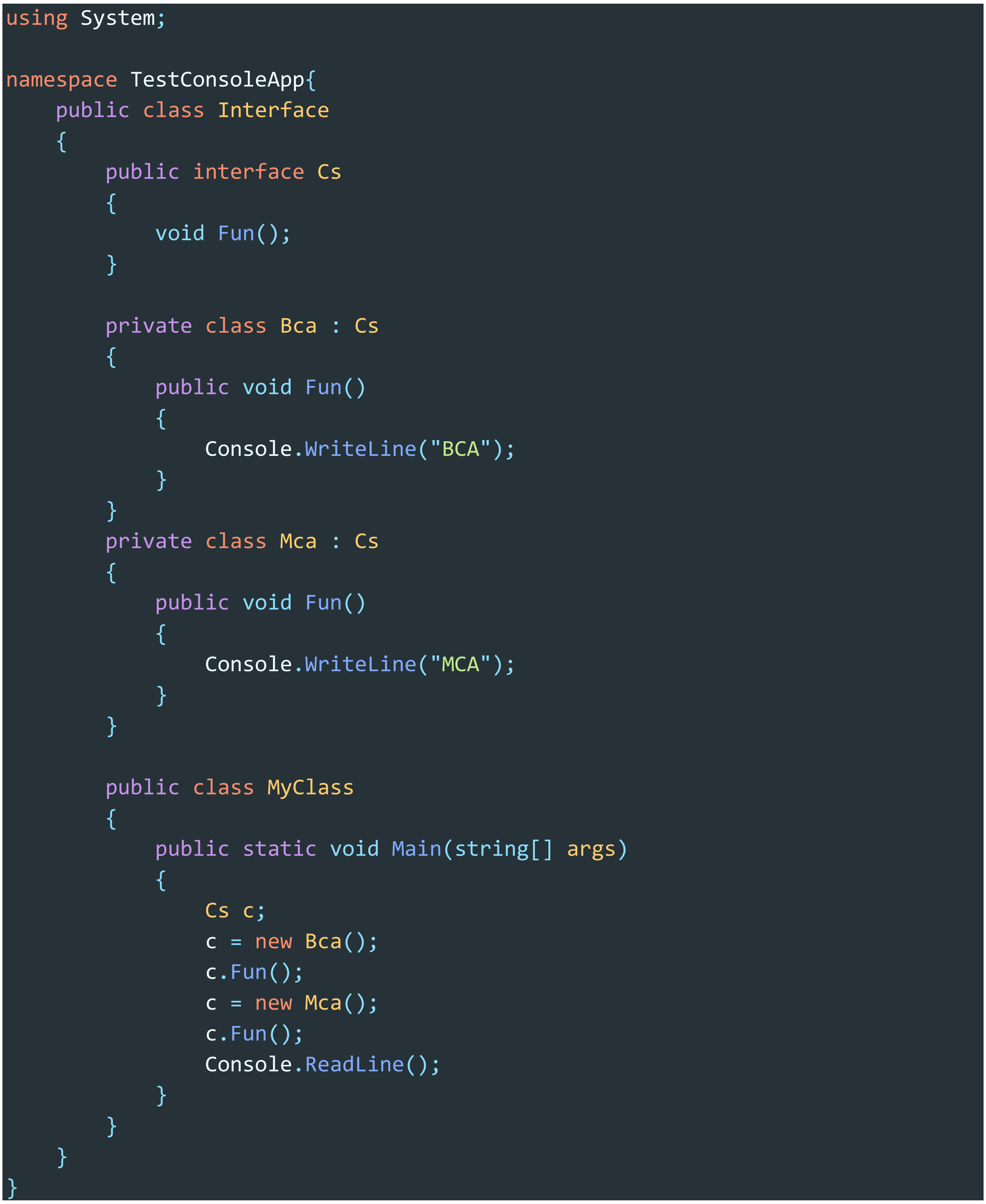
        private class BCA : Cs
        {
            public override void Fun()
            {
                Console.WriteLine("B.Sc");
            }
        }

        public static void Main()
        {
            Cs c;
            c = new BCA();
            c.Fun();
            c = new MCA();
            c.Fun();
            Console.ReadLine();
        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#>
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
B.Sc
M.Sc
```

25. Write a program for Interface

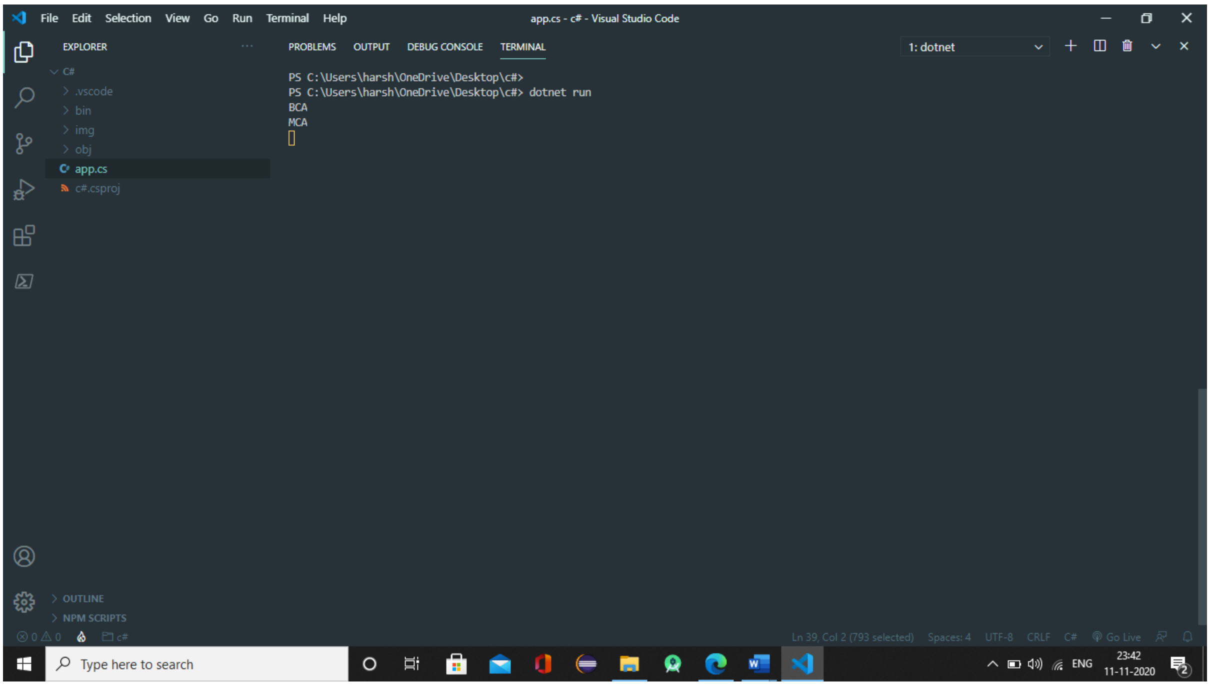


