

Practical-2

Aim: Console applications: Basic Concepts.

1. Write a program to get integer, double, character and string values from the user and display it on the screen.

Program:

```
using System;

namespace Practical2
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Enter Value");
            int a = Convert.ToInt32(Console.ReadLine());
            Console.WriteLine("You entered Number is : " + a);

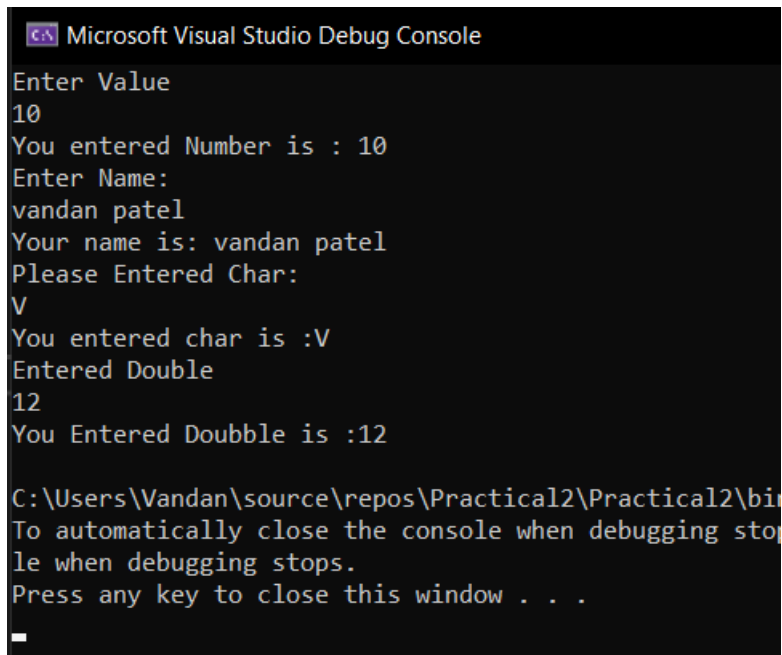
            Console.WriteLine("Enter Name:");
            string name = Console.ReadLine();
            Console.WriteLine("Your name is: " + name);

            Console.WriteLine("Please Entered Char:");
            char b = Convert.ToChar(Console.ReadLine());
            Console.WriteLine("You entered char is : " + b);

            Console.WriteLine("Entered Double");
            Double c = Convert.ToDouble(Console.ReadLine());
            Console.WriteLine("You Entered Double is : " + c);

            Console.ReadKey();
        }
    }
}
```

Output:



The screenshot shows the Microsoft Visual Studio Debug Console with the following text:

```
Enter Value
10
You entered Number is : 10
Enter Name:
vandan patel
Your name is: vandan patel
Please Entered Char:
V
You entered char is :V
Entered Double
12
You Entered Double is :12

C:\Users\Vandan\source\repos\Practical2\Practical2\bin
To automatically close the console when debugging stops,
press any key to close this window . . .
```

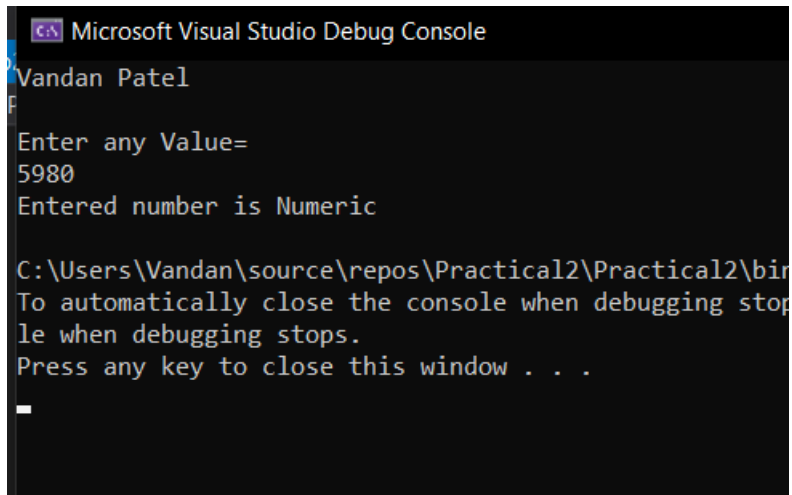
2. Write a program to check whether the entered value is numeric or not.
[Note: use try and catch.]

