****

Assignment No. 01

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III **Date:** / /

Signature:

****

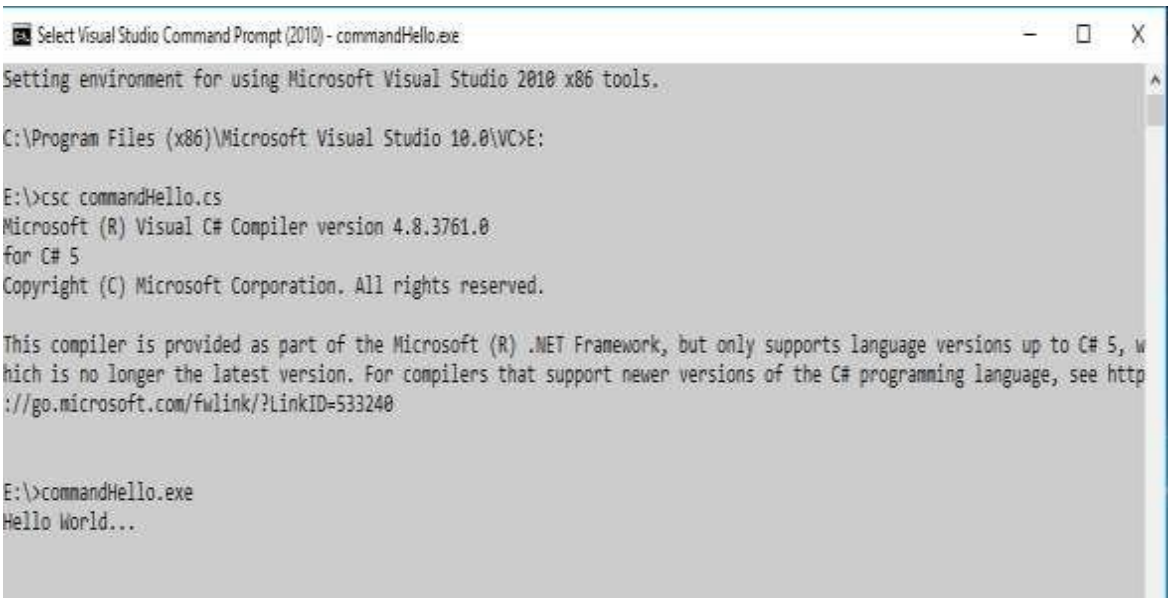
Q. Write a C# program that print hello world using command line argument.

Program:

```
using System;
uing System.Collections.Generic;
using System.Linq;
using System.Text;

namespace Command
  class Program3
{
  {s
     static void Main(string[]args)
    {
     Console.WriteLine("Hello World...");
     Console.ReadLine();
    }
  }
}
```

**********OUTPUT**********



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Assignment No. 02

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III **Date: / /**

Signature:

****

Q. Write a console application program to demonstrate switching, looping, branching statements.

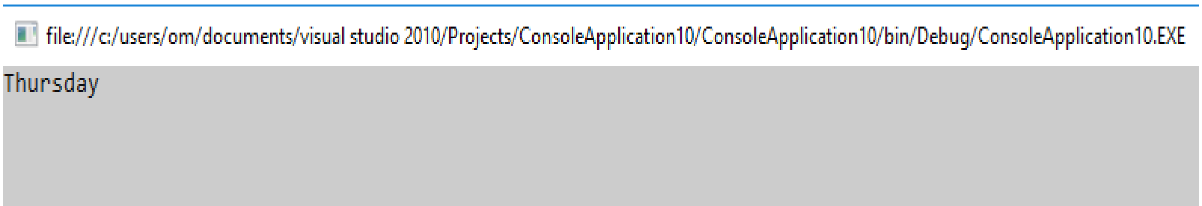
A) Switching

Program:

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

namespace ConsoleApplication4
{
   class Switch
   {
      static void Main(string[] args)
      {
         int day = 4;
         switch (day)
         {
            case 1:
               Console.WriteLine("Monday");
               break;

            case 2:
               Console.WriteLine("Tuesday");
               break;

            case 3:
               Console.WriteLine("Wednesday");
               break;

            case 4:
               Console.WriteLine("Thursday");
               break;
```

```
            case 5:
                Console.WriteLine("Friday");
                break;

            case 6:
                Console.WriteLine("Saturday");
                break;

            case 7:
                Console.WriteLine("Sunday");
                break;
        }
        Console.ReadLine();
    }
  }
}
```

**********************************OUTPUT**********************************



****

B) Looping

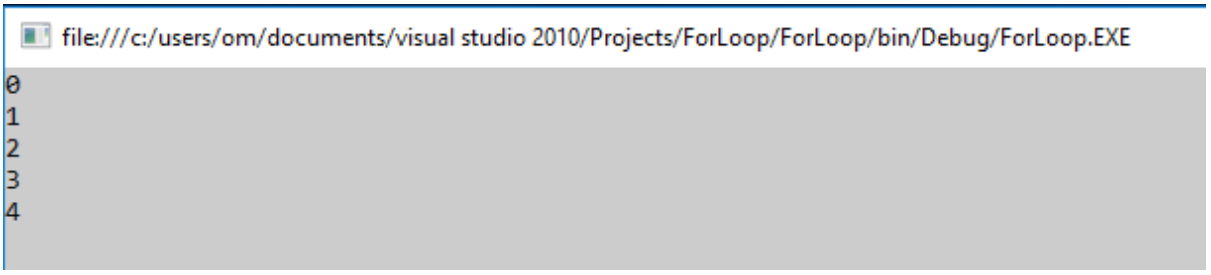
1) For loop

Program:

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

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

