| **20 C# - Programmed Codes**  **By Vihar Dasari - NB Technologies** |
| --- |

| Project 1 |
| --- |
| **Write a C# Code to Print Multiplication Table for a given number** |
| Code |
| using System;  // Multiplication Table  namespace ctocsprgms  {  internal class Program  {  static void Main(string[] args)  {  //Variable Declaration Section  int input, i;  Console.WriteLine("\nCode Dev by Vihar Dasari\n\n\t\t ----- Multiplication Table By Vihar©----- \n\n Which Multiplication Table You Want me To Print : ");  //Reading Inputs Section  input = Convert.ToInt32(Console.ReadLine());  //Program Logic Section  Console.WriteLine("\n Displaying Using String Concatenation Method by Vihar © \n");  for (i = 1; i <= 10; i++)  {  //Printing Output using String Concatenation  Console.WriteLine(input + "x" + i + "=" + input \* i);  }  Console.WriteLine("\n Displaying Using String Formatting Method by Vihar © \n");  for (i = 1; i <= 10; i++)  {  //Printing OutPut using String Formatting  Console.WriteLine("{0} x {1} = {2}", input, i, input \* i);  }  Console.WriteLine("\nMultiplication Table By Vihar D©");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 2 |
| --- |
| **Write a C# Code to Print Factorial of a given number** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Read a number and print its factorial  namespace ctocsprgms  {  internal class Program  {  static void Main(string[] args)  {  //Variable Declaration Section  int input, i, fact = 1;  Console.WriteLine("\n----- Welcome To Find a Factorial of a Number -----");  //Reading Inputs Section  Console.Write("\n\nEnter any Number, To find its Factorial : ");  input = Convert.ToInt32(Console.ReadLine());  //Program Logic Section  for (i = 1; i <= input; i++)  fact = fact \* i;  Console.WriteLine("\nFactorial of {0} is {1}",input, fact);  Console.WriteLine("\n\n ----- Developed by VD© -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 3 |
| --- |
| **Write a C# Code to Print Sum of N Natural Numbers** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Read a number and print sum of n natural numbers upto n.  namespace ctocsprgms  {  internal class Program  {  static void Main(string[] args)  {  //Variable Declaration Section  int input, i, sum = 0;  Console.WriteLine("\n----- Welcome To Find a Sum of n Natural Number -----");  //Reading Inputs Section  Console.Write("\n\nEnter any Number, To find Sum of (n) Natural Numbers : ");  input = Convert.ToInt32(Console.ReadLine());  //Program Logic Section  for (i = 1; i <= input; i++)  sum = sum + i;  Console.WriteLine("\nSum of {0} natural numbers is {1}",input, sum);  Console.WriteLine("\n\n ----- Developed by VD© -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 4 |
| --- |
| **Write a C# Code to Print Factorial using Functions** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Read a number and print its Factorial Using Functions.  namespace ctocsprgms  {  internal class Program  {  public static void PrintOutput(int n)  {  Console.WriteLine("\nFactorial of {0} is {1}", n, Factorial(n));  }  public static int Factorial(int input)  {  int fact = 1, i;  for (i = 1; i <= input; i++)  fact = fact \* i;  return fact;  }  static void Main(string[] args)  {  //Variable Declaration Section  int input;  Console.WriteLine("\n----- Welcome To Find Factorial Using Functions -----");  //Reading Inputs Section  Console.Write("\n\nEnter any Number, To find It's Factorial : ");  input = Convert.ToInt32(Console.ReadLine());  //Program Logic Section    PrintOutput(input);  Console.WriteLine("\n\n ----- Developed by VD© -----");  Console.ReadLine();  }  }  } |
| Output |
|  |
| Project 5 |
| **Write a C# Code to Print Factorial using Recursion** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Read a number and print its Factorial Using Recursion.  namespace ctocsprgms  {  internal class Program  {  public static void PrintOutput(int n)  {  Console.WriteLine("\nFactorial of {0} is {1}", n, Factorial(n));  }  public static int Factorial(int input)  {  if (input == 0)  return 1;  else  return input \* Factorial(input - 1);  }  static void Main(string[] args)  {  //Variable Declaration Section  int input;  Console.WriteLine("\n----- Welcome To Find Factorial Using Recursion -----");  //Reading Inputs Section  Console.Write("\n\nEnter any Number, To find It's Factorial : ");  input = Convert.ToInt32(Console.ReadLine());  //Program Logic Section    PrintOutput(input);  Console.WriteLine("\n\n ----- Developed by VD© -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 6 |