Program:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace PR2
{
    class Exp2
    {
        static void Main(string[] args)
        {
            double d;
            Console.WriteLine("Vandan Patel\n");
            try
            {
                Console.WriteLine("Enter any Value=");
                d = Convert.ToDouble(Console.ReadLine());
                Console.WriteLine("Entered number is Numeric");
            }
            catch
            {
                Console.WriteLine("Entered number is not Numeric");
            }
            Console.ReadKey();
        }
    }
}
```

```
    }  
  }  
}
```

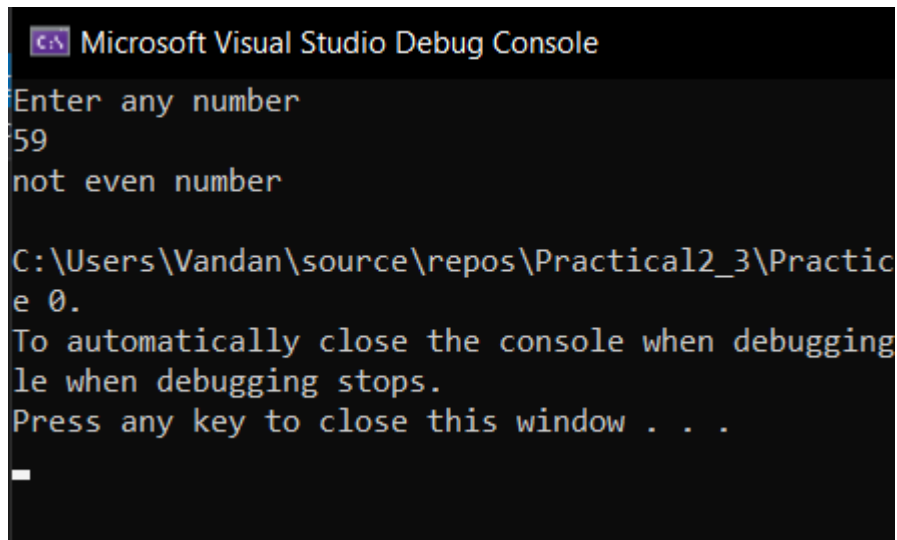
Output:A screenshot of the Microsoft Visual Studio Debug Console. The window title is "Microsoft Visual Studio Debug Console". The output text is as follows:
Vandan Patel
Enter any Value=
5980
Entered number is Numeric

C:\Users\Vandan\source\repos\Practical2\Practical2\bin
To automatically close the console when debugging stops,
press any key when debugging stops.
Press any key to close this window . . .
_**3. Write a program to accept a number from the user and throw an exception if the number is not an even number.****Program:**

```
using System;  
  
namespace Practical2_3  
{  
    class Program  
    {  
        static void Main(string[] args)  
        {  
            int answer;  
            Console.WriteLine("Enter any number");  
            int a = Convert.ToInt32(Console.ReadLine());  
            answer = a % 2;  
  
            if ( answer== 0)  
            {  
                Console.WriteLine("your number is even number");  
            }  
            else  
            {  
                Console.WriteLine("not even number");  
            }  
        }  
    }  
}
```

```
    }
}
```

Output:



```
Microsoft Visual Studio Debug Console
Enter any number
59
not even number

C:\Users\Vandan\source\repos\Practical2_3\Practic
e 0.
To automatically close the console when debugging
le when debugging stops.
Press any key to close this window . . .
_
```

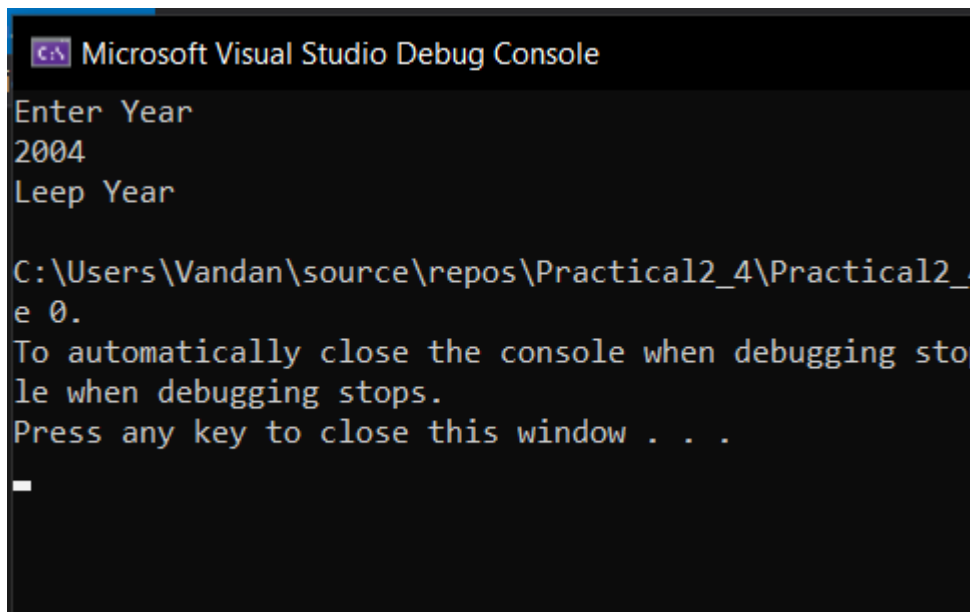
4. Write a program to find whether the given year is leap year or not.
 (Leap year is evenly divisible by 4, but if it is evenly divisible by 100 then it is not a leap year, but if it is evenly divisible by 400, then it is a leap year)

Program:

```
using System;

namespace Practical2_4
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Enter Year");
            int year = Convert.ToInt32(Console.ReadLine());
            if(((year % 4 == 0) && ((year % 400 == 0) || (year % 100 !=
0))))
            {
                Console.WriteLine("Leap Year");
            }
            else
            {
                Console.WriteLine("Not leap year");
            }
        }
    }
}
```

Output:

A screenshot of the Microsoft Visual Studio Debug Console. The window title is "Microsoft Visual Studio Debug Console". The text inside shows the program's execution: "Enter Year", "2004", "Leap Year", and a file path "C:\Users\Vandan\source\repos\Practical2_4\Practical2_4\Program.cs". It also includes instructions: "e 0.", "To automatically close the console when debugging stops, click the 'x' icon in the top right corner of the console window.", and "Press any key to close this window . . .". A small white cursor is visible at the bottom left.

5. Write a program to check whether the given number is perfect or not. A number is perfect if the sum of its divisor is same as multiplication of all digits. (For example: 6 which can be divided by 1, 2 and 3 so $1+2+3=6$)

Program:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace Pr2_5
{
    class Class4
    {
        static void Main(string[] args)
        {
            int i, n;
            int sum = 0;
            Console.WriteLine("Vandan Patel\n");
            Console.WriteLine("Enter the number:");
            n = Convert.ToInt32(Console.ReadLine());

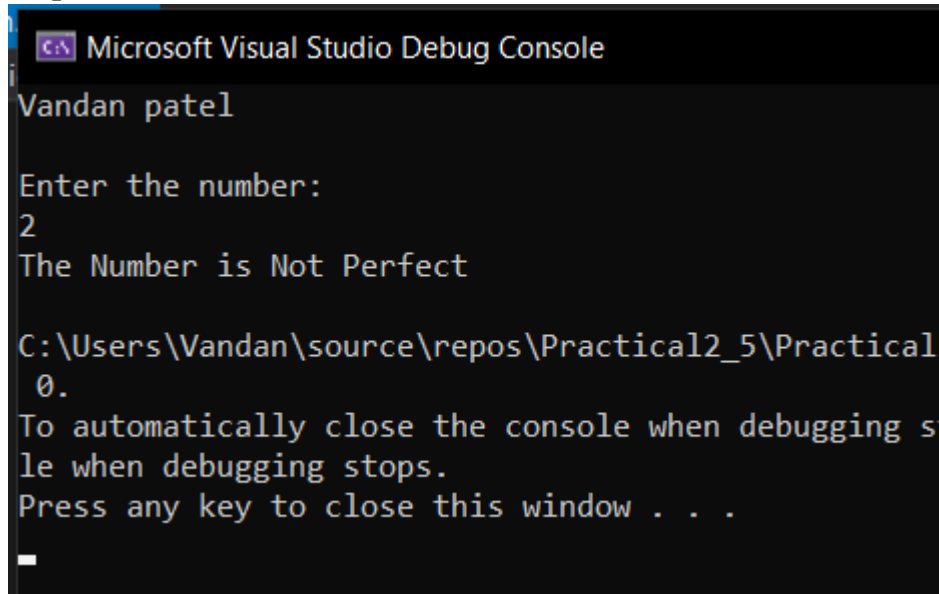
            for (i = 1; i < n; i++)
            {
                if (n % i == 0)
                {
                    sum = sum + i;
                }
            }
        }
    }
}
```

```

        if (sum == n)
            Console.WriteLine("The Number is Perfect");
        else
        {
            Console.WriteLine("The Number is Not Perfect");
        }
        Console.ReadKey();
    }
}

