Lab Deliverable 1   C# Basics
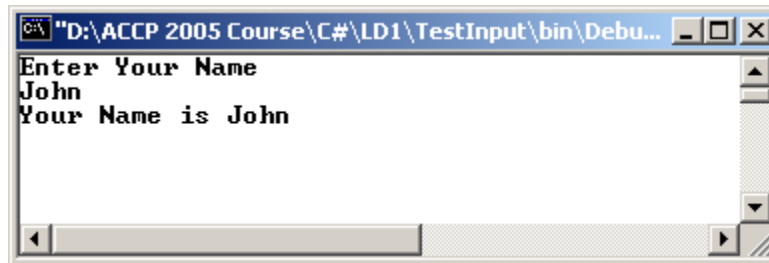
Part II

1. Write a program to accept a name and display the same.

Solution:

```
using System;

class TestInput
{
   static void Main()
   {
     string strName;
     Console.WriteLine("Enter Your Name");
     strName=Console.ReadLine();
     Console.WriteLine("Your Name is {0}", strName);
   }
}
```

The output of the program is as shown in Figure 1.1.

Figure 1.1: Output of TestInput.cs

2. Write a program that accepts a number between 1 and 7 from the user and returns the corresponding day of a week. (1 - Monday, 2 -Tuesday and so on)

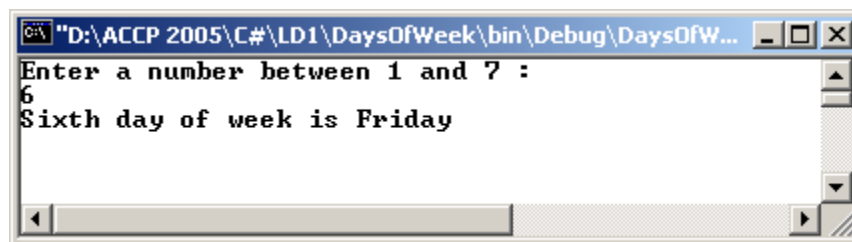**Solution:**

```
using System;

class DaysOfWeek
{
   static void Main()
   {
     string strDow;
     Console.WriteLine("Enter a number between 1 and 7 :");
     strDow = Console.ReadLine();
     switch(strDow)
     {
```

```
        case "1":
           Console.WriteLine("First day of week is Sunday");
           break;
        case "2":
           Console.WriteLine("Second day of week is Monday");
           break;
        case "3":
           Console.WriteLine("Third day of week is Tuesday");
           break;
        case "4":
           Console.WriteLine("Fourth day of week is Wednesday");
           break;
        case "5":
           Console.WriteLine("Fifth day of week is Thursday");
           break;
        case "6":
           Console.WriteLine("Sixth day of week is Friday");
           break;
        case "7":
           Console.WriteLine("Seventh day of week is Saturday");
           break;
        default:
           Console.WriteLine("Enter a number between 1 and 7");
           break;
     }
   }
}
```

The output of the program is as shown in Figure 1.2.

Figure 1.2: Output of DaysOfWeek.cs

3. Write a program that calls a method to find the square of 10.
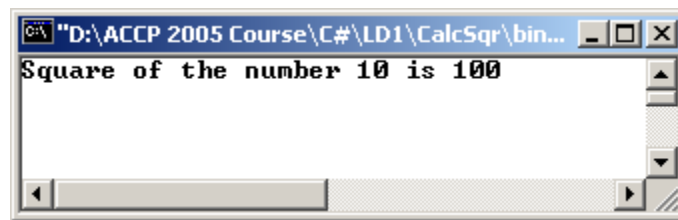
Solution:

```
using System;

class CalcSqr
{
   static void Main()
   {
      int intNum = 10;
```

```
      funcSqr(intNum);
      Console.ReadLine();
   }
   static void funcSqr(int intNum)
   {
      int intsqr;
      intsqr = intNum * intNum;
      Console.WriteLine("Square of the number 10 is {0}",
intsqr);
   }
}
```

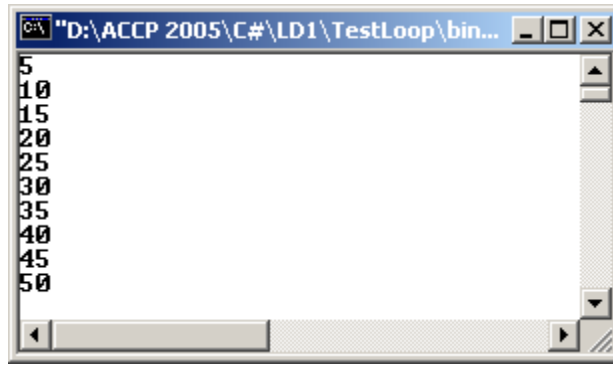The output of the program is as shown in Figure 1.3.