| --- |
| **Write a C# Code to Print Factors of a given number** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Read a number from the user and print factors of a given number.  namespace ctocsprgms  {  internal class Program  {  static void Main(string[] args)  {  //Variable Declaration Section  int input, i;  Console.WriteLine("\n----- Welcome To Find Factors of the Given Number -----");  //Reading Inputs Section  Console.Write("\n\nEnter any Number, To find It's Factor : ");  input = Convert.ToInt32(Console.ReadLine());  Console.WriteLine("\nThe Factors of the Given Number are :\n");  //Program Logic Section  for (i = 1; i <= input; i++)  {  if (input % i == 0)  Console.WriteLine(i);  }  Console.WriteLine("\n\n ----- Developed by VD© -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 7 |
| --- |
| **Write a C# Code to Print POWER of a given number [a power b]** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Read a , b values and print [a power b] value.  namespace ctocsprgms  {  internal class Program  {  static void Main(string[] args)  {  //Variable Declaration Section  int a, b, result = 1, i;  Console.WriteLine("\n----- Welcome To Find [A Power B] -----");  //Reading Inputs Section  Console.Write("\n\nEnter any Number, To find Its Power : ");  a = Convert.ToInt32(Console.ReadLine());  Console.Write("\n\nEnter Power Value, for {0} : ", a);  b = Convert.ToInt32(Console.ReadLine());    //Program Logic Section  for (i = 1; i <= b; i++)  result = result \* a;  Console.WriteLine("\nThe Value of [{0} POWER {1}] is : {2}", a, b, result);  Console.WriteLine("\n\n ----- Developed by VD© -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 8 |
| --- |
| **Write a C# Code to Print Given number is Prime Number or Not** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Read a number and check, if it is a Prime Number or Not  namespace ctocsprgms  {  internal class Program  {  static void Main(string[] args)  {  //Variable Declaration Section  int input, i;  Console.WriteLine("\n----- Welcome To Prime Number Checking -----");  //Reading Inputs Section  Console.Write("\n\nEnter any Number, To find Whether it is a Prime Number or Not : ");  input = Convert.ToInt32(Console.ReadLine());    //Program Logic Section  for (i = 2; i < input; i++)  {  if (input % i == 0)  break;  }  //Printing Output Section  if (i == input)  Console.WriteLine("\nYes, {0} is a Prime Number", input);  else  Console.WriteLine("\nNo, {0} is Not a Prime Number", input);  Console.WriteLine("\n\n ----- Developed by VD© -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 9 |
| --- |
| **Write a C# Code to Check given Number is Prime Number Using Functions** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Read a number and check, if it is a Prime Number or Not using Functions  namespace ctocsprgms  {  internal class Program  {  public static bool IsPrimeNumber(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)  {  //Variable Declaration Section  int input;  Console.WriteLine("\n----- Welcome To Prime Number Checking -----");  //Reading Inputs Section  Console.Write("\n\nEnter any Number, To find Whether it is a Prime Number or Not : ");  input = Convert.ToInt32(Console.ReadLine());  //Calling Function & Printing Output Section  if (IsPrimeNumber(input))  Console.WriteLine("\nYes, {0} is a Prime Number", input);  else  Console.WriteLine("\nNo, {0} is Not a Prime Number", input);  Console.WriteLine("\n\n ----- Developed by VD© -----");  Console.ReadLine();  }  }  } |
| Output |
|  |
| Project 10 |
| **Write a C# Code to Print Prime Numbers in Given Range** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: Prime Numbers in a given range.  namespace ctocsprgms  {  internal class Program  {  public static bool IsPrimeNumber(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)  {  //Variable Declaration Section  int a, b, i;  Console.WriteLine("\n----- Welcome To Prime Number In A Given Range -----");  //Reading Inputs Section  Console.Write("\n\nEnter Starting Range, To find Prime Numbers : ");  a = Convert.ToInt32(Console.ReadLine());  Console.Write("\n\nEnter Ending Range, To find Prime Numbers : ");  b = Convert.ToInt32(Console.ReadLine());  for (i =a; i <=b; i++)  {  if (IsPrimeNumber(i))  Console.WriteLine(i);  }  Console.WriteLine("\n\n ----- Developed by VD© -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 11 |