```
        for (int i = 0; i < 5; i++)
        {
            Console.WriteLine(i);
        }
        Console.ReadLine();
    }
  }
}
```

**********OUTPUT**********



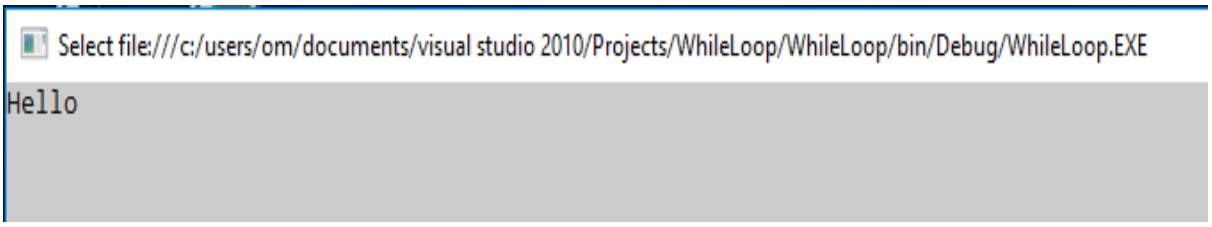
****

2) While Loop

Program:

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

namespace WhileLoop
{
  class Program
  {
    static void Main(string[] args)
    {
      int i = 4;
      while (i <= 4)
      {
        Console.WriteLine("Hello");
        i++;
      }
      Console.ReadLine();
    }
  }
}
```

**********OUTPUT**********



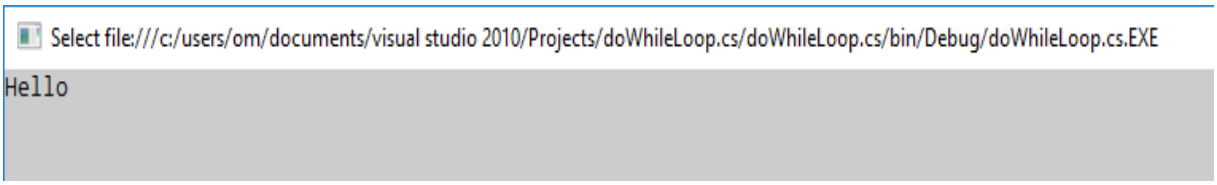
****

3) do - while Loop

Program:

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

namespace doWhileLoop.cs
{
   class Program
   {
      static void Main(string[] args)
      {
         int x = 21;
         do
         {
            Console.WriteLine("Hello");
            x++;
         }
         while (x < 20);
         Console.ReadLine();
      }
   }
}
```

**********OUTPUT**********



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C) Branching

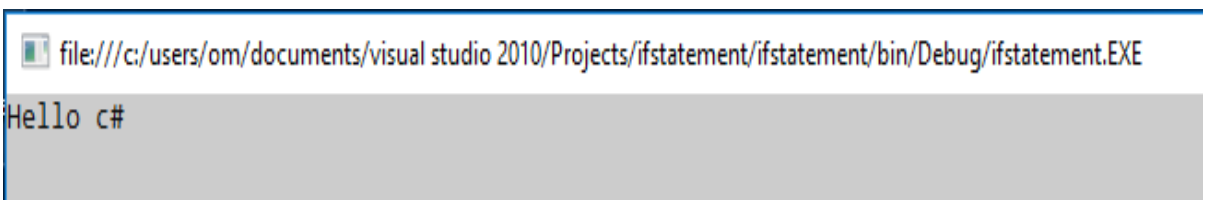
1)if-statement

Program:

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

namespace ConsoleApplication6
{
   class Program
   {
      static void Main(string[] args)
      {
         int a;
         a = 1;
         if (a == 1)
         {
            Console.WriteLine("Hello c#");
         }
         Console.ReadLine();
      }
   }
}
```