Figure 1.3: Output of CalcSqr.cs

4. Write a program to display the first 10 multiples of 5.

Solution:

```
using System;

class TestLoop
{
   static void Main()
   {
      int intRes, intCnt = 1;
      while (intCnt <= 10)
      {
         intRes = intCnt * 5;
         Console.WriteLine("{0}",intRes);
         intCnt = intCnt+1;
      }
   }
}
```

The output of the program is as shown in Figure1.4.

Figure 1.4: Output of TestLoop.cs

5. Write a program to list the first 10 prime numbers.
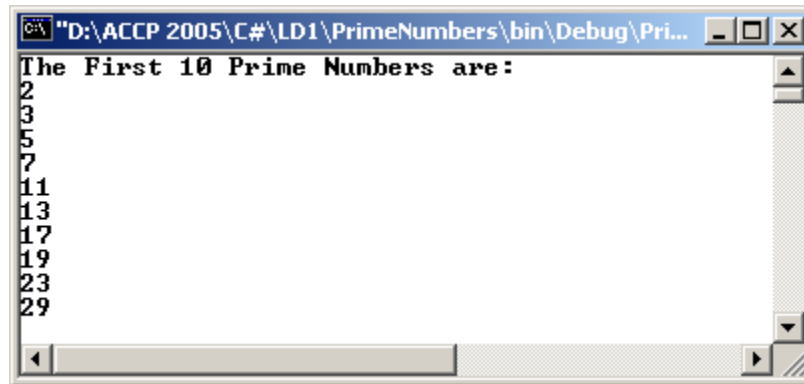
Solution:

```
using System;

class PrimeNumbers
{
   static void Main()
   {
      int intNum = 1, intCnt, intNumHalf = 0, intI = 0;
      bool IsPrime = true;
      Console.WriteLine("The First 10 Prime Numbers are:");
      while (intI < 10)
      {
         intNum += 1;
         intNumHalf = (intNum / 2);
         intCnt = 2;
         while (intNumHalf >= intCnt)
         {
            if ((intNum % intCnt) == 0)
            {
               IsPrime = false;
               break;
            }
            intCnt = intCnt+1;
         }
         if (IsPrime == true)
         {
            intI++;
            Console.WriteLine("{0}",intNum);
         }
         else
            IsPrime = true;
      }
      Console.ReadLine();
   }
```

```
}
```

The output of the program is as shown in Figure 1.5.

Figure 1.5: Output of PrimeNumbers.cs

Do It Yourself

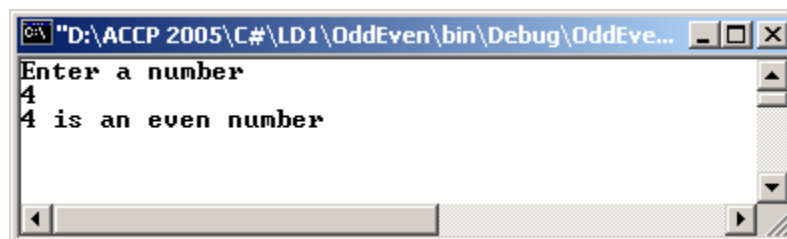1. Write a program to accept a number and display whether it is odd or even.

Solution:

```csharp
using System;

class OddEven
{
   static void Main()
   {
      Console.WriteLine("Enter a number");
      int intNum;
      intNum = Convert.ToInt32(Console.ReadLine());
      if ((intNum % 2) == 0)
         Console.WriteLine("{0} is Even",intNum);
      else
         Console.WriteLine("{0} is Odd",intNum);
   }
}
```

The output of the program is as shown in Figure1.6.

Figure 1.6: Output of OddEven.cs

2. Write a program to accept a character as input from the user. If the letter input is any one out of "a", "e", "i", "o", or "u" then display a message "You have input, Vowel" else display "This is not a Vowel".
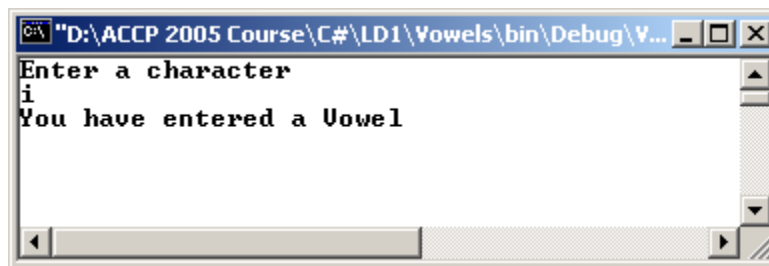
Solution:

```
using System;

class Vowels
{
   static void Main()
   {
      char strInput;
      Console.WriteLine("Enter a character");
      strInput = Convert.ToChar(Console.ReadLine());

      if( strInput == 'a' || strInput == 'e' || strInput == 'i'
|| strInput == 'o' || strInput == 'u')
         Console.WriteLine("You have entered a Vowel");
      else
         Console.WriteLine("The character entered is not a
Vowel");
   }
}
```

The output of the program is as shown in Figure1.7.