```

Output:



```

Microsoft Visual Studio Debug Console
Vandan patel
Enter the number:
2
The Number is Not Perfect
C:\Users\Vandan\source\repos\Practical2_5\Practical
0.
To automatically close the console when debugging s
le when debugging stops.
Press any key to close this window . . .
_

```

6. Write a program to check whether the given number is lucky or not. (A number is lucky if the number is itself a prime and the sum of digit of a number is also prime) Program:

```

using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace Praactical2_6
{
    class Class5
    {
        static void Main(string[] args)
        {
            int i, n, mod, flag = 1, sum = 0, temp;
            Console.WriteLine("Vandan Patel\n");
            Console.WriteLine("Enter any number to check whether its lucky
or not:\n");

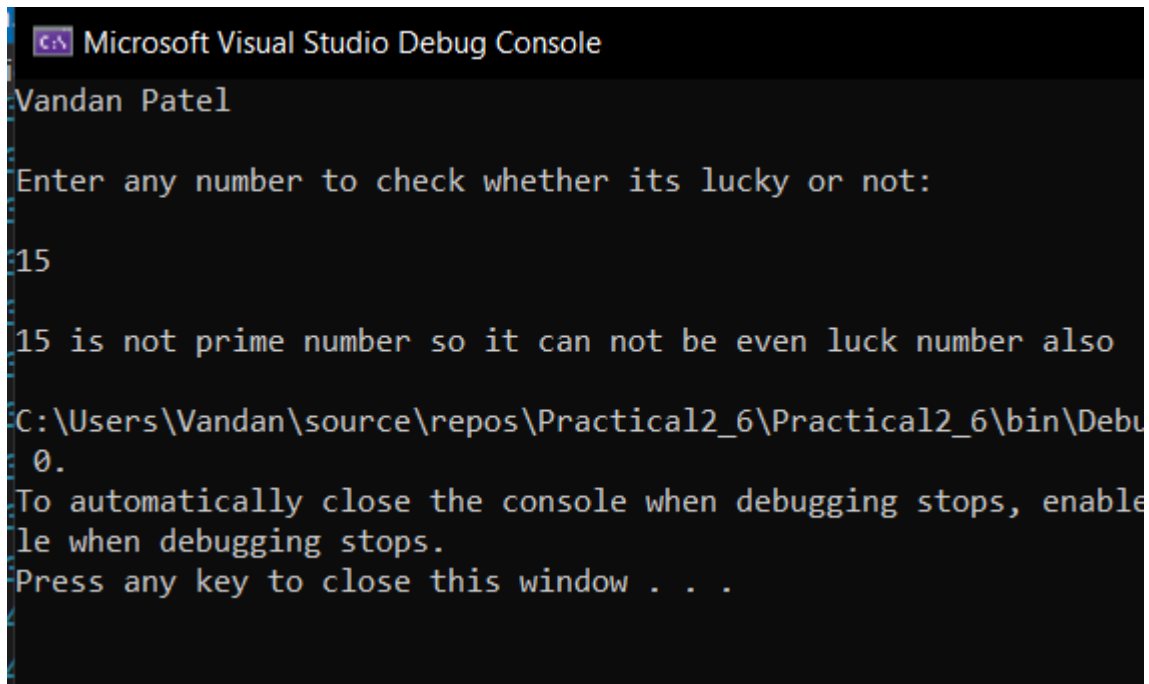
```

```

        n = Convert.ToInt32(Console.ReadLine());
        temp = sum;
        for (i = 2; i < n; i++)
        {
            if (n % i == 0)
            {
                flag = 0;
                Console.WriteLine("\n{0} is not prime number so it can
not be even luck number also", n);
                break;
            }
        }
        if (flag == 1)
        {
            while (n > 0)
            {
                mod = n % 10;
                sum += mod;
                n /= 10;
            }
            for (i = 2; i < sum; i++)
            {
                if (sum % i == 0)
                {
                    flag = 0;
                    Console.WriteLine("The sum {0} is divided by the
value { 1}", sum, i);
                    break;
                }
            }
            if (flag == 1)
                Console.WriteLine(" is a Lucky number", temp);
            else
                Console.WriteLine(" is not a Lucky number",temp);
        }
    }
}
}