**********OUTPUT**********



****

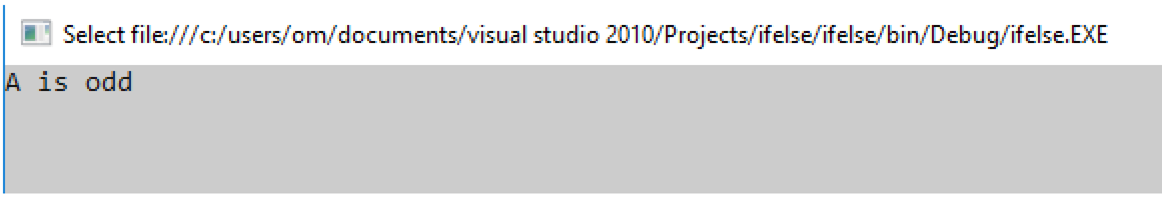
2) if-else statement

Program:

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

namespace ConsoleApplication8
{
    class Program
    {
        static void Main(string[] args)
        {
            int a = 45;
            if (a % 2 == 0)
            {
                Console.WriteLine("A is even");
            }
            else
            {
                Console.WriteLine("A is odd");
            }
            Console.ReadLine();
        }
    }
}
```

**********************************OUTPUT**********************************



****

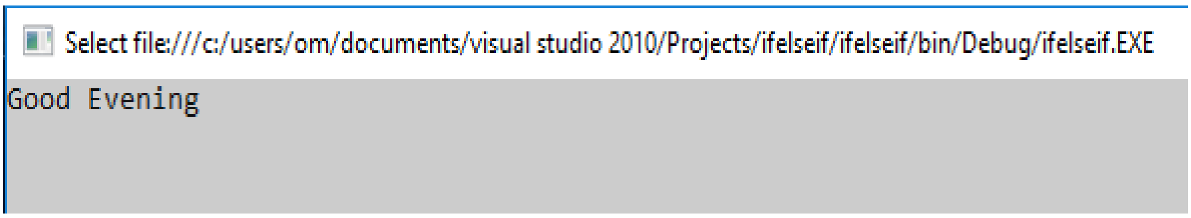
3) if else if statement

Program:

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

namespace ifelseif
{
    class Program
    {
        static void Main(string[] args)
        {
            int time = 22;
            if (time < 10)
            {
                Console.WriteLine("Good Morning");
            }
            else if (time < 20)
            {
                Console.WriteLine("Good Day");
            }
            else
            {
              Console.WriteLine("Good Evening");
            }
            Console.ReadLine();
        }
    }
}
```

***********************************OUTPUT***********************************



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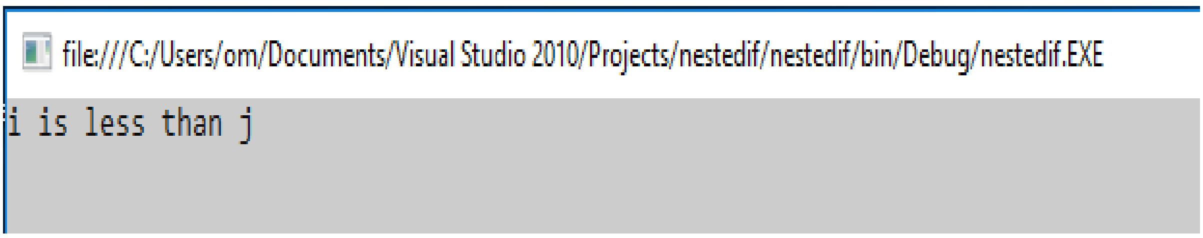
4) Nested if statement

Programs:

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

namespace nestedif
{
    class Program
    {
        static void Main(string[] args)
        {
            int i = 10, j = 20;
            if (i != j)
            {
                if (i < j)
                {
                    Console.WriteLine("i is less than j");
                }
                else if (i > j)
                {
                    Console.WriteLine("i is greater than j");
                }
            }
            else
            {
                Console.WriteLine("i is equal to j");
            }
            Console.ReadLine();
        }
    }
}
```

**********************************OUTPUT**********************************



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Assignment No. 03

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III **Date: / /**

Signature:

****

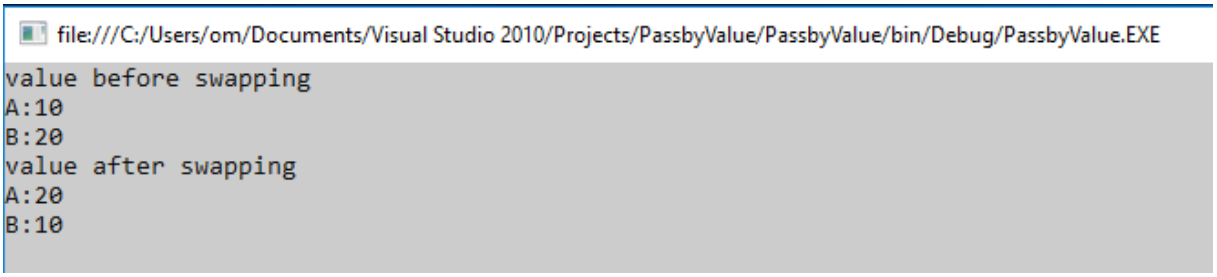
Q. Write a console application for swapping of 2 numbers using Pass by value.

Program:

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

namespace PassbyValue
{
   class Program
   {
      static void Main(string[] args)
      {
         int a = 10;
         int b = 20;
         pass_by_value(a, b);
         Console.ReadLine();
      }
      static void pass_by_value(int x, int y)
      {
         int a, b, temp;
         Console.WriteLine("value before swapping");
         a = x;
         b = y;
         Console.WriteLine("A:" + a);
         Console.WriteLine("B:" + b);
         Console.WriteLine("value after swapping");
         temp = a;
         a = b;
         b = temp;
         Console.WriteLine("A:" + a);
         Console.WriteLine("B:" + b);
      }
   }
}
```