Figure 1.7: Output of Vowels.cs

3. Create a structure that stores bill details for the items purchased such as bill number, number of items purchased, name of each item and price of each item. Accept values for all the structure elements and calculate the total bill amount.

Solution:

```
using System;

class BillStruct
{
```

```
   struct Bill
   {
      public int billNo;
      public int totalItems;
      public string[] itemName;
      public int[] price;
   }

   static void Main()
   {
      Bill trialBill;
      double totalAmt=0;

      Console.WriteLine("Input information for calculating the
bill of items:");
      Console.WriteLine("Input bill number :");
      trialBill.billNo = int.Parse(Console.ReadLine());
      Console.WriteLine("Input number of items purchased :");
      trialBill.totalItems =int.Parse(Console.ReadLine());
      trialBill.itemName =new string[trialBill.totalItems];
      trialBill.price = new int[trialBill.totalItems];

      for(int i=0;i<trialBill.totalItems;i++)
      {
         Console.WriteLine("Input item name {0}", i+1);
         trialBill.itemName[i]=Console.ReadLine();
         Console.WriteLine("Input item price for item {0}", i+1);
         trialBill.price[i]=int.Parse(Console.ReadLine());
         totalAmt=totalAmt+trialBill.price[i];
      }

      Console.WriteLine("Total number of items purchased are
{0}", trialBill.totalItems);
      Console.WriteLine("Total bill amount for the items
purchased is {0}", totalAmt);
   }
}
```
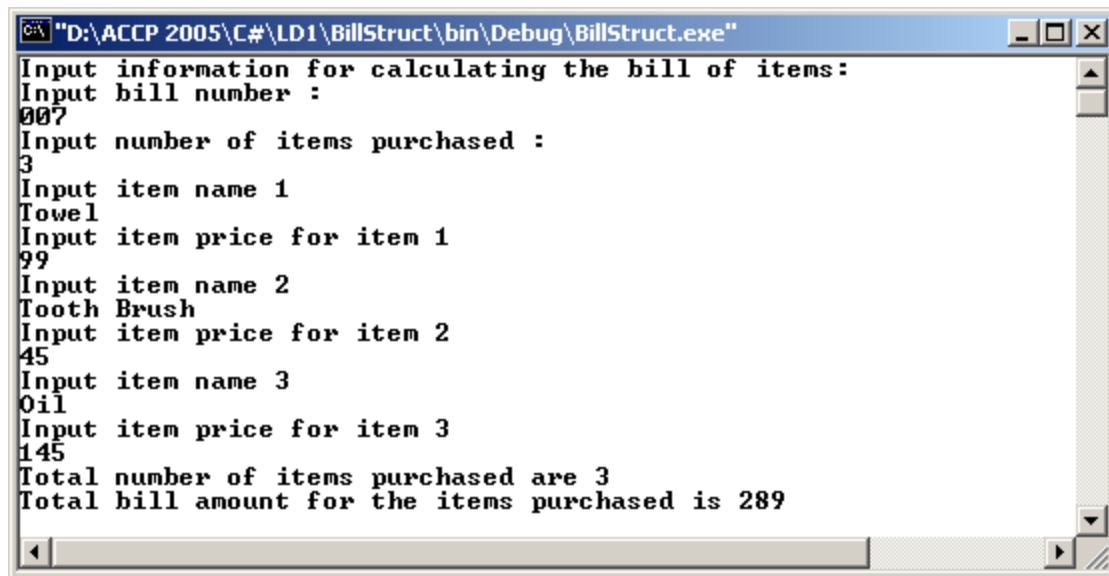
The output of the program is as shown in Figure1.8.

```
"D:\ACCP 2005\C#\LD1\BillStruct\bin\Debug\BillStruct.exe"
Input information for calculating the bill of items:
Input bill number :
007
Input number of items purchased :
3
Input item name 1
Towel
Input item price for item 1
99
Input item name 2
Tooth Brush
Input item price for item 2
45
Input item name 3
Oil
Input item price for item 3
145
Total number of items purchased are 3
Total bill amount for the items purchased is 289
```

Figure 1.8: Output of BillStruct.cs