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| 20 C# Programs Assignments  BY  Nanam Vaishnavi  27 Jan 2022 |

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| Program : 1 |
| 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 multiplication\_0\_\_fromat  {  internal class Program  {  static void Main(string[] args)  {  int i, v;  Console.WriteLine("Enter number: ");  v = Convert.ToInt32(Console.ReadLine());  for (i = 1; i <= 10; i++)  {  Console.WriteLine("{0}\*{1}={2}", v, i, v \* i);  }  Console.ReadLine();  }  }  } |
| **OUTPUT:** |

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| Program : 2 |
| 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 Factorial\_1  {  internal class Program  {  static void Main(string[] args)  {  int i, num, fact = 1;  Console.WriteLine("Enter num :");  num = Convert.ToInt32(Console.ReadLine());    for(i =1;i<=num;i++)  {  fact = fact\*i;  }  Console.WriteLine("Factorial of " +num+ " is: " + fact);  Console.ReadLine();  }  }  } |
| **OUTPUT:** |

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| Program : 3 |
| **Write a C# program to find 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 n\_natural\_numbers\_day3  {  internal class Program  {  static void Main(string[] args)  {  int j, n, sum =0;  Console.WriteLine("Enter n number");    n = Convert.ToInt32(Console.ReadLine());  for (j = 1; j <=n; j++)    sum+=j;    Console.WriteLine("\nSum of N Numbers : " + sum);  Console.ReadLine();      }  }  } |
| **OUTPUT :** |

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| Program : 4 |
| 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 Factorialusingrecurssion  {  internal class Program  {  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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| Program : 5 |
| 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 Factorialusingrecurssion  {  internal class Program  {  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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| Program : 6 |
| 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 Factors  {  internal class Program  {  static void Main(string[] args)  {  int i, n;  Console.WriteLine("Enter number");  n = Convert.ToInt32(Console.ReadLine());  for (i = 1; i <= n;i++)  {  if(n%i==0)  Console.WriteLine( i);  }  Console.ReadLine();  }  }  } |
| **OUTPUT** |

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| Program : 7 |
| Write a C# Program to Print POWER of Given numbers [a power b] |
| CODE : |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace A\_power\_B  {  internal class Program  {  public static int Power(int a, int b)  {  int p = 1;  for(int i =1;i<b;i++)  p \*= a;  return p;  }  static void Main(string[] args)  {  int a1 = 5; int b1 = 4 , a2 = 2, b2 = 6 , a3 = 3, b3 = 5;  Console.WriteLine("{0} power {1} = {2}", a1, b1, Power(a1, b1));  Console.WriteLine("{0} power {1} = {2}", a2, b2, Power(a2, b2));  Console.WriteLine("{0} power {1} = {2}", a2, b2, Power(a3, b3));  Console.ReadLine();  }  }  } |
| **OUTPUT:** |

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| Program : 8 |
| Write a C# program to find PRIME NUMBER or Not |
| CODE : |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Prime\_or\_not  {  internal class Program  {  static void Main(string[] args)  {  int i, v, count = 0;  Console.WriteLine("Enter any number: ");  v = Convert.ToInt32(Console.ReadLine());  for(i=1;i<=v;i++)  {  if (v % i == 0)  count++;  }  if (count == 2)  Console.WriteLine("v is a PRIME number", v);  else  Console.WriteLine("v is NOT a PRIME Number", v);  Console.ReadLine();  }  }  } |
| **OUTPUT:** |

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| Program : 9 |
| **Write a C# program to find prime number [Using Function]** |
| CODE : |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Prime\_using\_Function  {  internal class Program  {  public static bool Prime(int num)  {  for(int i=2;i<num;i++)  if(num%i==0)  return true;  return false;  }  public static void Main(string[] args)  {  Console.WriteLine("Enter any Number :");  int p = Convert.ToInt32(Console.ReadLine());  if (Prime(p))  Console.WriteLine("{0} is NOT PRIME.", p);  else  Console.WriteLine("{0} is PRIME.", p);  Console.ReadLine();  }  }    } |
| **OUTPUT :** |