```
using System;

namespace TestConsoleApp{
    public class Interface
    {
        public interface Cs
        {
            void Fun();
        }

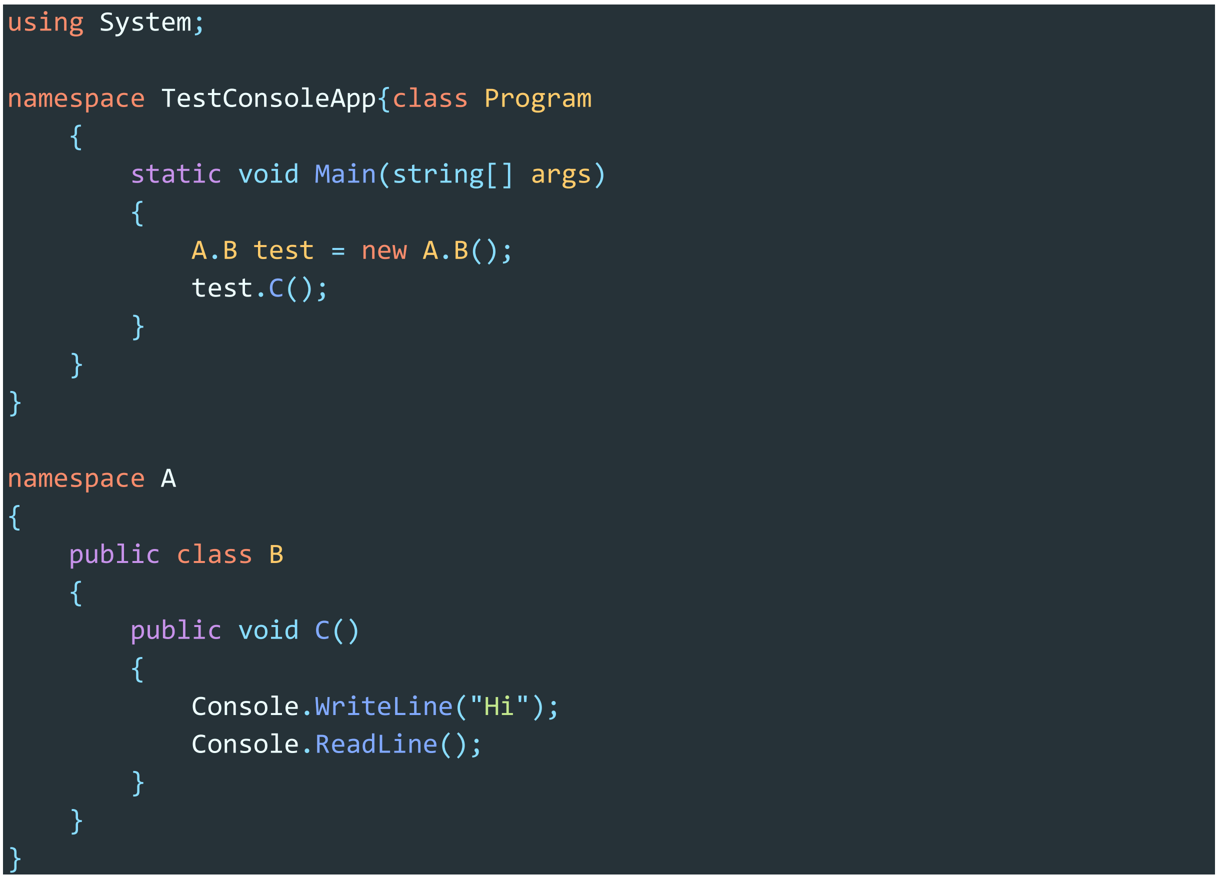
        private class Bca : Cs
        {
            public void Fun()
            {
                Console.WriteLine("BCA");
            }
        }
        private class Mca : Cs
        {
            public void Fun()
            {
                Console.WriteLine("MCA");
            }
        }

        public class MyClass
        {
            public static void Main(string[] args)
            {
                Cs c;
                c = new Bca();
                c.Fun();
                c = new Mca();
                c.Fun();
                Console.ReadLine();
            }
        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#>
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
BCA
MCA
```

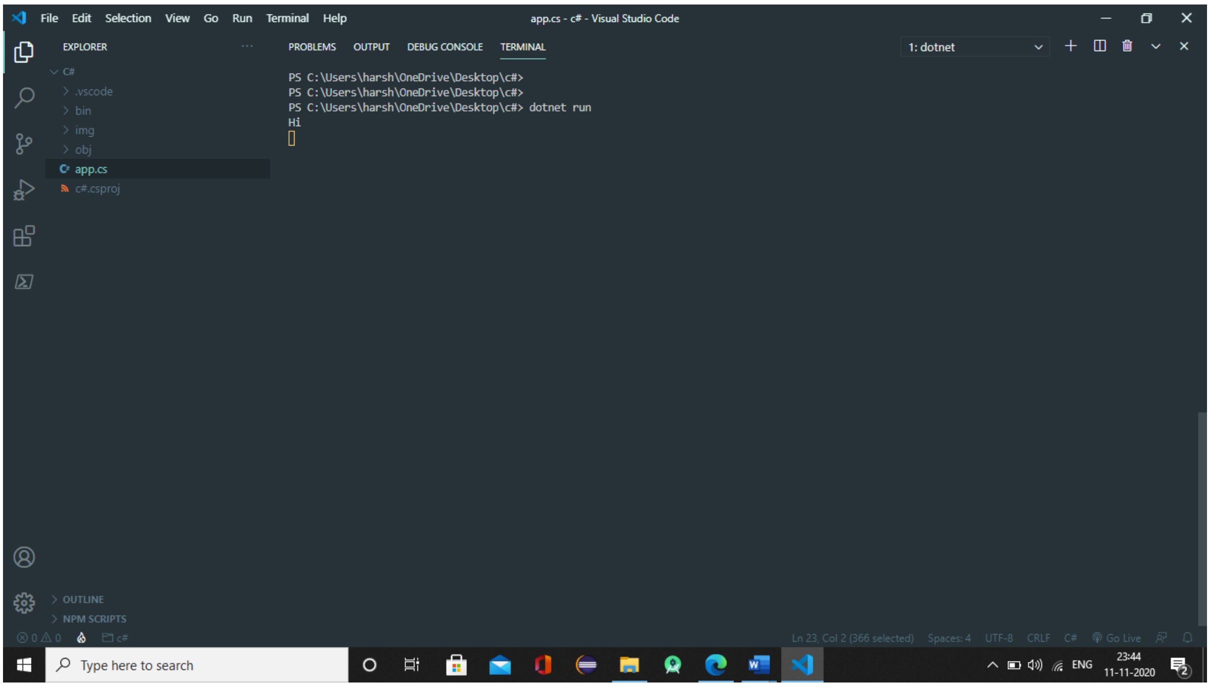
26. Write a program for Namespace



