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| 20 C# Programs By  Nalli\_Prudhvi.  27/01/2022 |

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| 1. C# Program: To Print MULTIPLICATION TABLE of given number |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_Multiplication  {  internal class Program  {  static void Main(string[] args)  {  //\*\*\*\*\*variable assigning\*\*\*\*\*  int input, mul = 1,op;  //\*\*\*\*\*\*\*\*input\*\*\*\*\*\*\*\*\*  Console.WriteLine("enter your cohice of table");  input = Convert.ToInt32(Console.ReadLine());  //\*\*\*\*\*\*\*\*logic\*\*\*\*\*\*\*\*\*  for (mul = 1; mul < 11; mul++)  {  op =input \* mul;  Console.WriteLine(input+ " X " +mul+ "= "+op);  }  }  }  } |
| Output: |
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| 1. C# Program: Print FACTORIAL of a given number |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace day\_4\_factorial  {  internal class Program  {  static void Main(string[] args)  {  //\*\*\*\*\*variable assigning\*\*\*\*\*  int input, mul = 1;  //\*\*\*\*\*\*\*\*input\*\*\*\*\*\*\*\*\*  Console.WriteLine("enter your cohice of factorial number");  input = Convert.ToInt32(Console.ReadLine());  //\*\*\*\*\*\*\*\*logic\*\*\*\*\*\*\*\*\*  for (int i = 1; i <= input; i++)  {  mul \*= i;    }  Console.WriteLine("factorial of " + input + " is " + mul);  }  }  } |
| Output |
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| 1. C# Program: Print SUM OF N Natural Numbers |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace day\_4\_sum\_of\_natural\_nums  {  internal class Program  {  static void Main(string[] args)  {  //\*\*\*\*\*\*\*variable assignment\*\*\*\*\*\*\*  int input, sum = 0;  //\*\*\*\*\*\*\*input\*\*\*\*\*\*\*\*\*\*\*  Console.WriteLine("Enter your number :");  input = Convert.ToInt32(Console.ReadLine());  //\*\*\*\*\*\*\*logic\*\*\*\*\*\*\*\*\*\*\*\*  for(int i = 1; i <= input; i++)  {  sum += i;    }  Console.WriteLine("sum of "+ input+ " natural numbers is :"+sum);  }  }  } |
| Output |
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| 1. C# Program: Print FACTORIAL using FUNCTION |
| Code:  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_factorial\_using\_function  {  internal class Program  {    public static int Fact(int ip)  {      int mul = 1;  for (int i = 1; i <= ip; i++)  {  mul \*= i;  }  return mul;    }  static void Main(string[] args)  {  Console.WriteLine("Enter the factorial number required :");  int input = Convert.ToInt32(Console.ReadLine());  Console.WriteLine("Factorial of " + input + " = " + Fact(input));  Console.ReadLine();  }  }  } |
| Output: |
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| 1. C# Program: Print FACTORIAL using RECURSION |
| Code:  using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_recursion  {  internal class Program  {  public static int Fact(int input)  {  if (input <= 1)  return 1;  else  return input \* Fact(input - 1);  }  static void Main(string[] args)  {  Console.WriteLine("Enter your number :");  int num = Convert.ToInt32(Console.ReadLine());  Console.WriteLine("factorial of {0} = {1}",num,Fact(num));  Console.ReadLine();  }  }  } |
| Output: |
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| 1. C# Program: Print FACTORS of given number |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_factors  {  internal class Program  {  static void Main(string[] args)  {  //\*\*\*\*\*variable assigning\*\*\*\*\*  int input, mul = 1;  //\*\*\*\*\*\*\*\*input\*\*\*\*\*\*\*\*\*  Console.WriteLine("enter your cohice of factorial number");  input = Convert.ToInt32(Console.ReadLine());  //\*\*\*\*\*\*\*\*logic\*\*\*\*\*\*\*\*\*  Console.WriteLine("factors of " + input + " are");  for(int i = 1; i <= input; i++)  {  if (input%i == 0)  {  Console.Write(i+",");  }  }  Console.ReadLine();  }  }  } |
| Output: |
