**20 C# Programs Assignment**

**By**

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| Program -1 |
| WACP To Print Multiplication Table of a given number |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D2P8MultiplicationTableUsingWhile  {  internal class Program  {  static void Main(string[] args)  {  int input, i = 1;  Console.WriteLine("Enter a Number");  input = Convert.ToInt32(Console.ReadLine());  while(i <= 10)  {  Console.WriteLine(input + "\*" + i + "=" + input \* i);  i++;  }  Console.ReadLine();  }  }  } |
| Output: |
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| Program -2 |
| WACP To Print Factorial of a given number |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D2p4FactorialofaNumber  {  internal class Program  {  static void Main(string[] args)  {  int input, product = 1, i;  Console.WriteLine("Enter a Number...");  input = Convert.ToInt32(Console.ReadLine());  for(i = 1; i <= input; i++)  {  product = product \* i;  }  Console.WriteLine(product);  Console.ReadLine();  }  }  } |
| Output: |
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| Program -3 |
| WACP To Print Sum Of N Natural numbers |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D2P3SumofNnaturalNumbers  {  internal class Program  {  static void Main(string[] args)  {  int input, Sum = 0, i;  Console.WriteLine("Enter a Number..");  input = Convert.ToInt32(Console.ReadLine());  for(i = 1; i <= input; i++)  {  Sum = Sum + i;  }  Console.WriteLine(Sum);  Console.ReadLine();  }  }  } |
| Output: |
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| Program -4 |
| WACP To Print Factorial of a given number using Function |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P1Factorialofanumberusingfunction  {  internal class Program  {  public static void PrintOutput(int n)  {  Console.WriteLine("Factorial of {0} is {1}", n, Factorial(n));  }  public static int Factorial(int n)  {  int fact = 1;  for(int i =1; i <= n; i++)  {  fact = fact \* i;    }  return fact;  }    static void Main(string[] args)  {  int n = 4;  PrintOutput(n);  Console.ReadLine();  }  }  } |
| Output: |
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| Program -5 |
| WACP To Print Factorial of a given number using Recursion |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P2FactorialnumberusingRecursion  {  internal class Program  {  public static void PrintOutput(int n)  {  Console.WriteLine("Factorial of {0} is {1}", n, Factorial(n));  }  public static int Factorial(int n)  {  if(n == 0)  {  return 1;  }  else  {  return n \* Factorial(n-1);  }  }  static void Main(string[] args)  {  int n = 9;  PrintOutput(n);  Console.ReadLine();  }  }  } |
| Output: |
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| Program -6 |
| WACP To Print Factors of a Given Number |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D2p5FactorsofaGivenNumber  {  internal class Program  {  static void Main(string[] args)  {  int input, i;  Console.WriteLine("Enter a Number...");  input = Convert.ToInt32(Console.ReadLine());  for(i = 1; i <= input; i++)  {  if(input % i == 0)  {  Console.WriteLine(i);  }  }  Console.ReadLine();  }  }  } |
| Output: |
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| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P3apowerb  {  internal class Program  {  public static int Power(int a, int b)  {  int pow = 1;  for(int i = 1; i <= b; i++)  {  pow \*= a;  }  return pow;  }    static void Main(String[] args)  {  int a = 4, b = 3;  Console.WriteLine("{0} power {1} = {2}", a, b, Power(a, b));  Console.ReadLine();  }  }  } |
| Output: |
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| Program -7 |
| WACP To Print A Power B |
| Code: |

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| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P4PrimenumberorNot  {  internal class Program  {  static void Main(string[] args)  {  int input, i;  Console.WriteLine("Enter a Number");  input = Convert.ToInt32(Console.ReadLine());  for(i = 2; i < input; i++)  {  if (input % i == 0)  break;  }  if(i == input)  {  Console.WriteLine("{0} is Prime Number",input);  }  else  {  Console.WriteLine("{0} is Not a Prime Number",input);  }  Console.ReadLine();  }  }  } |
| Output: |
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| Program -8 |
| WACP To Check Prime Number or Not |
| Code: |