```
using System;

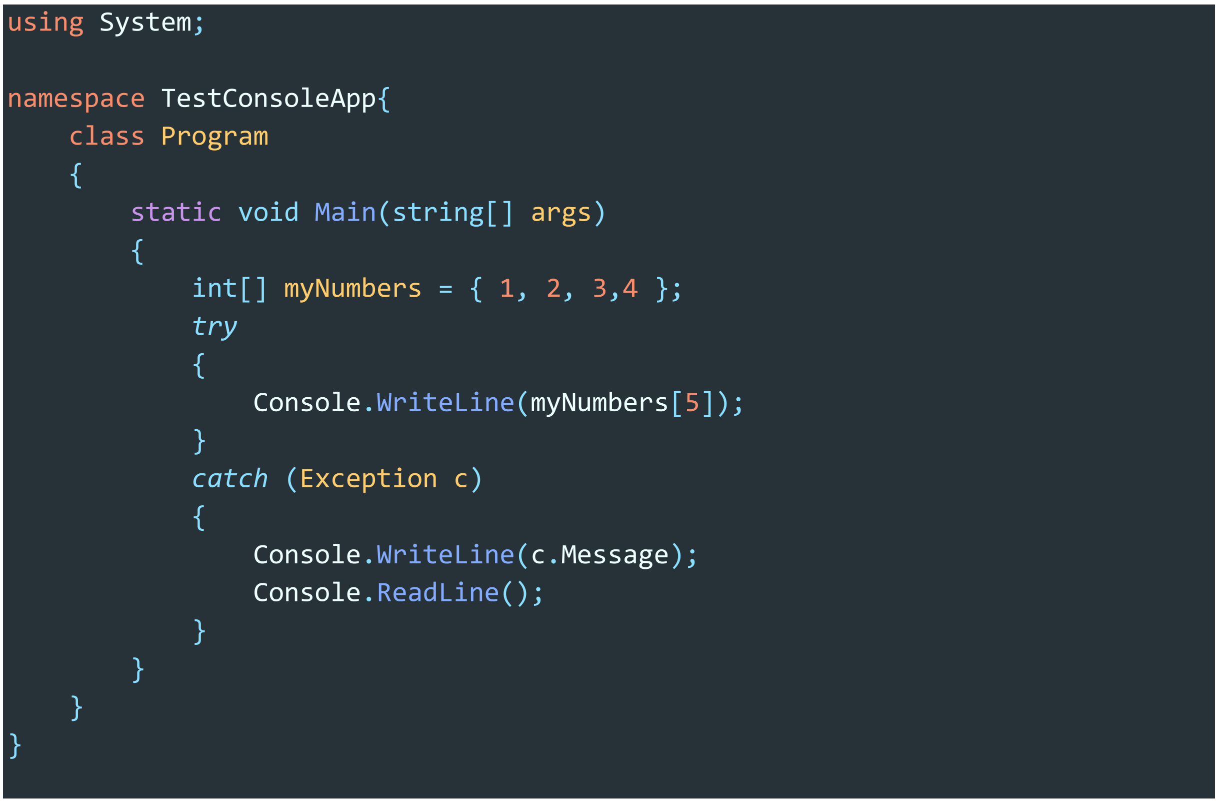
namespace TestConsoleApp{class Program
    {
        static void Main(string[] args)
        {
            A.B test = new A.B();
            test.C();
        }
    }
}