```

Output:



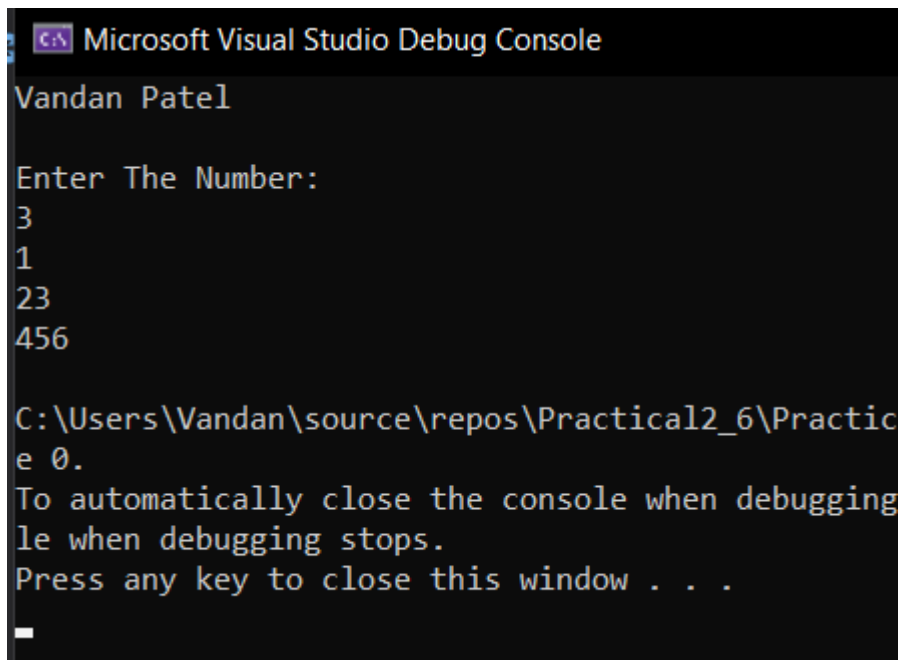
```
Microsoft Visual Studio Debug Console
Vandan Patel
Enter any number to check whether its lucky or not:
15
15 is not prime number so it can not be even luck number also
C:\Users\Vandan\source\repos\Practical2_6\Practical2_6\bin\Debug
0.
To automatically close the console when debugging stops, enable
le when debugging stops.
Press any key to close this window . . .
```