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| Program -9 |
| WACP To Prime Number Check Using Function |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P5PrimeNumberCheckUsingFunction  {  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)  {  int input, i;  Console.WriteLine("Enter a Number");  input = Convert.ToInt32(Console.ReadLine());  if(IsPrimeNumber(input))  {  Console.WriteLine("{0} is Prime Number", input);  }  else  {  Console.WriteLine("{0} is Not a Prime Number", input);  }  Console.ReadLine();  }  }  } |
| Output: |
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| Program -10 |
| WACP To Print Prime Numbers In Range |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P6PrimeNumberinRange  {  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)  {  int a,b, i;  Console.WriteLine("Enter A Value");  a = Convert.ToInt32(Console.ReadLine());  Console.WriteLine("Enter B Value");  b = Convert.ToInt32(Console.ReadLine());  for(i = a; i <= b; i++)  {  if(IsPrimeNumber(i))  {  Console.WriteLine(i);  }  }  Console.ReadLine();  }  }  } |
| Output: |
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| Program -11 |
| WACP To Print Fibonacci Series |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P7Fibanocciseries  {  internal class Program  {  static void Main(string[] args)  {  int n, i, a = 0, b = 1, c;  Console.WriteLine("Enter no.of terms to be printed n > 2:");  n = Convert.ToInt32(Console.ReadLine());  for(i = 1; i <= n-2; i++)  {  c = a + b;  a = b;  b = c;  Console.WriteLine(c);  }  Console.ReadLine();  }  }  } |
| Output: |
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| Program -12 |
| WACP To Print Armstrong Number |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P8ArmstrongNumber  {  internal class Program  {  static void Main(string[] args)  {  int n, rem, m, result = 0;  Console.WriteLine("Enter any Number");  n = Convert.ToInt32(Console.ReadLine());  m = n;  while(m > 0)  {  rem = m % 10;  m = m/ 10;  result = result + rem \* rem \* rem;  }  if(result == n)  {  Console.WriteLine("{0} is Armstrong Number",n);  }  else  {  Console.WriteLine("{0} is Not Armstrong Number", n);  }  Console.ReadLine();  }  }  } |
| Output: |
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| Program -13 |
| WACP To Print Armstrong Number using Function |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P9ArmstrongNumberUsingFunction  {  internal class Program  {    public static bool IsArmstrong(int n)  {  int m, rem, result = 0;  m = n;  while (m > 0)  {  rem = m % 10;  m = m / 10;  result = result + rem \* rem \* rem;  }  if (result == n)  {  return true;  }  else  {  return false;  }  }  static void Main(string[] args)  {  int n;  Console.WriteLine("Enter any Number");  n = Convert.ToInt32(Console.ReadLine());  if (IsArmstrong(n))  {  Console.WriteLine("{0} is Armstrong Number", n);  }  else  {  Console.WriteLine("{0} is Not Armstrong Number", n);  }  Console.ReadLine();  }  }  } |
| Output: |
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| Program -14 |
| WACP To Print Armstrong Number in Range |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P10ArmstrongnumberinRange  {  internal class Program  {  public static bool IsArmstrong(int n)  {  int m, rem, result = 0;  m = n;  while (m > 0)  {  rem = m % 10;  m = m / 10;  result = result + rem \* rem \* rem;  }  if (result == n)  {  return true;  }  else  {  return false;  }  }  static void Main(string[] args)  {  int a, b, i;  Console.WriteLine("Enter first Number");  a = Convert.ToInt32(Console.ReadLine());  Console.WriteLine("Enter second Number");  b = Convert.ToInt32(Console.ReadLine());  for(i = a; i <= b; i++)  {  if(IsArmstrong(i))  {  Console.WriteLine(i);  }  }  Console.ReadLine();  }    }  } |
| Output: |
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| Program -15 |
| WACP To Print Sum Of Digits Of Given Number |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P11SumOfDigitsofaGivenNumber  {  internal class Program  {  static void Main(string[] args)  {  int n, m, i,rem, result = 0;  Console.WriteLine("Enter any Number");  n = Convert.ToInt32(Console.ReadLine());  m = n;  while(m > 0)  {  rem = m % 10;  m = m / 10;  result = result + rem;    }  Console.WriteLine("Sum of digits of {0} is {1}", n, result);  Console.ReadLine();  }  }  } |
| Output: |
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| Program -16 |
| WACP To Print Reverse of a given number |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P12ReverseofaGivenNumber  {  internal class Program  {  static void Main(string[] args)  {  int n, rev = 0, rem, m;  Console.WriteLine("Enter any Number");  n = Convert.ToInt32(Console.ReadLine());  m = n;  while (m > 0)  {  rem = m % 10;  m = m / 10;  rev = rev \* 10 + rem;  }  Console.WriteLine("Reverse of {0} is {1}", n, rev);  Console.ReadLine();  }  }  } |
| Output: |
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| Program -17 |
| WACP To Print Palindrome Number |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P13PalindromeNumber  {  internal class Program  {  static void Main(string[] args)  {  int n, m, rem, rev = 0;  Console.WriteLine("Enter any Number");  n = Convert.ToInt32(Console.ReadLine());  m = n;  while (m > 0)  {  rem = m % 10;  m = m / 10;  rev = rev \* 10 + rem;  }  if (n == rev)  {  Console.WriteLine("{0} is Palindrome", n);  }  else  {  Console.WriteLine("{0} is Not a Palindrome", n);  }  Console.ReadLine();  }  }  } |
| Output: |
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| Program -18 |
| WACP To Print Swap Numbers using Third variable |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P15SwapingNumbersUsingThirdVariable  {  internal class Program  {  static void Main(string[] args)  {  int a = 5, b = 8,t;  Console.WriteLine("Before Swap");  Console.WriteLine("a = {0}, b = {1}",a,b);  t = a;  a = b;  b = t;  Console.WriteLine("After Swap");  Console.WriteLine("a = {0}, b = {1} ", a, b);  Console.ReadLine();  }  }  } |
| Output: |
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| Program -19 |
| WACP To Print Swap Numbers Without Using Third Variable |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P16Swapnumberswithoutusingthirdvariable  {  internal class Program  {  static void Main(string[] args)  {  int a = 5, b = 8;  Console.WriteLine("Before Swap");  Console.WriteLine("a = {0}, b = {1}", a, b);  a = a + b;  b = a - b;  a = a - b;  Console.WriteLine("After Swap");  Console.WriteLine("a = {0}, b = {1} ", a, b);  Console.ReadLine();  }  }  } |
| Output: |
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| Program -20 |
| WACP To Print Stars in right angle triangle pattern |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace D4P17PatternProgram  {  internal class Program  {  static void Main(string[] args)  {  int n, i,j;  Console.WriteLine("Enter no.of rows to be printed:");  n = Convert.ToInt32(Console.ReadLine());  for(i = 1; i <= n; i++)  {  for(j = 1; j <= i; j++)  {  Console.WriteLine("\* ");  }  Console.WriteLine("/n");  }  Console.ReadLine();  }  }  } |
| Output: |
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