namespace A
{
    public class B
    {
        public void C()
        {
            Console.WriteLine("Hi");
            Console.ReadLine();
        }
    }
}
```



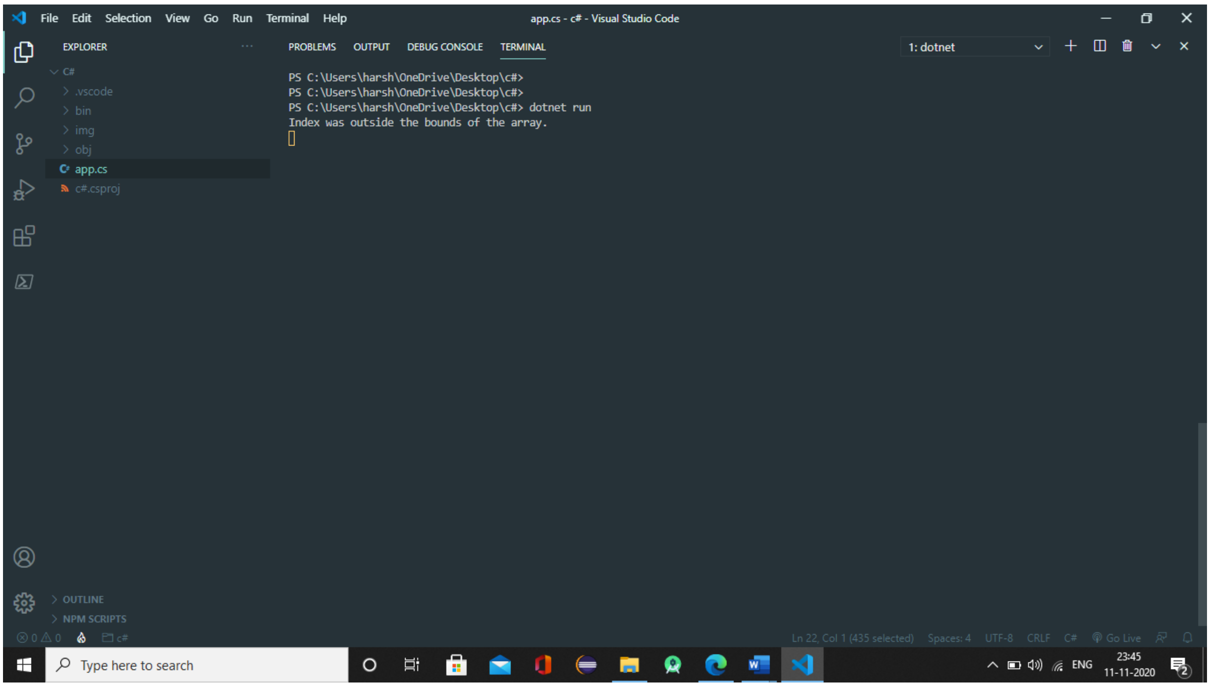
```
PS C:\Users\harsh\OneDrive\Desktop\c#>
PS C:\Users\harsh\OneDrive\Desktop\c#>
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
Hi
```

27. Write a program for exception handling through try and catch



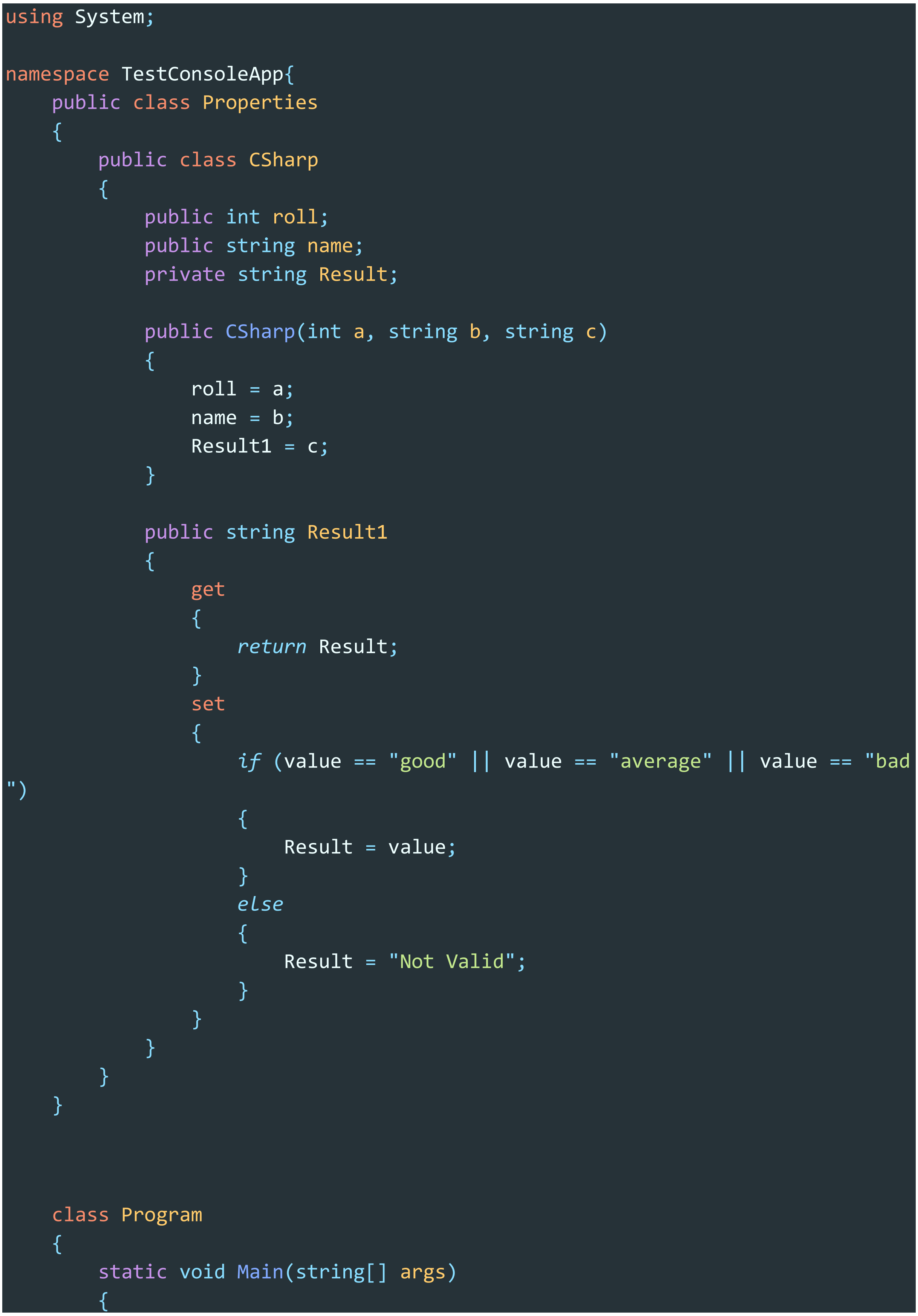
```
using System;

namespace TestConsoleApp{
    class Program
    {
        static void Main(string[] args)
        {
            int[] myNumbers = { 1, 2, 3,4 };
            try
            {
                Console.WriteLine(myNumbers[5]);
            }
            catch (Exception c)
            {
                Console.WriteLine(c.Message);
                Console.ReadLine();
            }
        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#>
PS C:\Users\harsh\OneDrive\Desktop\c#>
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
Index was outside the bounds of the array.
```

28. Write a program for Properties



```
using System;

