20 C# Programs Assignment

By

Praveen Chakravarthi

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Program-1:

WACP to find Multiples of a Number

Code

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

namespace Multiples_of_a_Number
{
   internal class Program
   {
      static void Main(string[] args)
      {
         // variable declaration
         int input, i;

         // read from user

         Console.WriteLine("Enter any Number");
         input =Convert.ToInt32(Console.ReadLine());

         // Logic

         for (i = 1; i <= 10; i++)
         {
            Console.WriteLine("{0}x{1}={2}", input, i, input * i);
         }
         for (i = 1; i<=10; i++)
            Console.WriteLine(input + "x" + i + "=" + input*i);
         Console.ReadLine();


      }
   }
}
```

Output


C:\Praveen Chakravarthi
Enter any Number
5
5x1=5
5x2=10
5x3=15
5x4=20
5x5=25
5x6=30
5x7=35
5x8=40
5x9=45
5x10=50
5x1=5
5x2=10
5x3=15
5x4=20
5x5=25
5x6=30
5x7=35
5x8=40
5x9=45
5x10=50

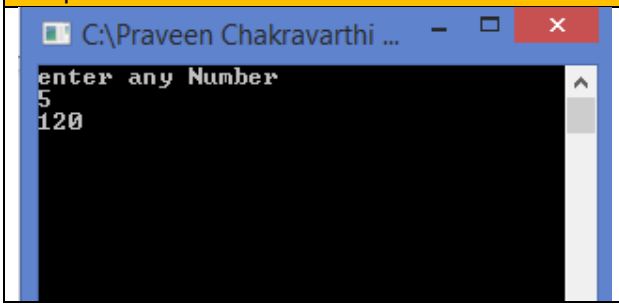
Program –2:

WACP to find Factorial of a Number

Code

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

namespace Factorial_of_a_Number
{
   internal class Program
   {
      static void Main(string[] args)
      {
         //variable declaration

         int input, product =1, i;

         // User Input

         Console.WriteLine("enter any Number");
         input=Convert.ToInt32(Console.ReadLine());

         // Logic
         for (i = 1; i <= input; i++)
         {
            product = product * i;
         }
         // output

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

Output



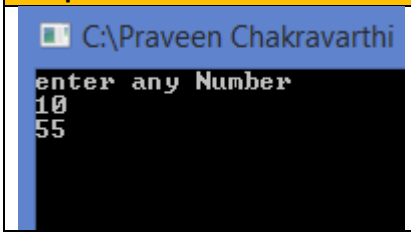
Program-3:

WACP to find sum of N Natural Numbers

Code

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

namespace sum_of_n_natural_numbers
{
   internal class Program
   {
      static void Main(string[] args)
      {
         //variable declaration
         int i, input, sum = 0;

         //read from user

         Console.WriteLine("enter any Number");
         input = Convert.ToInt32(Console.ReadLine());

         //logic

         for (i = 0; i <= input; i++)
            sum = sum + i;

         //output
         Console.WriteLine(sum);
         Console.ReadLine();

      }
   }
}
```

Output



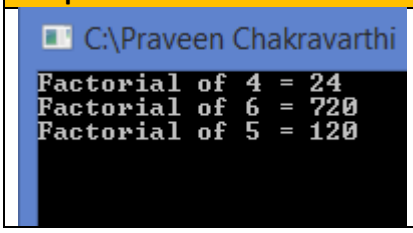
Program-4:

WACP to find Factorial of 3 Numbers using Function

Code

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

namespace Factorial_of_3_number_using_Function
{
   internal class Program
   {
      public static void printOutput(int n)
      {
         Console.WriteLine("Factorial of {0} = {1}", n, factorial(n));
      }
      public static int factorial(int n)
      {
         int fact = 1;
         for (int i = 1; i <= n; i++)
            fact *= i;
         return fact;
      }
         static void Main(string[] args)
      {
         int n = 4, n1 = 6, n2 = 5;

         printOutput(n);
         printOutput(n1);
         printOutput(n2);