**********OUTPUT**********


file:///C:/Users/om/Documents/Visual Studio 2010/Projects/PassbyValue/PassbyValue/bin/Debug/PassbyValue.EXE
value before swapping
A:10
B:20
value after swapping
A:20
B:10

****

****

Assignment No. 04

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III **Date: / /**

Signature:

****

Q. Write a console application for swapping of 2 numbers using pass by reference.

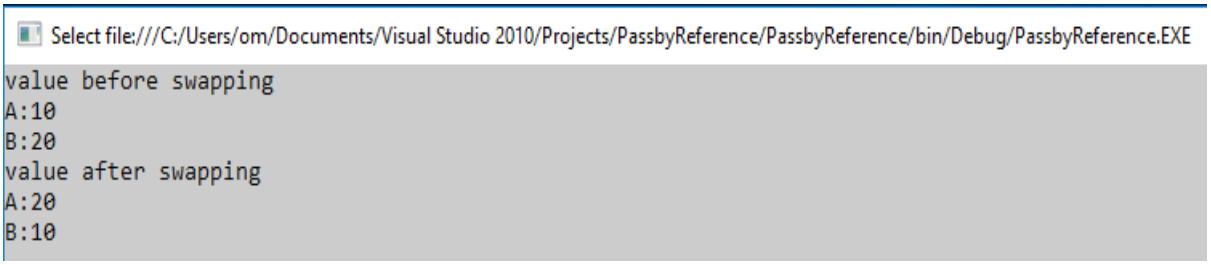
Program:

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

namespace PassbyReference
{
   class Program
   {
      static void Main(string[] args)
      {
         int a = 10;
         int b = 20;
         pass_by_reference(ref a, ref b);
         Console.ReadLine();
      }
      static void pass_by_reference(ref int x, ref int y)
      {
         int a, b, temp;
         Console.WriteLine("value before swapping");
         a = x;
         b = y;
         Console.WriteLine("A:" + a);
         Console.WriteLine("B:" + b);
         Console.WriteLine("value after swapping");
         temp = a;
         a = b;
         b = temp;
         Console.WriteLine("A:" + a);
         Console.WriteLine("B:" + b);

      }
   }
}
```

**********OUTPUT**********


Select file:///C:/Users/om/Documents/Visual Studio 2010/Projects/PassbyReference/PassbyReference/bin/Debug/PassbyReference.EXE
value before swapping
A:10
B:20
value after swapping
A:20
B:10

****

****

Assignment No. 05

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III **Date:** / /

Signature:

****

Q. Write a C# program that uses explicit keyword.

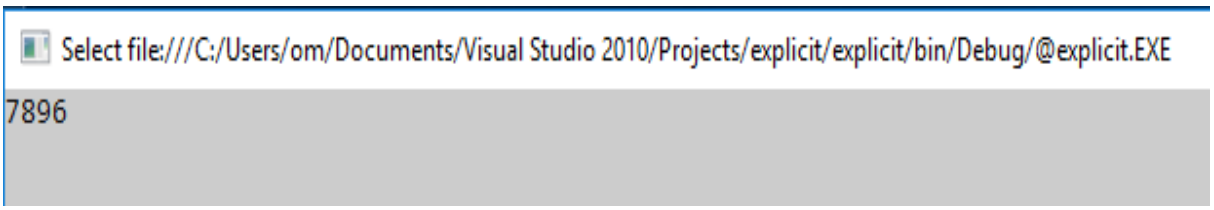
Program:

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

namespace Assignment5
{
   class ProgramExplicit
   {
      static void Main(string[] args)
      {
         double db = 7896.45;
         int xy;

         xy = (int)db;
         Console.WriteLine(xy);
         Console.ReadKey();
      }
   }
}
```

**********OUTPUT**********



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Assignment No. 06

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III **Date:** / /

Signature:

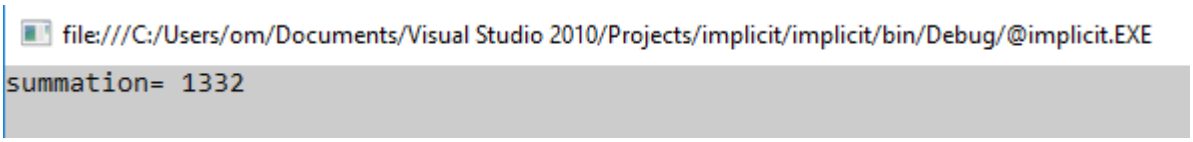
****

Q. Write a C# program that uses implicit keyword.

Program:

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

namespace Assignment6
{
   class ProgramImplicit
   {
      static void Main(string[] args)
      {
         int value1 = 567;
         int value2 = 765;
         long summation;

         summation = value1 + value2;

         Console.WriteLine("summation= " + summation);

         Console.ReadLine();

      }
   }
}
```

**********OUTPUT**********



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Assignment No. 07

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III **Date:** / /

Signature:

****

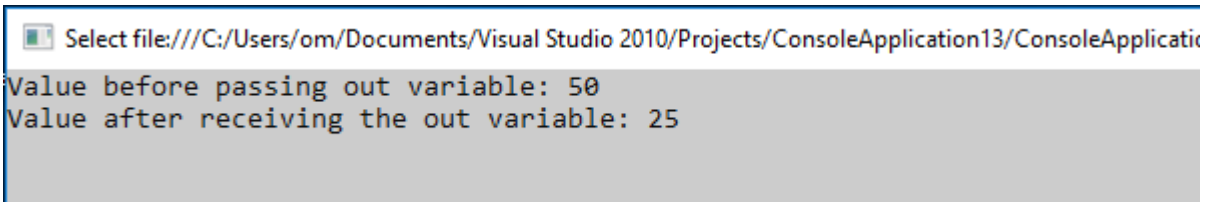
Q. Write a C# program to implement out parameter.

Program:

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

namespace Assignment7
{
   class Program
   {
      public void show(out int val)
      {
         int square = 5;
         val = square;
         val *= val;
      }
      static void Main(string[] args)
      {
         int val = 50;
         Program program = new Program();
         Console.WriteLine("Value before passing out variable: " + val);
         program.show(out val);
         Console.WriteLine("Value after receiving the out variable: " + val);
         Console.ReadLine();
      }
   }
}
```

**********OUTPUT**********


Select file:///C:/Users/om/Documents/Visual Studio 2010/Projects/ConsoleApplication13/ConsoleApplicatio
Value before passing out variable: 50
Value after receiving the out variable: 25

****

****

Assignment No. 08

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III **Date:** / /

Signature:

****

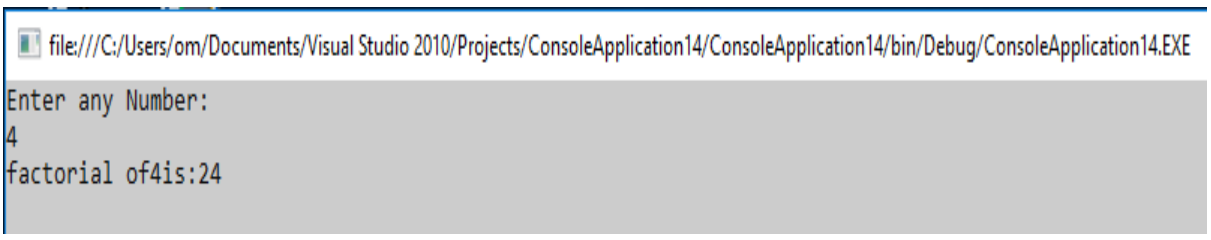
Q. Write C# program to display factorial of number.

Program:

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

namespace Assignment8
{
   class Factorial
   {
      static void Main(string[] args)
      {
         int i, fact = 1, number;
         Console.WriteLine("Enter any Number:");
         number = int.Parse(Console.ReadLine());
         for (i = 1; i <= number; i++)
         {
            fact = fact * i;
         }
         Console.WriteLine("factorial of" + number + "is:" + fact);
         Console.ReadLine();
      }
   }
}
```

**********OUTPUT**********



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Assignment No. 09

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III **Date:** / /

Signature:

****

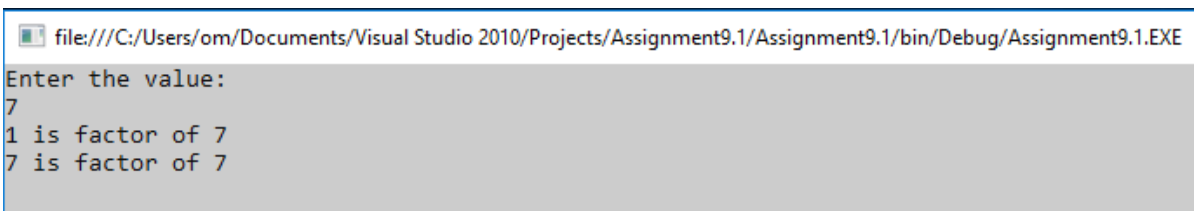
Q. Write a C# program to display prime factors of entered number.

Program:

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

namespace Assignment9
{
   class Program
   {
      static void Main(string[] args)
      {
         int a, b;
         Console.WriteLine("Enter the value:");
         a = int.Parse(Console.ReadLine());
         for (b = 1; b <= a; b++)
         {
            if (a % b == 0)
            {
               Console.WriteLine(b + " is factor of " + a);
            }
         }
         Console.ReadLine();
      }
   }
}
```

