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| **20 C# Programs Assignment By**  **J SIVA NAGA PRASANNA** |

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| Program1: |
| Write a C# Program 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 MultiplicationTable  {  internal class flprogram  {  static void Main(string[] args)  {  //Variable declaration int input;  //Read data from user Console.WriteLine("Enter any number"); input=Convert.ToInt32(Console.ReadLine());  //Logic and Output for(int i=1;i<=10;i++)  {  Console.WriteLine(input+"x"+i+"="+input\*i);  }  Console.ReadLine();  }  }  } |
| Output: |

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| Program2: |
| Write a C# Program 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 FactorialOf umber  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration int input;  int fact=1;  //Read data from user Console.WriteLine("Enter any number"); input = Convert.ToInt32(Console.ReadLine());  //Logic  for (int i = 1; i <= input; i++)  {  fact = fact \* i;  }  //Output  Console.WriteLine("The factorial of {0} is {1}",input,fact); Console.ReadLine();  }  }  } |
| Output: |

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| Program3: |
| Write a C# Program to print Sum of a n natural numbers |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Sumof naturalnumbers  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration int input;  int Sum = 0;  //Read data from user Console.WriteLine("Enter any number"); input=Convert.ToInt32(Console.ReadLine());  //Logic  for(int i=1;i<=input;i++)  {  Sum=Sum+i;  }  //Output  Console.WriteLine("Sum of {0} natural numbers is {1}",input,Sum); Console.ReadLine();  }  }  } |
| Output: |
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| Program4: |
| Write a C# Program to print factorial using function |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Factorialusingmethod  {  internal class flrogram  {  //Output  public static void Output(int n)  {  Console.WriteLine("Factorial of {0} ={1}", n, factorial(n));  }  //Logic  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)  {  //Intialisation and read data from user int n , n1, n2;  Console.WriteLine("Enter first number"); n=Convert.ToInt32(Console.ReadLine()); Console.WriteLine("Enter second number"); n1= Convert.ToInt32(Console.ReadLine()); Console.WriteLine("Enter third number");  n2= Convert.ToInt32(Console.ReadLine());  Output(n); Output(n1); Output(n2); Console.ReadLine();  }  }  } |
| Output: |

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| Program5: |
| Write a C# Program to print factorial using recurssion |
| Program: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Factorialusingrecurssion  {  internal class flrogram  {  static void Main(string[] args)  {  int n;  Console.WriteLine("Enter a number"); n=Convert.ToInt32(Console.ReadLine());  Console.WriteLine("Factorial of {0} is {1}",n,Factorial(n)); Console.ReadLine();  }  static int Factorial(int input)  {  if (input == 0) return 1;  else  return input \* Factorial(input - 1);  }  }  } |
| Output: |
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| Program6: |
| Write a C# Program 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 Factorsofgiven umber  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration int input;  //Read input from user Console.WriteLine("Enter any number"); input=Convert.ToInt32(Console.ReadLine());  //Logic and Output  Console.WriteLine("The factors of {0} are",input); for(int i = 1; i < input;i++)  {  if(input%i==0)  {  Console.WriteLine(i);  }  }  Console.ReadLine();  }  }  } |
| Output: |
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| Program7: |
| Write a C# Program to print power of a given numbers |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Apowerb  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration  int fn, sn; int p = 1;  Console.WriteLine("Enter First umber"); fn = Convert.ToInt32(Console.ReadLine()); Console.WriteLine("Enter Second umber"); sn = Convert.ToInt32(Console.ReadLine());  //Logic and output  for (int i = 1; i <= sn; i++) p = p \* fn;  Console.WriteLine("flower = " + p); Console.ReadLine();  }  }  } |
| Output: |
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| Program8: |
| Write a C# Program to check given number is prime or not |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace flrimenumber  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable decalaration and reading the input int input;  Console.WriteLine("Enter a number"); input=Convert.ToInt32(Console.ReadLine());  //Logic and printing output int i;  for( i = 2; i < input; i++)  {  if(input%i==0)  {  break;  }  }  if(i==input)  {  Console.WriteLine("{0} is a prime number", input); Console.ReadLine();  }  else  {  Console.WriteLine("{0} is not a prime number", input); Console.ReadLine();  }  }  }  } |