| --- |
| **Write a C# Code to Print Fibonacci Series** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Read a Number (n) & Print n Fibonacci Sequence.  namespace ctocsprgms  {  internal class Program  {  static void Main(string[] args)  {  //Variable Declaration Section  int n, i,a = 0, b = 1, c;  Console.WriteLine("\n----- Welcome To Find Fibonacci Series -----");  //Reading Inputs Section  Console.Write("\n\nEnter Number of Terms to be Printed(n>2) : ");  n = Convert.ToInt32(Console.ReadLine());  Console.Write("\nFibonacci Series: 0 1");  for (i = 1; i <= n-2; i++)  {  c = a + b;  a = b;  b = c;  Console.Write(" {0}",c);  }  Console.WriteLine("\n\n ----- Developed by VD© -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 12 |
| --- |
| **Write a C# Code to Check given number is Armstrong Number** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Read a Number and Check if it is an ARMSTRONG Number or Not.  namespace ctocsprgms  {  internal class Program  {  static void Main(string[] args)  {  //Variable Declaration Section  int n, rem, m, result = 0;  Console.WriteLine("\n----- Welcome To ARMSTRONG Number Identifier -----");  //Reading Inputs Section  Console.Write("\n\nEnter any Number To Check, Armstrong Number or Not : ");  n = Convert.ToInt32(Console.ReadLine());  //Logic Section  m = n;  while (m > 0)  {  rem = m % 10;  m = m / 10;  result = result + rem \* rem \* rem;  }  //Printing Output Section  if (result == n)  Console.WriteLine("\nYes, {0} is an ARMSTRONG Number", n);  else  Console.WriteLine("\nNo, {0} is Not an ARMSTRONG Number", n);  Console.WriteLine("\n\n ----- Developed by VD© -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 13 |
| --- |
| **Write a C# Code to Check given number is Armstrong Number Using Functions** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Read a Number and Check if it is an ARMSTRONG Number or Not Using Function.  namespace ctocsprgms  {  internal class Program  {  public static bool IsArmstrong(int n)  {  int m, result = 0, rem;  m = n;  while (m > 0)  {  rem = m % 10;  m = m / 10;  result = result + rem \* rem \* rem;  }  //Printing Output Section  if (result == n)  return true;  else  return false;  }  static void Main(string[] args)  {  //Variable Declaration Section  int n;  Console.WriteLine("\n----- Welcome To ARMSTRONG Number Identifier -----");  //Reading Inputs Section  Console.Write("\n\nEnter any Number To Check, Armstrong Number or Not : ");  n = Convert.ToInt32(Console.ReadLine());  //Function Calling Section  if (IsArmstrong(n))  Console.WriteLine("\nYes, {0} is an ARMSTRONG Number", n);  else  Console.WriteLine("\nNo, {0} is Not an ARMSTRONG Number", n);  Console.WriteLine("\n\n ----- Developed by VD© -----");  Console.ReadLine();  }  }  } |
| Output |
|  |
| Project 14 |
| **Write a C# Code to Print Armstrong Numbers in given range** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: ARMSTRONG Numbers in a given Range.  namespace ctocsprgms  {  internal class Program  {  public static bool IsArmstrong(int n)  {  int m, result = 0, rem;  m = n;  while (m > 0)  {  rem = m % 10;  m = m / 10;  result = result + rem \* rem \* rem;  }  //Printing Output Section  if (result == n)  return true;  else  return false;  }  static void Main(string[] args)  {  //Variable Declaration Section  int a, b, i;  Console.WriteLine("\n----- Welcome To ARMSTRONG Number Identifier -----");  //Reading Inputs Section  Console.Write("\n\nEnter Starting Range of Numbers To Check, Armstrong Number : ");  a = Convert.ToInt32(Console.ReadLine());  Console.Write("\n\nEnter Ending Range of Numbers To Check, Armstrong Number : ");  b = Convert.ToInt32(Console.ReadLine());  Console.Write("\n The ArmStrong Numbers in the Given Range {0} to {1} are :",a,b);  for (i = a; i <= b; i++)  {  if (IsArmstrong(i))  Console.Write(" {0}",i);  }  Console.WriteLine("\n\n ----- Developed by VD© -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 15 |
| --- |