**********OUTPUT**********



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Assignment No. 10

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III **Date:** / /

Signature:

****

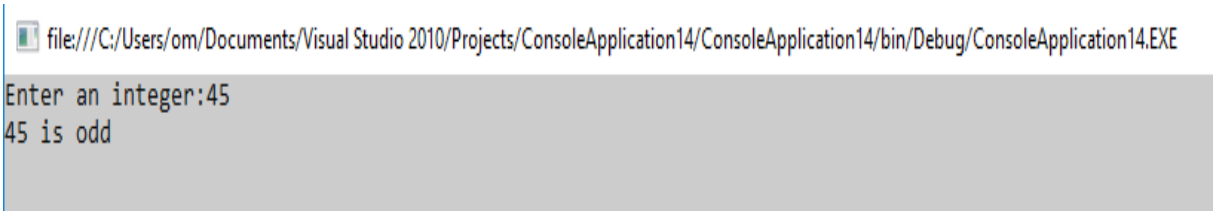
Q. Write C# program check entered number is even or odd.

Program:

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

namespace ConsoleApplication4
{
   class Program
   {
      static void Main(string[] args)
      {
         {
            int n;
            Console.Write("Enter an integer:");
            n = Int32.Parse(Console.ReadLine());
            if (n % 2 == 0)
            {
               Console.WriteLine("{0} is even", n);
            }
            else
            {
               Console.WriteLine("{0} is odd", n);
            }
            Console.ReadKey();
         }
      }
   }
}
```

**********OUTPUT**********


file:///C:/Users/om/Documents/Visual Studio 2010/Projects/ConsoleApplication14/ConsoleApplication14/bin/Debug/ConsoleApplication14.EXE
Enter an integer:45
45 is odd

****

****

Assignment No. 11

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III **Date:** / /

Signature:

****

Q.Write C# program to demonstrate array.

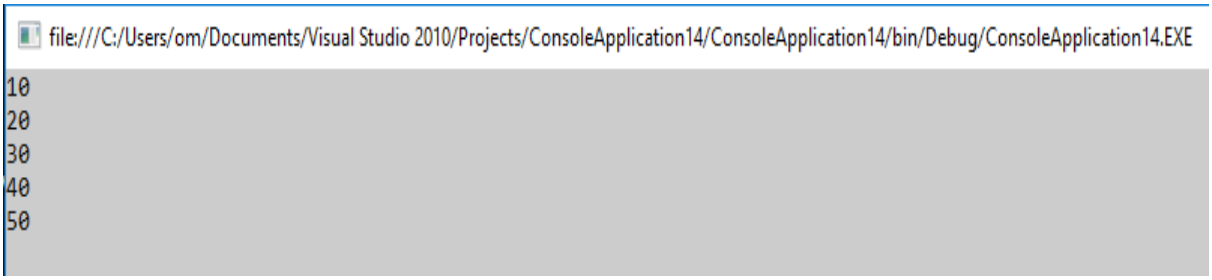
Program:

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

namespace Assignment11
{
   class ProgramArray
   {
      static void Main(string[] args)
      {
         int[] arr = { 10, 20, 30, 40, 50 };

         for (int i = 0; i < arr.Length; i++)
         {
            Console.WriteLine(arr[i]);
         }
         Console.ReadLine();
      }
   }
}
```

**********OUTPUT**********



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Assignment No. 12

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III **Date:** / /

Signature:

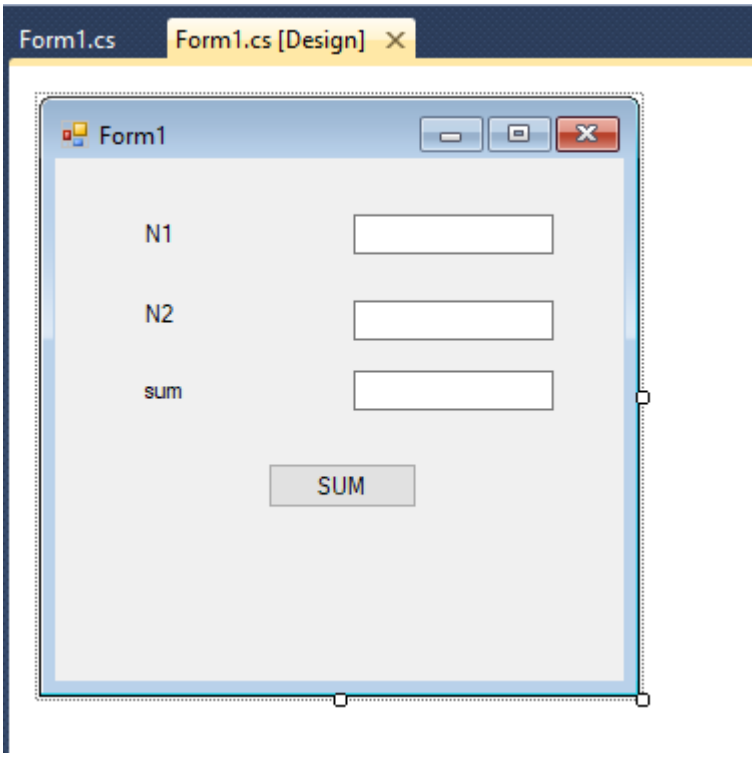
****

Q. Write DLL and implement in another console application.

Program:

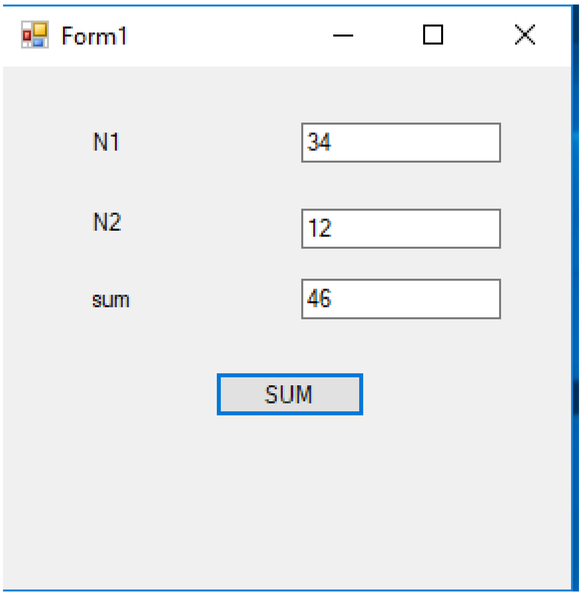
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using snehaldll;

namespace snehaldll
{
   public class Class1
   {
      public int sum(int n1, int n2)
      {
         return n1 + n2;
      }
   }
}
```

**********OUTPUT**********



```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
using snehaldll;

namespace addtwonumbersusingdlls1
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void button1_Click(object sender, EventArgs e)
        {
            int n1, n2;



            n1 = Convert.ToInt32(textBox1.Text);
            n2 = Convert.ToInt32(textBox2.Text);
            snehaldll.Class1 obj = new snehaldll.Class1();
            textBox3.Text = (obj.sum(n1, n2).ToString());
        }
    }
}
```

**********************************OUTPUT**********************************



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Assignment No. 13

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III D**ate:** / /

Signature:

****

Q. Write a C# program to demonstrate static and non-static methods.

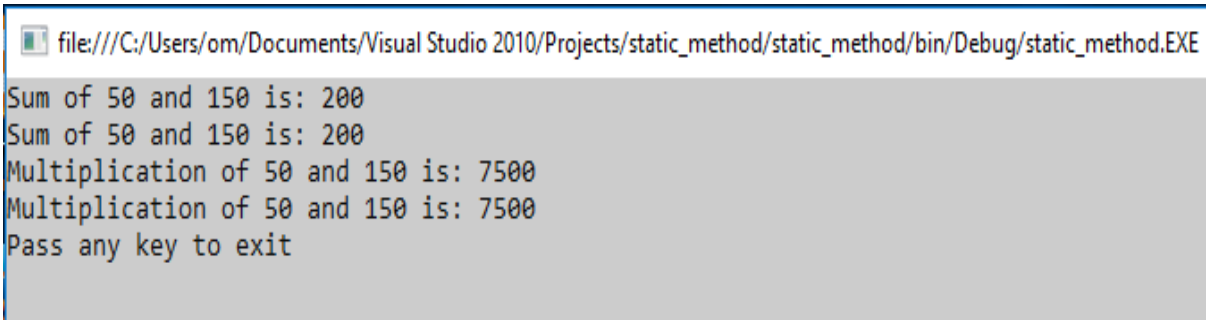
Program:

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

namespace static_method
{
   class Program
   {
      int x = 50;
      static int y = 150;
      static void Add()
      {
         Program obj = new Program();
         Console.WriteLine("Sum of 50 and 150 is: " + (obj.x + y));
      }
      void mul()
      {
         Console.WriteLine("Multiplication of 50 and 150 is: " + (this.x * Program.y));
         Console.WriteLine("Multiplication of 50 and 150 is: " + (x * y));
      }
      static void Main(string[] args)
      {
         Program.Add();
         Add();
         Program obj = new Program();
         obj.mul();
         Console.WriteLine("Pass any key to exit");
         Console.ReadLine();

      }
   }
}
```

**********OUTPUT**********


file:///C:/Users/om/Documents/Visual Studio 2010/Projects/static_method/static_method/bin/Debug/static_method.EXE
Sum of 50 and 150 is: 200
Sum of 50 and 150 is: 200
Multiplication of 50 and 150 is: 7500
Multiplication of 50 and 150 is: 7500
Pass any key to exit