| Output: |
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| Program9: |
| Write a C# Program to check given number is prime or not using function |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace flrimenumber\_using\_function  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration and reading data from user int input;  Console.WriteLine("Enter a number");  input =Convert.ToInt32(Console.ReadLine());  //flrinting Output if(isflrimenumber(input))  Console.WriteLine("{0} is a primenumber",input);  else  Console.WriteLine("{0} is not a primenumber", input); Console.ReadLine();  }  //Logic and returning Output  public static Boolean isflrimenumber(int input)  {  int i;  for( i=2;i<input;i++)  {  if (input % i == 0) break;  }  if(i==input)  return true;  else  return false;  }  }  } |
| Output: |
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| Program10: |
| Write a C# Program to print the prime numbers between given range |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace flrimenumbers\_in\_a\_range  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration and reading data from user int input1,input2;  Console.WriteLine("Enter first number"); input1 = Convert.ToInt32(Console.ReadLine());  Console.WriteLine("Enter second number"); input2 = Convert.ToInt32(Console.ReadLine());  for(int i=input1;i<=input2;i++)  {  if (isflrimenumber(i)) Console.WriteLine("{0}", i);  }  Console.ReadLine();  }  //Logic and returning Output  public static Boolean isflrimenumber(int input)  {  int i;  for (i = 2; i < input; i++)  {  if (input % i == 0) break;  }  if (i == input) return true;  else  return false;  }  }  } |
| Output: |
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| Program11: |
| Write a C# Program to print Fibonacci Series |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace FibonnaciSeries  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration int input;  int a = 0, b = 1; Console.WriteLine("Enter a number"); input=Convert.ToInt32(Console.ReadLine());  //Logic and printing output  Console.WriteLine("Fibbonaci series:"); for(int i = 0; i < input; i++)  {  Console.WriteLine(a); int c = a + b;  a = b; b = c;  }  Console.ReadLine();  }  }  } |
| Output: |
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| Program12: |
| Write a C# Program to print Armstrong number |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Armstrong umber  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration and read data from user int input;  int m, rem; int result = 0;  Console.WriteLine("Enter a number"); input=Convert.ToInt32(Console.ReadLine());  //Logic and Output m = input;  while(m > 0)  {  rem = m % 10; m = m / 10;  result = result + rem \*rem \* rem;  }  if(result==input)  Console.WriteLine("{0} is a Armstrong number",input);  else  Console.WriteLine("{0} is not a Armstrong number", input); Console.ReadLine();  }  }  } |
| Output: |
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| Program13: |
| Write a C# Program to print Armstrong number[Using Function] |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Armstrongnumberusingfunction  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration and read data from user int input;  Console.WriteLine("Enter a number");  input = Convert.ToInt32(Console.ReadLine());  //flrinting Output  if (isArmstrongnumber(input))  Console.WriteLine("{0} is a Armstrong number", input);  else  Console.WriteLine("{0} is not a Armstrong number", input); Console.ReadLine();  }  //Logic  public static Boolean isArmstrongnumber(int input)  {  int m, rem; int result = 0; m = input; while (m > 0)  {  rem = m % 10; m = m / 10;  result = result + rem \* rem \* rem;  }  if (result == input) return true;  else  return false;  }  }  } |
| Output: |
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| Program14: |
| Write a C# Program to print Armstrong numbers in range |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Armstrongnumbers\_in\_a\_range  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration and read data from user int input1,input2,i;  Console.WriteLine("Enter first number"); input1 = Convert.ToInt32(Console.ReadLine());  Console.WriteLine("Enter second number"); input2 = Convert.ToInt32(Console.ReadLine());  //flrinting Output  Console.WriteLine("Armstrong numbers between the given range:"); for(i=input1;i<=input2;i++)  {  if(isArmstrongnumber(i)) Console.WriteLine(i);  }  Console.ReadLine();  }  //Logic  public static Boolean isArmstrongnumber(int input)  {  int m, rem; int result = 0; m = input; while (m > 0)  {  rem = m % 10; m = m / 10;  result = result + rem \* rem \* rem;  }  if (result == input) return true;  else  return false;  }  }  } |