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| 1. C# Program: 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 Day\_4\_aPowerb  {  internal class Program  {  public static int Power(int P, int B)  {  int mul = 1;  for (int i = 1; i <= P; i++)  mul \*= B;  return mul;  }  static void Main(string[] args)    {  Console.WriteLine("Enter your Power :");  int Pwr = Convert.ToInt32(Console.ReadLine());  Console.WriteLine("Enter your Base :");  int Base = Convert.ToInt32(Console.ReadLine());  int result = Power(Pwr,Base);  Console.WriteLine("{1}^{0} = {2}", Pwr, Base, result);  Console.ReadLine();  }  }  } |
| Output: |
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| 1. C# Program: PRIME NUMBER or Not |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_prime\_check\_whithout\_fn  {  internal class Program  {  static void Main(string[] args)  {  Console.WriteLine("enter your number:");  int num =Convert.ToInt32(Console.ReadLine());  bool flag = false;  int i;  for (i = 2; i < num; i++)  {  if (num % i == 0)  {  flag = true;  break;  }  }  if (flag == true)  Console.WriteLine("{0} is composite cause it is divided by {1}", num, i);  else  Console.WriteLine("{0} is a prime number",num);  }  }  } |
| Output: |
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| 1. C# Program: PRIME NUMBER check [Using FUNCTION] |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_prime\_CHeck  {  internal class Program  {  public static int Prime\_num(int num)  {  int i;  bool flag = false;  for (i = 2; i < num; i++)  {  if(num%i == 0)  {  flag = true;  break;  }  }  if (flag == true)  Console.WriteLine("{0} is composite cause it is divided by {1}", num, i);  else  Console.WriteLine("{0} is a prime number");  return 0;  }  static void Main(string[] args)  {    Console.WriteLine("Enter you'r number to check :");  int input = Convert.ToInt32(Console.ReadLine());  if (input > 1)  Prime\_num(input);  else  Console.WriteLine("enter your number above 1");  Console.ReadLine();  }  }  } |
| Output: |
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| 1. C# Program: PRIME NUMBERS in RANGE |
| Code: |
| using System;  namespace Day\_4\_prime\_range  {  internal class Program  {  public static bool Prime\_num(int num)  {  int i;  bool flag = true;  for (i = 2; i < num; i++)  {  if (num % i == 0)  {  flag = false;  break;  }  }  return flag ;  }  static void Main(string[] args)  {  int i;    Console.WriteLine("Enter your num\_1");  int a =Convert.ToInt32(Console.ReadLine());  Console.WriteLine("Enter your num\_2");  int b = Convert.ToInt32(Console.ReadLine());  for(i = a;i<=b;i++)  {  if (Prime\_num(i))  {  Console.Write($"{i},");  }  }  Console.ReadLine();  }  }  } |
| Output: |
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| 1. C# Program: FIBONACCI SERIES |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_fibonacci\_series  {  internal class Program  {  static void Main(string[] args)  {  int n, a = 0, b = 1, c;  Console.WriteLine("enter your number :");  c= Convert.ToInt32(Console.ReadLine());    for (int i = 0; i <= c; i++)  {  n = a + b;  a = b;  b = n;  Console.Write(n + ",");  }  Console.ReadLine();  }  }  } |
| Output: |
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| 1. C# Program: ARMSTRONG NUMBER |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_Armstrong  {  internal class Program  {  static void Main(string[] args)  {  int a, b, c, d = 0;  Console.WriteLine("Enter your number :");  a =Convert.ToInt32(Console.ReadLine());  c = a;  while(c > 0)  {  b = c % 10;  c /= 10;  d += b\*b\*b;  }  if (d == a)  Console.WriteLine("its a armstrong number");  else  Console.WriteLine("its not a armstrong number");  Console.ReadLine();  }  }  } |
| Output: |