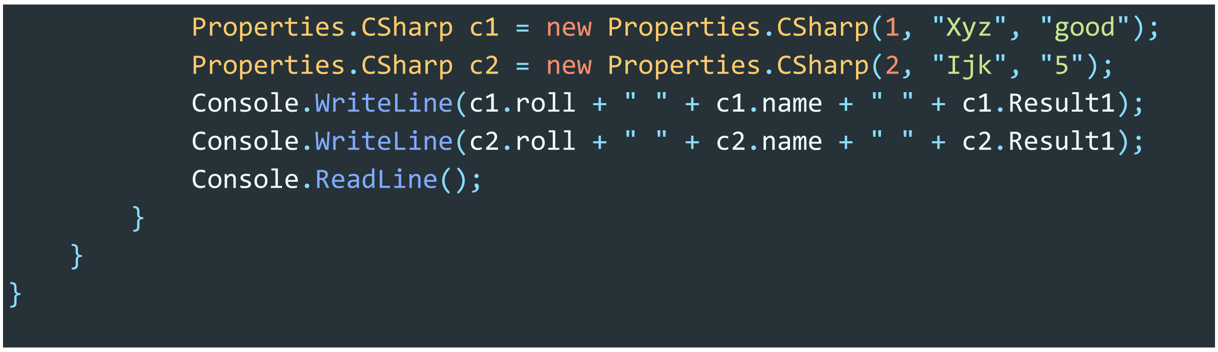
namespace TestConsoleApp{
    public class Properties
    {
        public class CSharp
        {
            public int roll;
            public string name;
            private string Result;

            public CSharp(int a, string b, string c)
            {
                roll = a;
                name = b;
                Result1 = c;
            }

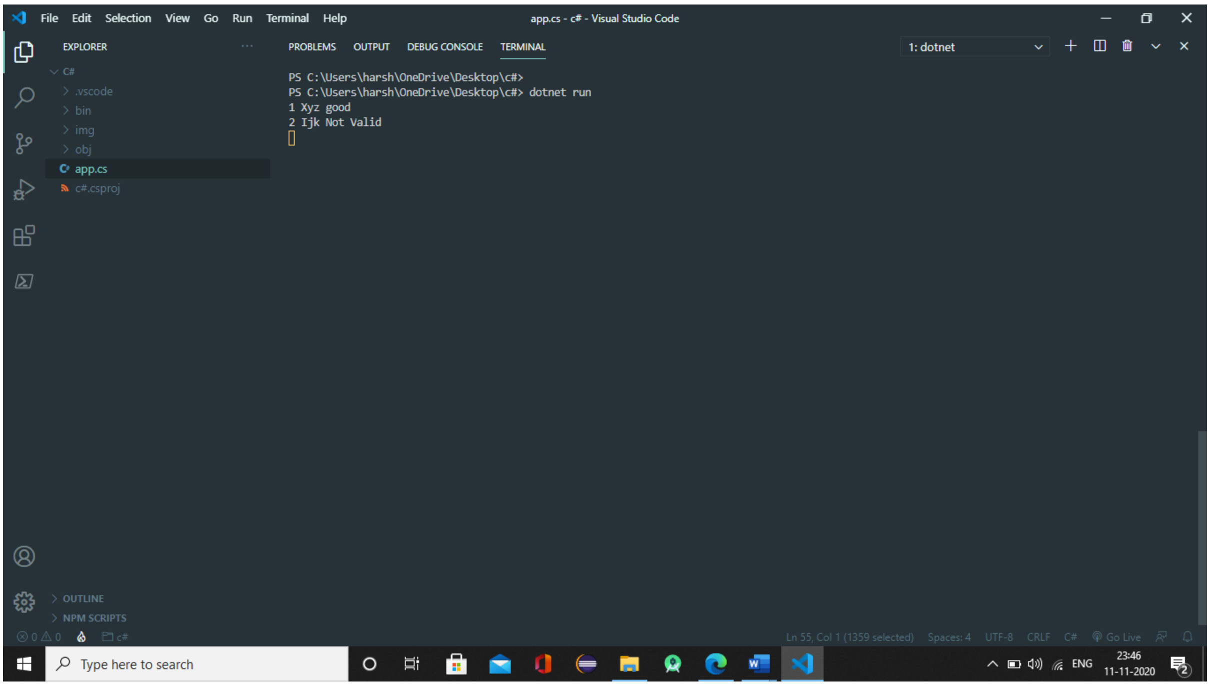
            public string Result1
            {
                get
                {
                    return Result;
                }
                set
                {
                    if (value == "good" || value == "average" || value == "bad
")
                    {
                        Result = value;
                    }
                    else
                    {
                        Result = "Not Valid";
                    }
                }
            }
        }
    }



    class Program
    {
        static void Main(string[] args)
        {
```



```
            Properties.CSharp c1 = new Properties.CSharp(1, "Xyz", "good");
            Properties.CSharp c2 = new Properties.CSharp(2, "Ijk", "5");
            Console.WriteLine(c1.roll + " " + c1.name + " " + c1.Result1);
            Console.WriteLine(c2.roll + " " + c2.name + " " + c2.Result1);
            Console.ReadLine();
        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#>
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
1 Xyz good
2 Ijk Not Valid
```

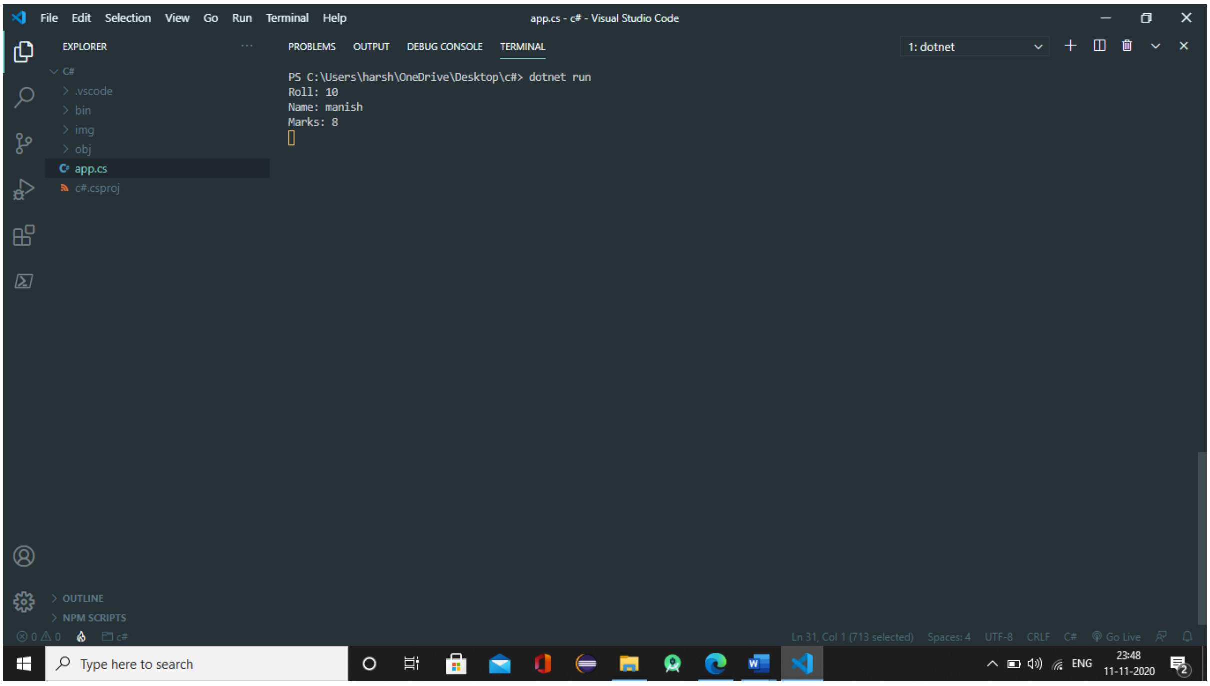
File Edit Selection View Go Run Terminal Help
app.cs - c# - Visual Studio Code
EXPLORER
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
1: dotnet
C#
.vscode
bin
img
obj
app.cs
c#.csproj
OUTLINE
NPM SCRIPTS
Ln 55, Col 1 (1359 selected) Spaces: 4 UTF-8 CRLF C# Go Live
Type here to search
ENG
23:46
11-11-2020

29. Write a program for Constructors