| **Write a C# Code to Print Sum of Digits in a given number** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Read a number from the user and Print Sum of Digits.  namespace ctocsprgms  {  internal class Program  {  static void Main(string[] args)  {  //Variable Declaration Section  int n, m, rem, result = 0;  Console.WriteLine("\n----- Welcome To SUM Of Digits In a Given Number -----");  //Reading Inputs Section  Console.Write("\n\nEnter a Number to Find Its Sum of Digits : ");  n = Convert.ToInt32(Console.ReadLine());  //Logic Section  m = n;  while (m > 0)  {  rem = m % 10;  m = m / 10;  result = result + rem;  }  Console.Write("\nSum of Digits of {0} is {1}",n, result);    Console.WriteLine("\n\n ----- Developed by VD © -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 16 |
| --- |
| **Write a C# Code to Print Reverse of a Given Number** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Read a number from the user and Print Reversed format of it.  namespace ctocsprgms  {  internal class Program  {  static void Main(string[] args)  {  //Variable Declaration Section  int n, rev = 0, rem, m;  Console.WriteLine("\n----- Welcome To Reversing of a Given Number -----");  //Reading Inputs Section  Console.Write("\n\nEnter any Number to Reverse It : ");  n = Convert.ToInt32(Console.ReadLine());  //Logic Section  m = n;  while (m > 0)  {  rem = m % 10;  m = m / 10;  rev = rev \* 10 + rem;  }  Console.Write("\nReversing of {0} is {1}",n , rev);    Console.WriteLine("\n\n ----- Developed by VD © -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 17 |
| --- |
| **Write a C# Code to Print given number is Palindrome Number or Not** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Read and Check If it is Palindrome Number or Not.  namespace ctocsprgms  {  internal class Program  {  static void Main(string[] args)  {  //Variable Declaration Section  int n, rev = 0, rem, m;  Console.WriteLine("\n----- Welcome To Palindrome Numbers -----");  //Reading Inputs Section  Console.Write("\n\nEnter any Number to Check, If It is a Palindrome ? : ");  n = Convert.ToInt32(Console.ReadLine());  //Logic Section  m = n;  while (m > 0)  {  rem = m % 10;  m = m / 10;  rev = rev \* 10 + rem;  }  if (n == rev)  Console.WriteLine("Yes, {0} Is a Palindrome Number", n);  else  Console.WriteLine("No, {0} is Not a Palindrome Number", n);    Console.WriteLine("\n\n ----- Developed by VD © -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 18 |
| --- |
| **Write a C# Code to Swap Numbers using Third Variable** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Swap data of Two Variables By Using Third Variable.  namespace ctocsprgms  {  internal class Program  {  static void Main(string[] args)  {  //Variable Declaration Section  int a = 10, b = 20, temp;  Console.WriteLine("\n----- Welcome To Swapping Of Two Variables Using Third Variable -----");  Console.WriteLine("\nBefore Swap : ");  Console.WriteLine("\t a = {0} , b = {1}",a ,b);  //Logic Section  temp = a;  a = b;  b = temp;  //Printing Output Section  Console.WriteLine("\nAfter Swap : ");  Console.WriteLine("\t a = {0} , b = {1}", a, b);  Console.WriteLine("\n\n ----- Developed by VD © -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 19 |
| --- |
| **Write a C# Code to Swap Numbers without using Third Variable** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Swap data of Two Variables Without Using Third Variable.  namespace ctocsprgms  {  internal class Program  {  static void Main(string[] args)  {  //Variable Declaration Section  int a = 20, b = 10;  Console.WriteLine("\n----- Welcome To Swapping Of Two Variables Without Third Variable -----");  Console.WriteLine("\nBefore Swap : ");  Console.WriteLine("\t a = {0} , b = {1}",a ,b);  //Logic Section  a = a + b;  b = a - b;  a = a - b;  //Printing Output Section  Console.WriteLine("\nAfter Swap : ");  Console.WriteLine("\t a = {0} , b = {1}", a, b);  Console.WriteLine("\n\n ----- Developed by VD © -----");  Console.ReadLine();  }  }  } |
| Output |
|  |

| Project 20 |
| --- |
| **Write a C# Code to Print Stars(\*) in a - Right Angled Triangle Pattern** |
| Code |
| using System;  // DEV-Admin: Vihar D© (VD)  // Program: To Print Stars (\*) in a Right Angled Triangle.  namespace ctocsprgms  {  internal class Program  {  static void Main(string[] args)  {  //Variable Declaration Section  int n, i, j;  Console.WriteLine("\n----- Welcome To Printing Right Angle Triangle Using Stars -----");  Console.Write("\n Enter no. of rows to be Printed : ");  n = Convert.ToInt32(Console.ReadLine());  //Logic Section  for (i = 1; i <= n; i++)  {  for (j = 1; j <= i; j++)  {  Console.Write("\* ");  }  Console.Write("\n");  }  Console.WriteLine("\n\n ----- Developed by VD © -----");  Console.ReadLine();  }  }  } |
| Output |
|  |