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

Output



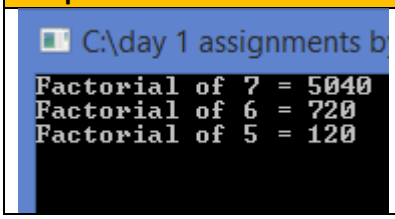
Program-5:

WACP to find Factorial of 3 Numbers using Recursion

Code

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

namespace Factorial_of_3_Numbers_using_Recursion
{
   internal class Program
   {
      public static int Factorial(int n)
      {
         if (n == 0)
            return 1;
         else
            return n * Factorial(n - 1);
   }
      public static void Print(int n)
      {
         Console.WriteLine("Factorial of {0} = {1}", n, Factorial(n));
      }
      static void Main(string[] args)
      {
         int n = 7, n1 = 6, n2 = 5;
         Print(n);
         Print(n1);
         Print(n2);
         Console.ReadLine();
      }
   }
}
```

Output



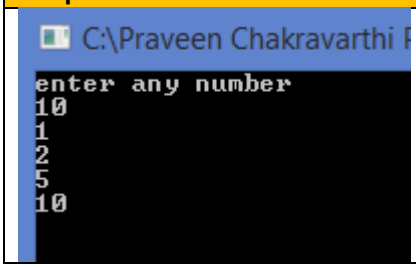
Program-6:

WACP to find Factors of a Number

Code

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

namespace Factors_of_a_Number
{
   internal class Program
   {
      static void Main(string[] args)
      {
         //variable declaration

         int i, input;

         //read from user
         Console.WriteLine("enter any number");
         input =Convert.ToInt32(Console.ReadLine());

         //logic

         for (i = 1; i <= input; i++)
         {
            if (input%i== 0)
               Console.WriteLine(i);
         }
         Console.ReadLine();

      }
   }
}
```

Output



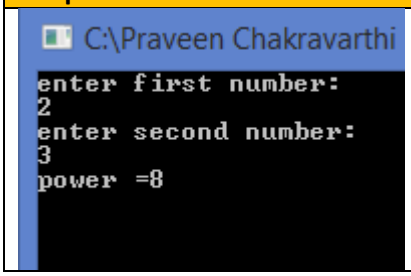
Program –7:

WACP to Find A power B

Code

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

namespace A_power_B
{
   internal class Program
   {
      static void Main(string[] args)
      {
         int fn, sn, sum=0 ;
         int p = 1;
         fn = 0;
         Console.WriteLine("enter first number:");
         fn = Convert.ToInt32(Console.ReadLine());

         Console.WriteLine("enter second number:");
         sn = Convert.ToInt32(Console.ReadLine());

         for(int i=1; i <= sn; i++)
         p = p * fn;

         Console.WriteLine("power =" +p);
         Console.ReadLine();

      }
   }
}
```

Output



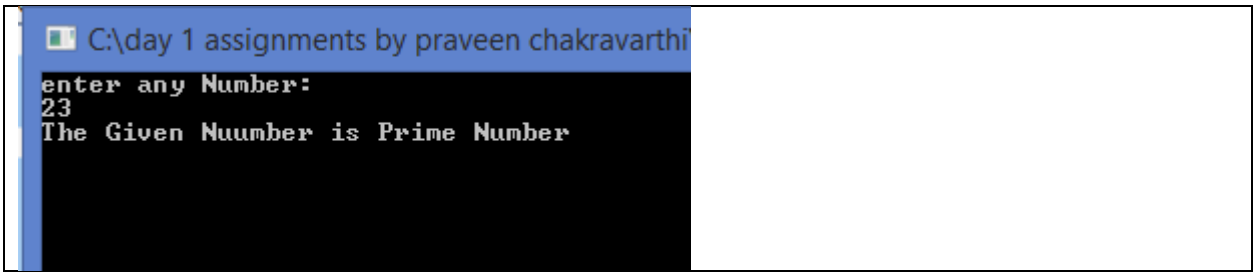
Program-8:

WACP to Find the given number is a prime number or not

Code

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

namespace Prime_Number_or_Not
{
   internal class Program
   {
      static void Main(string[] args)
      {

         int input, i, count = 0;

         Console.WriteLine("enter any Number:");
         input = Convert.ToInt32(Console.ReadLine());

         for (i = 2; i < input; i++)
         {
            if (input % i == 0)
               break;
         }

         if (i == input)

            Console.WriteLine("The Given Nuumber is Prime Number");

            else
               Console.WriteLine("It is a Composite Number");

            Console.ReadLine();

      }
   }
}
```