```
using System;

namespace TestConsoleApp{
    class Constructor
    {
        public class CSharp
        {
            public int roll;
            public string name;
            public int marks;

            public CSharp(int a, string b, int c)
            {
                roll = a;
                name = b;
                marks = c;
            }
        }
    }
    public class MyClass
    {
        public static void Main(string[] args)
        {
            Constructor.CSharp a = new Constructor.CSharp(10, "manish", 8);
            Console.WriteLine("Roll: " + a.roll + "\nName: " + a.name + "\nMar
ks: " + a.marks);
            Console.ReadLine();
        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
Roll: 10
Name: manish
Marks: 8
```

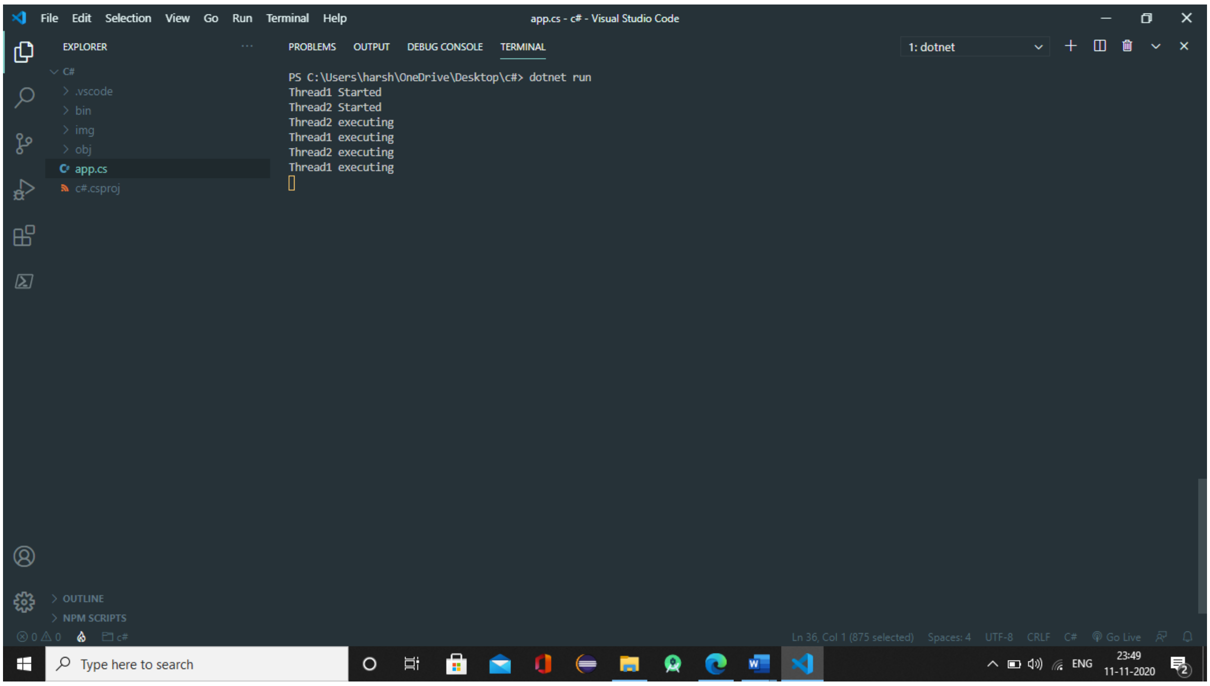
30. Write a program for Threading

```
using System;
using System.Threading;

namespace TestConsoleApp{
    class Program
    {
        static void T1()
        {
            Console.WriteLine("Thread1 Started");
            Thread.Sleep(5000);
            Console.WriteLine("Thread1 executing");
            Thread.Sleep(5000);
            Console.WriteLine("Thread1 executing");
        }