7. Write a program to generate Floyds Triangle.

Program:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace Practical2_6
{
    class Ep7
    {
        static void Main(string[] args)
        {
            int n, i, j, count = 1;
            Console.WriteLine("Vandan Patel\n");
            Console.WriteLine("Enter The Number:");
            n = Convert.ToInt32(Console.ReadLine());
            for (i = 1; i <= n; i++)
            {
                for (j = 1; j <= i; j++)
                {
                    Console.Write(count + " ");
                    count++;
                }
                Console.WriteLine();
            }
        }
    }
}
```


Output:



The screenshot shows the Microsoft Visual Studio Debug Console. The title bar reads 'Microsoft Visual Studio Debug Console'. The output text is as follows:

```
Vandan Patel

Enter The Number:
3
1
23
456

C:\Users\Vandan\source\repos\Practical2_6\Practic
e 0.
To automatically close the console when debugging
le when debugging stops.
Press any key to close this window . . .
```

8. Write a program to replace a substring of given length with new substring. (Input: starting index and length of substring)

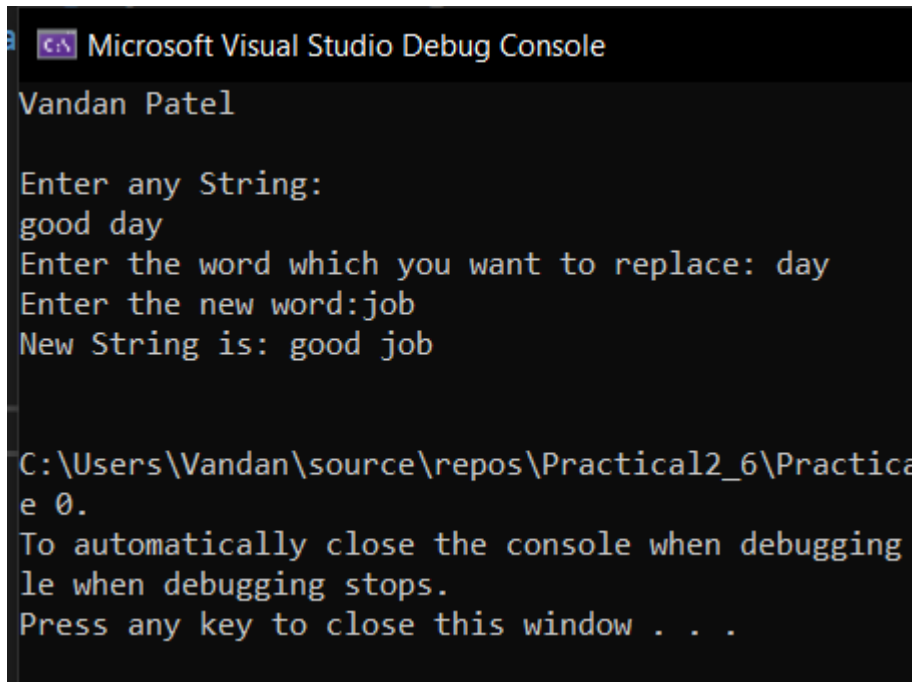
Program:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace Practical2_6
{
    class Ep8
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Vandan Patel\n");
            Console.WriteLine("Enter any String:");
            string s = Console.ReadLine();
            Console.Write("Enter the word which you want to replace: ");

            string a = Console.ReadLine();
            Console.Write("Enter the new word:");
            string sub = Console.ReadLine();
            string New = s.Replace(a, sub);
            Console.Write("New String is: " + New + "\n\n");
        }
    }
}
```

```
}
```

Output:



The screenshot shows the Microsoft Visual Studio Debug Console window. The title bar reads 'Microsoft Visual Studio Debug Console'. The output text is as follows:

```
Vandan Patel  
  
Enter any String:  
good day  
Enter the word which you want to replace: day  
Enter the new word:job  
New String is: good job  
  
C:\Users\Vandan\source\repos\Practical2_6\Practical2_6\Program.cs:10:1: warning: variable 'e' is never used  
e 0.  
To automatically close the console when debugging stops, right-click the console tab and select 'Close Console when Debugging Stops'.  
Press any key to close this window . . .
```