Output


C:\day 1 assignments by praveen chakravarthi
enter any Number:
23
The Given Nuumber is Prime Number

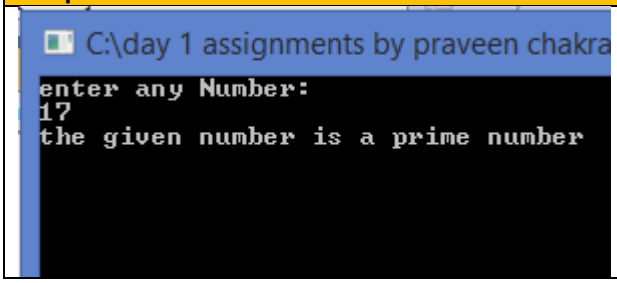
Program-9:

WACP to find the given number is a Prime number or not using Function

Code

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

namespace Prime_Number_or_Not_Using_Function
{
   internal class Program
   {
      public static void prime(int input)
      {
         int i;
         for (i = 2; i < input; i++)
         {
            if (input % i == 0)
               break;
         }
         if (i == input)
            Console.WriteLine("the given number is a prime number");
         else
            Console.WriteLine("it is a composite Number");
      }
      static void Main(String[] args)

      {
         Console.WriteLine("enter any Number:");
         prime(Convert.ToInt32(Console.ReadLine()));
         Console.ReadLine();
      }
   }
}
```

Output



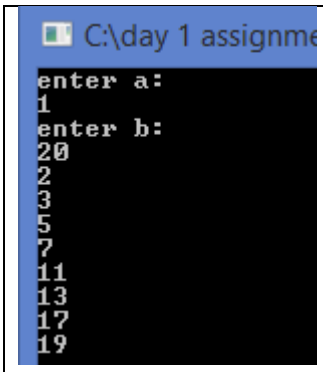
Program-10:

WACP to find the given number is a Prime number or not using Recursion

Code

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

namespace Prime_Number_or_Not_using_Recursion
{
   internal class Program
   {
      public static bool prime(int input)
      {
         int i;
         for (i = 2; i < input; i++)
         {
            if (input % i == 0)
               break;
         }
         if (i == input)
            return true;
         else
            return false;
      }
      static void Main(String[] args)

      {
         int a, b, i;
         Console.WriteLine("enter a:");
         a= (Convert.ToInt32(Console.ReadLine()));
         Console.WriteLine("enter b:");
         b= (Convert.ToInt32(Console.ReadLine()));
         for (i=a;i<=b;i++)
         {
            if (prime(i))
               Console.WriteLine(i);
         }
         Console.ReadLine();
      }
   }
}
```