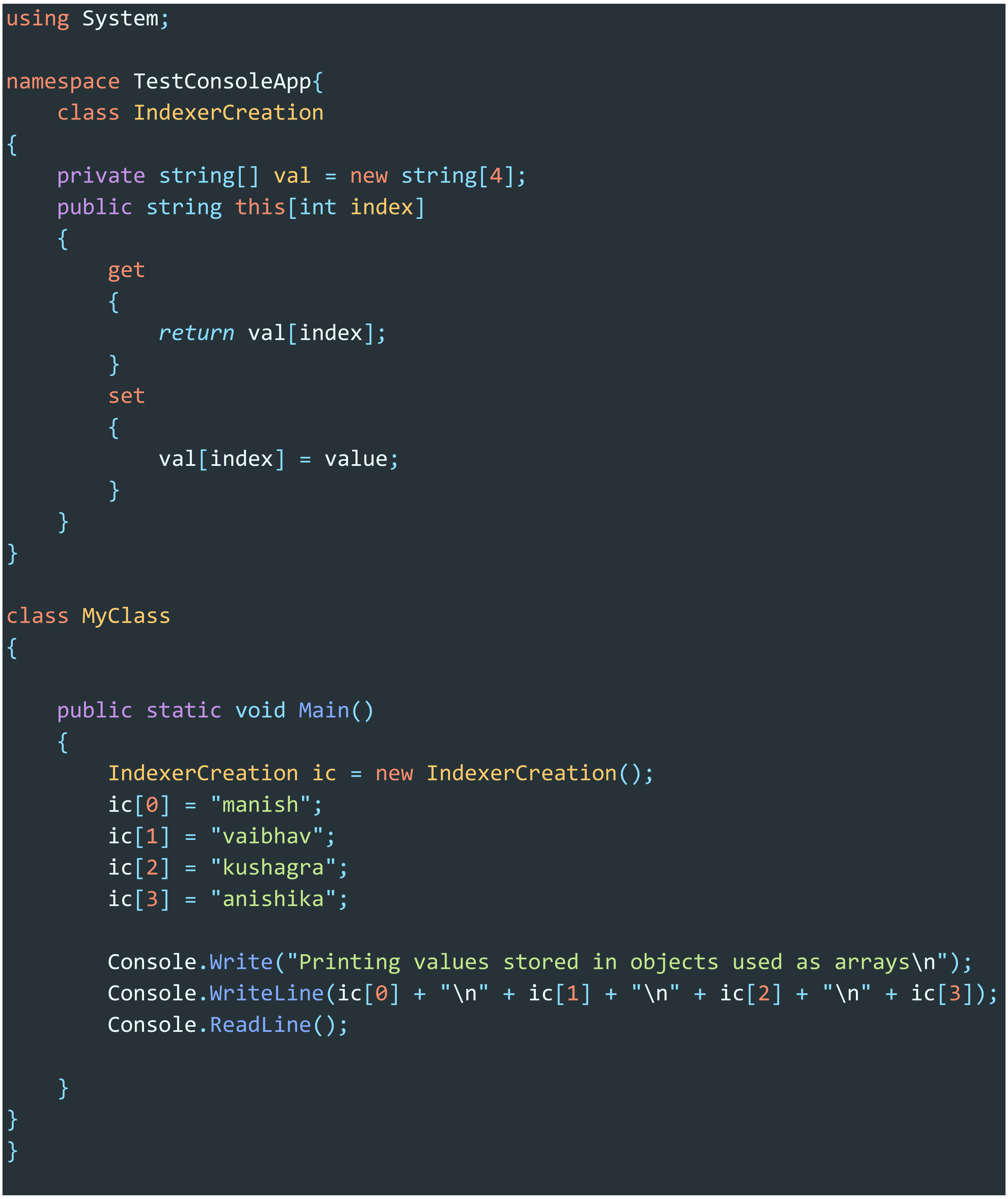
        static void T2()
        {
            Console.WriteLine("Thread2 Started");
            Thread.Sleep(5000);
            Console.WriteLine("Thread2 executing");
            Thread.Sleep(5000);
            Console.WriteLine("Thread2 executing");
        }

        public static void Main()
        {
            Thread t1 = new Thread(T1);
            Thread t2 = new Thread(T2);
            t1.Start();
            t2.Start();
            Console.ReadLine();
        }
    }
}
```



```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
Thread1 Started
Thread2 Started
Thread2 executing
Thread1 executing
Thread2 executing
Thread1 executing
```

31. Write a program for Indexer



```
using System;

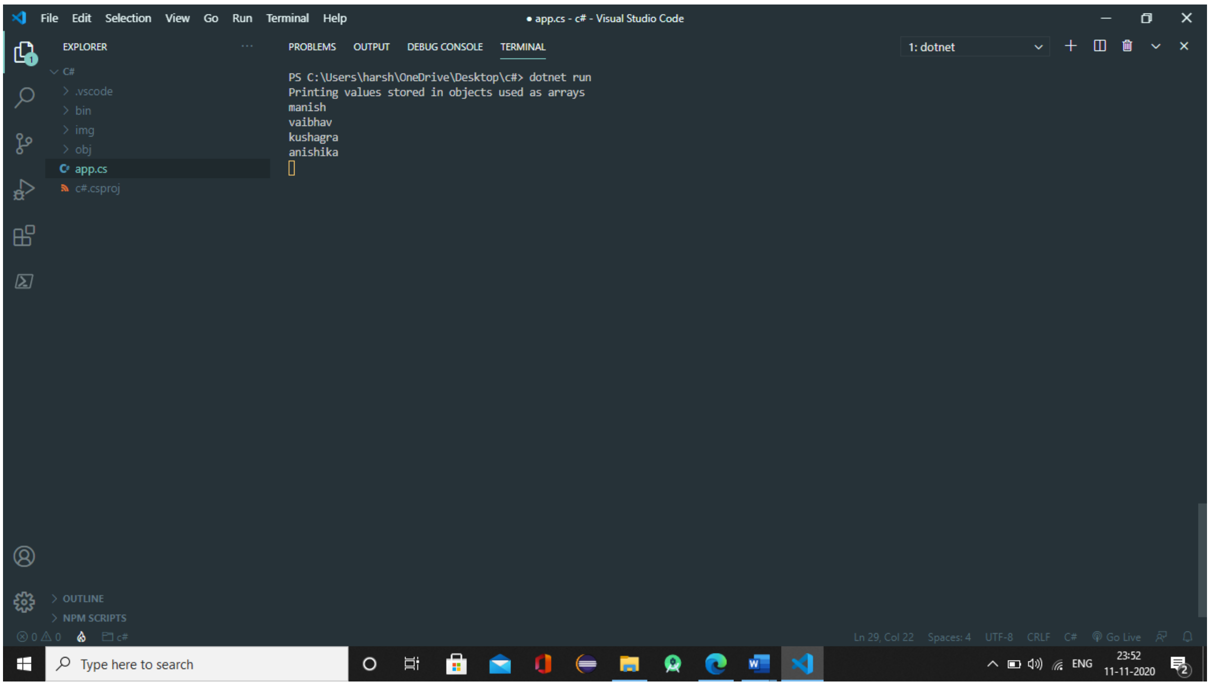
namespace TestConsoleApp{
    class IndexerCreation
{
    private string[] val = new string[4];
    public string this[int index]
    {
        get
        {
            return val[index];
        }
        set
        {
            val[index] = value;
        }
    }
}

class MyClass
{

    public static void Main()
    {
        IndexerCreation ic = new IndexerCreation();
        ic[0] = "manish";
        ic[1] = "vaibhav";
        ic[2] = "kushagra";
        ic[3] = "anishika";