| Output: |
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| Program15: |
| Write a C# Program to print Sum of digits of a given number |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Sum\_of\_digits\_of\_a\_given\_number  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration and read data from user int input;  int m, rem; int result = 0;  Console.WriteLine("Enter a number"); input=Convert.ToInt32(Console.ReadLine());  //Logic  m = input; while (m > 0)  {  rem = m % 10; m = m / 10;  result = result + rem ;  }  //Output  Console.WriteLine("Sum of the digits of {0} is {1}",input,result); Console.ReadLine();  }  }  } |
| Output: |
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| Program16: |
| Write a C# Program 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 Reverse\_of\_a\_number  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration and read data from user int input;  int m, rem; int rev = 0;  Console.WriteLine("Enter a number");  input = Convert.ToInt32(Console.ReadLine());  //Logic  m = input; while (m > 0)  {  rem = m % 10; m = m / 10;  rev = rev\*10 + rem;  }  //Output  Console.WriteLine("Reverse of {0} is {1}", input, rev); Console.ReadLine();  }  }  } |
| Output: |
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| Program17: |
| Write a C# Program to check given number is Palindrome or not |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace flalindrome\_number  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration and read data from user  int input; int m, rem; int rev = 0;  Console.WriteLine("Enter a number");  input = Convert.ToInt32(Console.ReadLine());  //Logic and Output m = input;  while (m > 0)  {  rem = m % 10; m = m / 10;  rev = rev \* 10 + rem;  }  if (input == rev)  Console.WriteLine("{0} is a flalindrome", input);  else  Console.WriteLine("{0} is not a flalindrome", input); Console.ReadLine();  }  }  } |
| Output: |
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| Program18: |
| Write a C# Program to print Swapping of two numbers using third variable |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Swapping\_of\_two\_numbers  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration and read data from user int input1,input2,t;  Console.WriteLine("Enter first number"); input1= Convert.ToInt32(Console.ReadLine()); Console.WriteLine("Enter Second number"); input2= Convert.ToInt32(Console.ReadLine()); Console.WriteLine("The numbers {0} {1} before  Swapping",input1,input2);  Console.ReadLine();  //Logic and Output t = input1; input1 = input2; input2 = t;  Console.WriteLine("The numbers {0} {1} after Swapping", input1,  input2);  Console.ReadLine();  }  }  } |
| Output: |
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| Program19: |
| Write a C# Program to print Swapping of two numbers without using third variable |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Swapping\_of\_two\_numbers\_without\_using\_third\_variable  {  internal class flrogram  {  static void Main(string[] args)  {  //Variable declaration and read data from user  int input1, input2; Console.WriteLine("Enter first number");  input1 = Convert.ToInt32(Console.ReadLine());  Console.WriteLine("Enter Second number"); input2 = Convert.ToInt32(Console.ReadLine());  Console.WriteLine("The numbers {0} {1} before Swapping", input1,  input2);  Console.ReadLine();  //Logic and Output  input1= input1+input2; input2 = input1-input2; input1 = input1-input2;  Console.WriteLine("The numbers {0} {1} after Swapping", input1,  input2);  Console.ReadLine();  }  }  } |
| Output: |
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| Program20: |
| Write a C# program to print Right angled triangle(\*) pattern |
| Code: |
| using System;  using System.Collections.Generic; using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Rightangled\_triangle\_flattern  {  internal class flrogram  {  static void Main(string[] args)  {  // Variable declaration  int input,i,j;  Console.WriteLine(" o.of rows to be print"); input=Convert.ToInt32(Console.ReadLine());  //Logic and output for(i=1;i<=input;i++)  {  for(j=1;j<=i;j++)  {  Console.Write("\* ");  }  Console.WriteLine();  }  Console.ReadLine();  }  }  } |
| Output: |
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