Output


C:\day 1 assignme
enter a:
1
enter b:
20
2
3
5
7
11
13
17
19

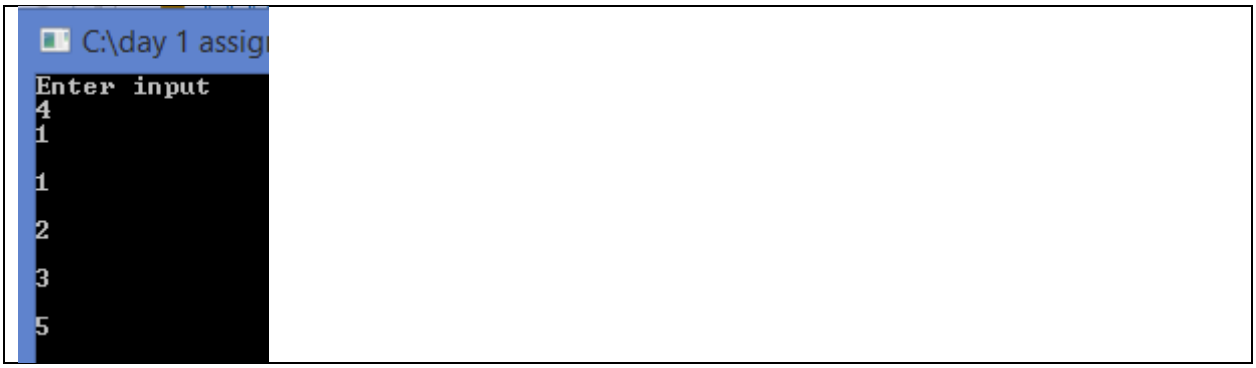
Program-11:

WACP to find Fibonacci series

Code

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

namespace Find_Fibonacci_series_of_a_Number
{
   internal class Program
   {
      static void Main(String[] args)

      {
         int input;
         Console.WriteLine("Enter input");
         input = Convert.ToInt32(Console.ReadLine());
         int next = 0;
         int prev = 0;

         for (int i = 0; i <= input; i++)
         {
            if (next == 0)
            {
               next = 1;
            }
            else
            {
               int temp = next;
               next = next + prev;
               prev = temp;
            }

            Console.WriteLine(next);
            Console.ReadLine();

         }
      }
   }
}
```

Output


C:\day 1 assig
Enter input
4
1
1
2
3
5

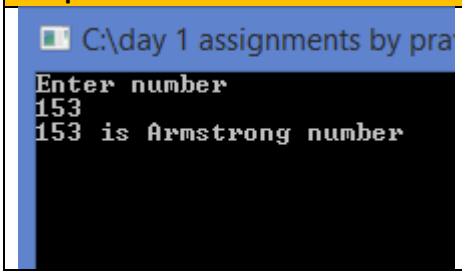
Program-12:

WACP to Find Armstrong Number

Code

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

namespace Finding_Armstrong_Number
{
   internal class Program
   {
      static void Main(String[] args)

      {
         int number, rem, sum = 0, temp;
         Console.WriteLine("Enter number");
         number = Convert.ToInt32(Console.ReadLine());
         temp = number;
         while (number > 0)
         {
            rem = number % 10;
            sum = sum + (rem * rem * rem);
            number = number / 10;
         }
         if (temp == sum)
            {
               Console.WriteLine("{0} is Armstrong number ", temp);
            }
            else
               Console.WriteLine("{®} is not Armstrong number",temp);

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

Output



Program-13:

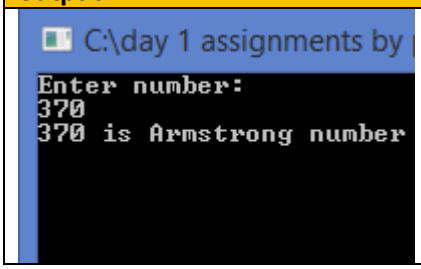
WACP to Find Armstrong Number using Function

Code

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

namespace Find_Armstrong_Number_using_Function
{
   internal class Program
   {
      public static bool Arm(int number)
      {
         int temp, sum = 0, rem;
         temp = number;
         while (number > 0)
         {
            rem = number % 10;
            sum = sum + (rem * rem * rem);
            number = number / 10;
         }

         if (temp == sum)
         {
            return true;
         }
         else
         {
            return false;
         }
      }

         static void Main(String[] args)
         {
            int number;

         Console.WriteLine("Enter number:");
         number = Convert.ToInt32(Console.ReadLine());

         if (Arm(number) == true)
            Console.WriteLine("{0} is Armstrong number ", number);
         else
         {
            Console.WriteLine("{0} is not Armstrong number", number);
```

```
        }
        Console.ReadLine();


    }
  }
}
```

output



Program-14:

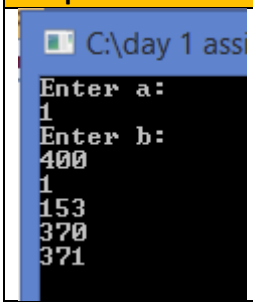
WACP to Find Armstrong Number In Range

Code

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

namespace Find_Armstrong_Number_using_Recursion
{
   internal class Program
   {
      public static bool Arm(int number)
      {
         int temp, sum = 0, rem;
         temp = number;
         while (number > 0)
         {
            rem = number % 10;
            sum = sum + (rem * rem * rem);
            number = number / 10;
         }
         if (temp == sum)
         {
            return true;
         }
          else
         {
            return false;
         }
      }

        public static void Main(String[] args)
         {
         int a, b;

         Console.WriteLine("Enter a:");
         a = Convert.ToInt32(Console.ReadLine());
         Console.WriteLine("Enter b:");
         b = Convert.ToInt32(Console.ReadLine());

         for (int i = a; i <= b; i++)
         {
            if (Arm(i))
               Console.WriteLine(i);
         }
         Console.ReadLine();
```

```
    }
  }
}
```

Output



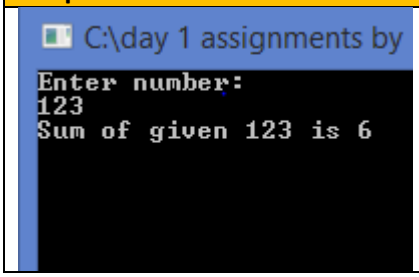
Program-15

WACP to find the sum of given digits

Code

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

namespace Find_the_Sum_of_given_digits
{
   internal class Program
   {
      static void Main(string[] Args)
         {
            int rem, sum = 0, number;
      Console.WriteLine("Enter number: ");
      number=Convert.ToInt32(Console.ReadLine());
      int temp = number;
         while (number > 0)
         {
            rem = number % 10;
            sum = sum + rem;
            number = number / 10;
         }
      Console.WriteLine("Sum of given {0} is {1}", temp, sum );
      Console.ReadLine();
      }
   }
}
```

Output



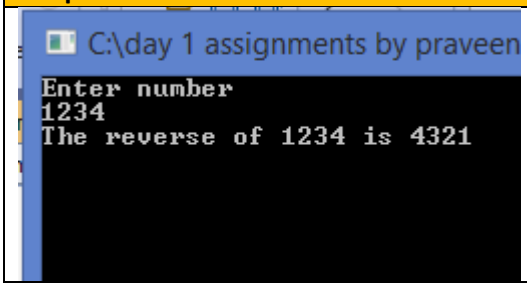
Program-16:

WACP to Find Reverse of a given Number

Code

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

namespace Find_Reverse_of_a_given_Number
{
   internal class Program
   {
      static void Main(string[] Args)
      {
         int n, temp, rem, rev = 0;
         Console.WriteLine("Enter number");
         n = Convert.ToInt32(Console.ReadLine());
         temp = n;
         while (n > 0)
         {
            rem = n % 10;
            rev = (rev * 10) + rem;
            n = n / 10;
         }
         Console.WriteLine("The reverse of {0} is {1}", temp, rev);
         Console.ReadLine();
      }
   }
}
```

Output



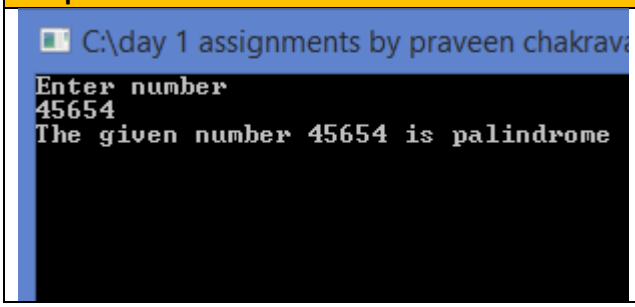
Program-17:

WACP to Check Palindrome Numbers

Code

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

namespace Check_Palindrome_Number
{
   internal class Program
   {
      static void Main(string[] Args)
      {
         int n, temp, rem, rev = 0;
         Console.WriteLine("Enter number");
         n = Convert.ToInt32(Console.ReadLine());
         temp = n;
         while (n > 0)
         {
            rem = n % 10;
            rev = (rev * 10) + rem;
            n = n / 10;
         }

         if (temp == rev)
            Console.WriteLine("The given number {0} is palindrome",temp);
         else
            Console.WriteLine("The given number{0} is not a palindrome", temp);
         Console.ReadLine();
      }
   }
}
```

Output



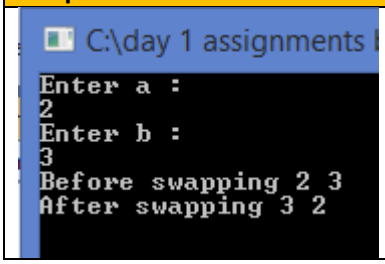
Program-18:

WACP to Swap Numbers using Third Variable

Code

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

namespace Swap_Numbers_using_Third_Variable
{
   internal class Program
   {
      static void Main(string[] Args)
      {
         int temp, a, b;
         Console.WriteLine("Enter a :");
         a = Convert.ToInt32(Console.ReadLine());

         Console.WriteLine("Enter b :");
         b = Convert.ToInt32(Console.ReadLine());

         Console.WriteLine("Before swapping {0} {1} ", a, b);
         temp = a;
         a = b;
         b = temp;
         Console.WriteLine("After swapping {0} {1} ", a, b);
         Console.ReadLine();
      }
   }
}
```

Output



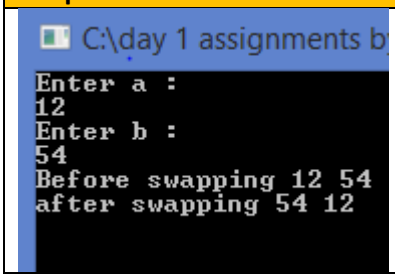
Program-19:

WACP to Swap Numbers without using Third Variable

Code

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

namespace Swap_Numbers_without_using_Third_Variable
{
   internal class Program
   {
      static void Main(string[] Args)
      {
         int a, b;
         Console.WriteLine("Enter a :");
         a = Convert.ToInt32(Console.ReadLine());
         Console.WriteLine("Enter b :");

         b = Convert.ToInt32(Console.ReadLine());
         Console.WriteLine("Before swapping {0} {1} ", a, b);
         a+= b;
         b= a-b;
         a-= b;
         Console.WriteLine("after swapping {0} {1}", a, b);
         Console.ReadLine();
      }
   }
}
```

Output



Program-20:

WACP to Print Stars(*) in Pattern

Code

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

namespace Print_Stars_in_Pattern
{
   internal class Program
   {
      static void Main(string[] Args)
      {
         int n,i,j;
         Console.WriteLine("Enter number of rows");
         n = Convert.ToInt32(Console.ReadLine());
         for (i = 1; i <= n; i++)
         {
            for (j = 1; j <= i; j++)
            {
               Console.Write("*");
            }
               Console.WriteLine();
            }
         Console.ReadLine();
      }
   }
}
```

Output