Practical 1: Basic C# Programs

Q1. Write a C# program to calculate Fibonacci Series.

```
using System;
 public class FibonacciExample
 {
   public static void Main(string[] args)
    {
       int n1=0,n2=1,n3,i,number;
       Console.Write("Enter the number of elements: ");
       number = int.Parse(Console.ReadLine());
       Console.Write(n1+" "+n2+" "); //printing 0 and 1
       for(i=2;i<number;++i) //loop starts from 2 because 0 and 1 are already printed
       {
        n3=n1+n2;
        Console.Write(n3+" ");
        n1=n2;
        n2=n3;
       }
    }
 }
```

Q2. Write a C# program to check whether the number is prime or not

```
using System;
 public class PrimeNumberExample
 {
   public static void Main(string[] args)
    {
       int n, i, prime=0;
       Console.Write("Enter the Number to check Prime: ");
       n = int.Parse(Console.ReadLine());
       for(i = 2; i < n; i++)
       {
       if(n % i == 0)
              {
                     Console.Write(n+" is not Prime.");
              }
              else
              {
                     Console.Write(n+" is Prime.");
             }
              break;
         }
```

```
        }
  }
```

Q3. Write a C# program to find the reverse of a number

```
using System;
  public class ReverseExample
  {
    public static void Main(string[] args)
     {
      int  n, reverse=0, rem;
      Console.Write("Enter a number: ");
      n= int.Parse(Console.ReadLine());
      while(n!=0)
      {
       rem=n%10;
       reverse=reverse*10+rem;
       n/=10;
      }
      Console.Write("Reversed Number: "+reverse);
   }
 }
```

Q4. Write a C# program to calculate factorial of a number

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

Q5. Write a C# program to find the number is Palindrome or not

```
using System;
 public class PalindromeExample
  {
    public static void Main(string[] args)
     {
```

```
        int n,r,sum=0,temp;
        Console.Write("Enter the Number: ");
        n = int.Parse(Console.ReadLine());
        temp=n;
        while(n>0)
        {
         r=n%10;
         sum=(sum*10)+r;
         n=n/10;
        }
        if(temp==sum)
         Console.Write("Number is Palindrome.");
        else
         Console.Write("Number is not Palindrome");
    }
 }
```

Q6. Write a C# program to calculate sum of digits of a number

```
using System;
  public class SumExample
  {
    public static void Main(string[] args)
     {
```

```
      int  n,sum=0,m;
      Console.Write("Enter a number: ");
      n= int.Parse(Console.ReadLine());
      while(n>0)
      {
       m=n%10;
       sum=sum+m;
       n=n/10;
      }
      Console.Write("Sum is= "+sum);
    }
  }
```

Q7. Write a C# program to swap two numbers with and without using third variable

1) Swapping using third variable

```
using System;
namespace swap {
  class ab {
    static void Main(String[] args) {
      int a = 5, b = 3, temp;

      //swapping
```

```
      temp = a;
      a = b;
      b = temp;
      Console.WriteLine("Values after swapping are:");
      Console.WriteLine("a=" + a);
      Console.WriteLine("b=" + b);
    }
  }
}
```

2) Swapping without using third variable

```
using System;
namespace swap {
  class ab {
    static void Main(String[] args) {
      int a = 10, b = 20;
      //swapping
      a = a + b;
      b = a - b;
      a = a - b;
      Console.WriteLine("Values after swapping are:");
      Console.WriteLine("a=" + a);
```

```
    Console.WriteLine("b=" + b);
   }
  }
}
```

Q8. Write a C# program to check whether the number is Armstrong or not.

```
using System;
 public class ArmstrongExample
  {
    public static void Main(string[] args)
     {
      int  n,r,sum=0,temp;
      Console.Write("Enter the Number= ");
      n= int.Parse(Console.ReadLine());
      temp=n;
      while(n>0)
      {
       r=n%10;
       sum=sum+(r*r*r);
       n=n/10;
      }
```

```
    if(temp==sum)
     Console.Write("Armstrong Number.");
    else
     Console.Write("Not Armstrong Number.");
   }
}
```