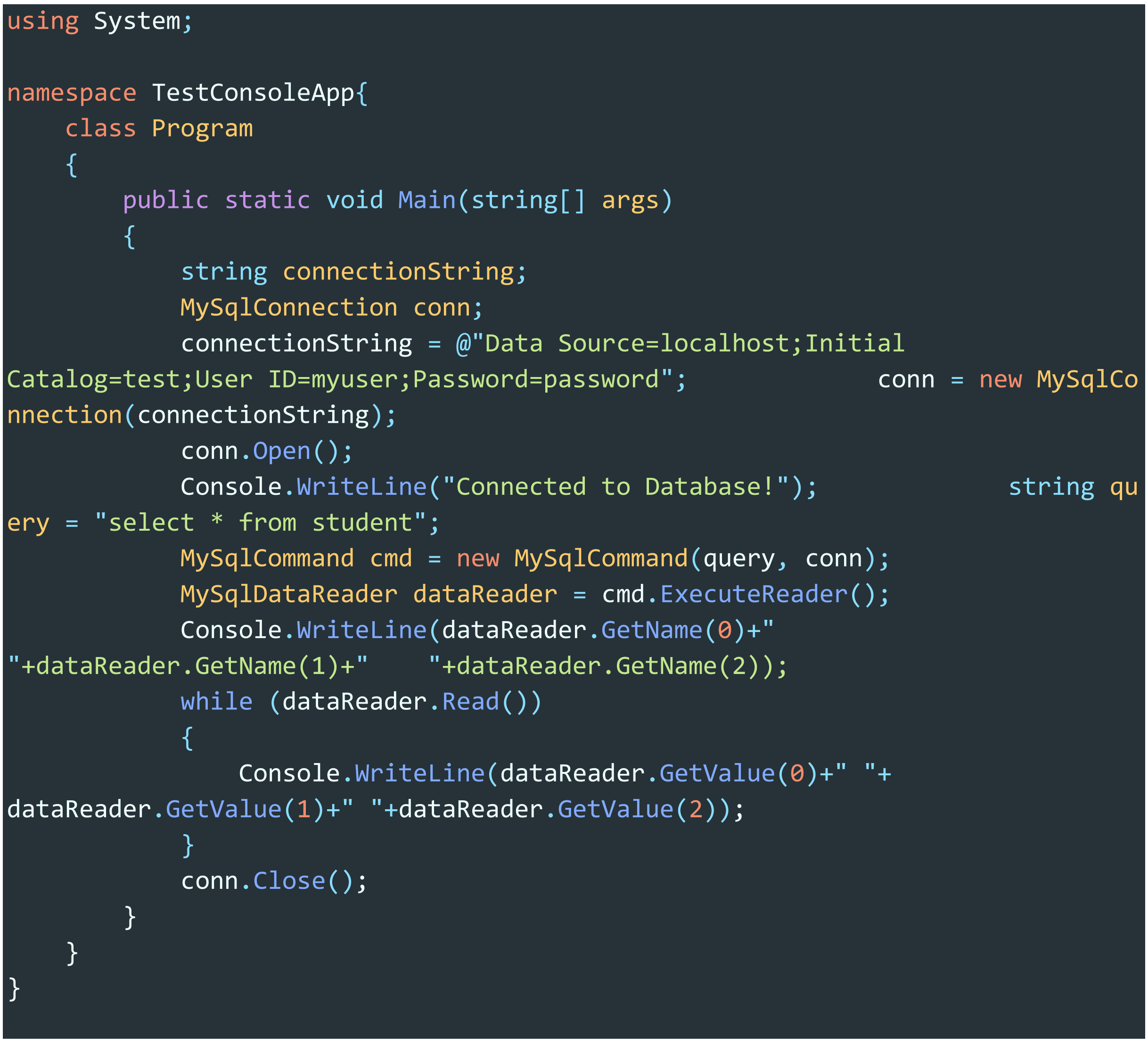
        Console.Write("Printing values stored in objects used as arrays\n");
        Console.WriteLine(ic[0] + "\n" + ic[1] + "\n" + ic[2] + "\n" + ic[3]);
        Console.ReadLine();

    }
}
}
```



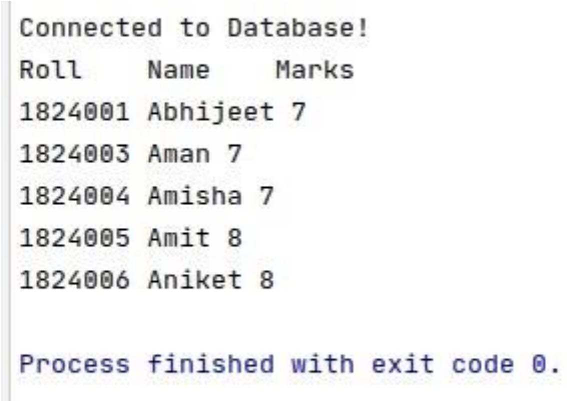
```
PS C:\Users\harsh\OneDrive\Desktop\c#> dotnet run
Printing values stored in objects used as arrays
manish
vaibhav
kushagra
anishika
```

32. Write a program to access data from database using ADO.NET



```
using System;

namespace TestConsoleApp{
    class Program
    {
        public static void Main(string[] args)
        {
            string connectionString;
            MySqlConnection conn;
            connectionString = @"Data Source=localhost;Initial
Catalog=test;User ID=myuser;Password=password";             conn = new MySqlCo
nnection(connectionString);
            conn.Open();
            Console.WriteLine("Connected to Database!");             string qu
ery = "select * from student";
            MySqlCommand cmd = new MySqlCommand(query, conn);
            MySqlDataReader dataReader = cmd.ExecuteReader();
            Console.WriteLine(dataReader.GetName(0)+"
"+dataReader.GetName(1)+"    "+dataReader.GetName(2));
            while (dataReader.Read())
            {
                Console.WriteLine(dataReader.GetValue(0)+" "+
dataReader.GetValue(1)+" "+dataReader.GetValue(2));
            }
            conn.Close();
        }
    }
}
```



```
Connected to Database!
Roll    Name    Marks
1824001 Abhijeet 7
1824003 Aman 7
1824004 Amisha 7
1824005 Amit 8
1824006 Aniket 8

Process finished with exit code 0.
```