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| Program : 10 |
| Write a C# program to find PRIME NUMBERS in RANGE |
| CODE |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Primenumbers\_in\_a\_range  {  internal class Program  {  static void Main(string[] args)  {  //Variable declaration and reading data from user  int i1, i2;  Console.WriteLine("Enter first number");  i1 = Convert.ToInt32(Console.ReadLine());  Console.WriteLine("Enter second number");  i2 = Convert.ToInt32(Console.ReadLine());  for (int i = i1; i <= i2; i++)  {  if (isPrimenumber(i))  Console.WriteLine("{0}", i);  }  Console.ReadLine();  }  //Logic and returning Output  public static Boolean isPrimenumber(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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| Program : 11 |
| **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 Fibonacci\_series  {  internal class Program  {  static void Main(string[] args)  {  int input;  int v = 0, p = 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(v);  int c = v + p;  v = p;  p = c;  }  Console.ReadLine();  }  }  } |
| **OUTPUT** |

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| Program :12 |
| **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\_number  {  internal class Program  {  static void Main(string[] args)  {  int input;  int s, arm;  int result = 0;  Console.WriteLine("Enter a number");  input = Convert.ToInt32(Console.ReadLine());  //Logic and Output  s = input;  while (s > 0)  {  arm = s % 10;  s = s / 10;  result = result + arm \* arm \* arm;  }  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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| Program : 13 |
| **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 Armstrong\_number  {  internal class Program  {  static void Main(string[] args)  {  int input;  Console.WriteLine("Enter a number");  input = Convert.ToInt32(Console.ReadLine());  //Printing 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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| Program : 14 |
| **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 Armstrong\_number  {  internal class Program  {  static void Main(string[] args)  {  int input1, input2, i;  Console.WriteLine("Enter first number");  input1 = Convert.ToInt32(Console.ReadLine());  Console.WriteLine("Enter second number");  input2 = Convert.ToInt32(Console.ReadLine());  //Printing 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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| Program : 15 |
| **Write a C# program to find 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  {  internal class Program  {  static void Main(string[] args)  {  int input;  int d, sum;  int res = 0;  Console.WriteLine("Enter a number");  input = Convert.ToInt32(Console.ReadLine());  //Logic  d = input;  while (d > 0)  {  sum = d % 10;  d = d / 10;  res = res + sum;  }  //Output  Console.WriteLine("Sum of the digits of {0} is {1}", input, res);  Console.ReadLine();  }  }  } |
| **OUTPUT :** |

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| Program : 16 |
| **Write to 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\_number  {  internal class Program  {  static void Main(string[] args)  {  int input;  int r, sum;  int rev = 0;  Console.WriteLine("Enter a number");  input = Convert.ToInt32(Console.ReadLine());  //Logic  r = input;  while (r > 0)  {  sum = r % 10;  r = r / 10;  rev = rev \* 10 + sum;  }  //Output  Console.WriteLine("Reverse of {0} is {1}", input, rev);  Console.ReadLine();  }  }  } |
| **OUTPUT** |

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| Program : 17 |
| **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 Palindrome\_or\_Not  {  internal class Program  {  static void Main(string[] args)  {  //Variable declaration and read data from user  int k;  int p, palin;  int rev = 0;  Console.WriteLine("Enter a number");  k = Convert.ToInt32(Console.ReadLine());  //Logic and Output  p = k;  while (p > 0)  {  palin = p % 10;  p = p / 10;  rev = rev \* 10 + palin;  }  if (k == rev)  Console.WriteLine("{0} is a Palindrome", k);  else  Console.WriteLine("{0} is not a Palindrome", k);  Console.ReadLine();  }  }  } |
| **OUTPUT** |

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| Program : 18 |
| **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 Program  {  static void Main(string[] args)  {  int a, b, s;  Console.WriteLine("Enter first number");  a = Convert.ToInt32(Console.ReadLine());  Console.WriteLine("Enter Second number");  b = Convert.ToInt32(Console.ReadLine());  Console.WriteLine("The numbers {0} {1} before Swapping",a, b);    Console.ReadLine();  //Logic and Output  s = a;  a = b;  b = s;  Console.WriteLine("The numbers {0} {1} after Swapping", a, b);  Console.ReadLine();  }  }  } |
| **OUTPUT** |

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| Program : 19 |
| **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  {  internal class Program  {  static void Main(string[] args)  {  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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| Program : 20 |
| **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 Right\_angled\_Triangle  {  internal class Program  {  static void Main(string[] args)  {  int input, i, j;  Console.WriteLine("No.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** |