****

****

Assignment No. 14

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III **Date:** / /

Signature:

****

Q. Write C# program to demonstrate Interitance.

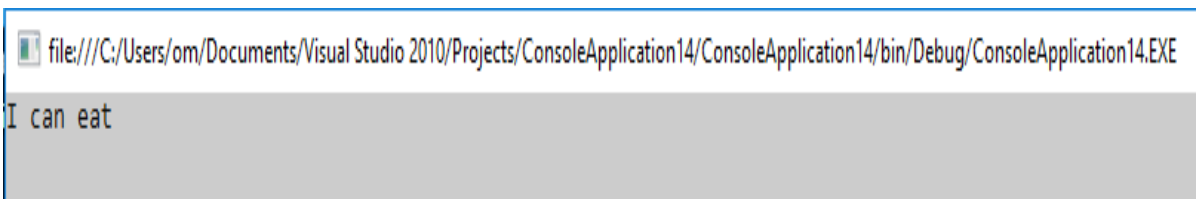
Program:

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

namespace Assignment14
{
   class Animal
   {
      protected void eat()
      {
         Console.WriteLine("I can eat");
      }
   }

   class Dog : Animal
   {
      static void Main(string[] args)
      {
         Dog labrador = new Dog();
         labrador.eat();
         Console.ReadLine();
      }
   }
}
```

**********OUTPUT**********



****

Assignment No. 15

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III D**ate:** / /

Signature:

****

Q. Write C# program to demonstrate Interface.

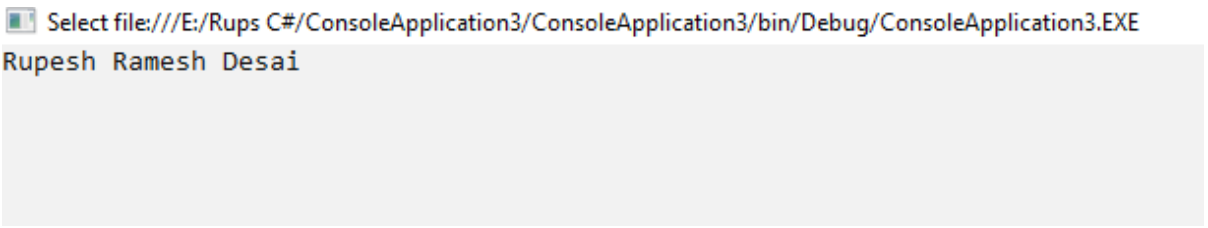
Program:

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

namespace Interface
{
   interface inter1
   {
      void display();
   }
   class TestClass : inter1
   {
      public void display()
      {
         Console.WriteLine("Rupesh Ramesh Desai");
      }
   }
   class Program
   {
      static void Main(string[] args)
      {
         TestClass obj = new TestClass();
         obj.display();
         Console.ReadLine();
      }

   }
}
```

**********OUTPUT**********


Select file:///E:/Rups C#/ConsoleApplication3/ConsoleApplication3/bin/Debug/ConsoleApplication3.EXE
Rupesh Ramesh Desai

****

****

Assignment No. 16

Name of Student: Rupesh Ramesh Desai **Roll No.:**

Class: B.Sc III **Date: / /**

Signature:

****

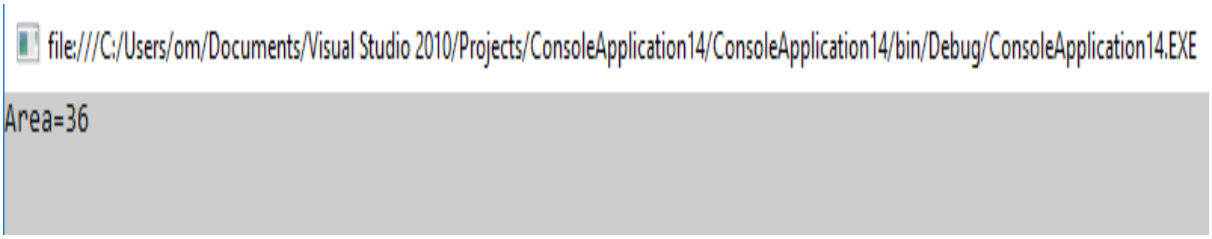
Q. Write C# program to demonstrate abstract class.

Program:

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

namespace Assignment16
{
   abstract class AreaClass
   {
      abstract public int Area();
   }
   class Square : AreaClass
   {
      int side = 0;
      public Square(int n)
      {
         side = n;
      }
      public override int Area()
      {
         return side * side;
      }
   }
   class Program
   {
      static void Main(string[] args)
      {
         Square s = new Square(6);
         Console.WriteLine("Area=" + s.Area());
         Console.ReadLine();
      }
   }
}
```

**********OUTPUT**********


file:///C:/Users/om/Documents/Visual Studio 2010/Projects/ConsoleApplication14/ConsoleApplication14/bin/Debug/ConsoleApplication14.EXE
Area=36

****