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| 1. C# Program: ARMSTRONG NUMBER [using FUNCTION] |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_arm\_check\_fn  {  internal class Program  {  public static bool arm(int a)  {  bool flag = false;  int b, c = 0, d = a;  while (a > 0)  {  b = a % 10;  a /= 10;  c += b \* b \* b;  }  if (c == d)  flag = true;  return flag;  }  static void Main(string[] args)  {  Console.Write("Enter your number :");  int ip = Convert.ToInt32(Console.ReadLine());  if (arm(ip) == true)  Console.WriteLine($"{ip} its a armstrong number");  else  Console.WriteLine($"{ip} its not a armstrong number");  Console.ReadLine();  }  }  } |
| Output: |
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| 1. C# Program: ARMSTRONG NUMBERS IN RANGE |
| Code: |
| using System;  namespace Day\_4\_arm\_fn  {  internal class Program  {  public static bool arm(int a)  {  bool flag = false;  int b ,c=0,d=a;    while(a > 0)  {  b = a%10;  a /= 10;  c += b\*b\*b;  }  if (c == d)  flag = true;  return flag;  }  static void Main(string[] args)  {  int i;  Console.Write("enter your number1 :");  int ip\_1 = Convert.ToInt32(Console.ReadLine());  Console.WriteLine();  Console.Write("enter your number2 :");  int ip\_2 = Convert.ToInt32(Console.ReadLine());  Console.WriteLine();  Console.Write($"armstrong number ranging from {ip\_1} to {ip\_2} :");  for (i = ip\_1; i <= ip\_2;i++)  {  if (arm(i))  {  Console.Write(i+",");  }  }  Console.ReadLine();  }  }  } |
| Output: |
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| 1. C# Program: SUM OF DIGITS of given number |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_sum\_of\_digits  {  internal class Program  {  static void Main(string[] args)  {  Console.WriteLine("enter your number :");  int ip = Convert.ToInt32(Console.ReadLine());  int a=0,c = ip;  while(ip > 0)  {  a += ip % 10;  ip /= 10;  }  Console.WriteLine($"{c} sum of digits ={a}");  Console.ReadLine();  }  }  } |
| Output: |
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| 1. C# Program: REVERSE OF A GIVEN NUMBER |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_Reverse\_of\_a\_num  {  internal class Program  {  static void Main(string[] args)  {  Console.WriteLine("enter your number :");  int ip = Convert.ToInt32(Console.ReadLine());  int a = 0, c = ip, r=0;  while (ip > 0)  {  a = ip % 10;  ip /= 10;  r = r\*10+a;    }  Console.WriteLine($"reverse of your number {c} ={r}");  }  }  } |
| Output: |
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| 17.C# Program: PALINDROME NUMBER |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_palindrome  {  internal class Program  {  static void Main(string[] args)  {  Console.WriteLine("enter your number :");  int ip = Convert.ToInt32(Console.ReadLine());  int a = 0, c = ip, r = 0;  while (ip > 0)  {  a = ip % 10;  ip /= 10;  r = r \* 10 + a;  }  if(c==r)  Console.WriteLine($"{c} is a palindrome number ");  else  Console.WriteLine($"{c} is not a palindrome number ");  Console.ReadLine();  }  }  } |
| Output: |
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| 18.C# Program: SWAP NUMBERS using THIRD VARIABLE |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_swap\_num\_using\_3var  {  internal class Program  {  static void Main(string[] args)  {  int a = 5, b = 4, r ;  Console.WriteLine($"before swap:\na={a} b={b}");  r= a;  a= b;  b= r;  Console.WriteLine($"after swap:\na={a} b={b}");  Console.ReadLine();  }  }  } |
| Output: |
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| 19.C# Program: SWAP NUMBERS WITHOUT THIRD VARIABLE |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_swap\_num\_without\_var  {  internal class Program  {  static void Main(string[] args)  {  int a = 5, b = 4;  Console.WriteLine($"before swap:\na={a} b={b}");  a=a+b;  b=a-b;  a=a-b;  Console.WriteLine($"after swap:\na={a} b={b}");  Console.ReadLine();  }  }  } |
| Output: |
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| 19.C# Program: PATTERN |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace Day\_4\_patters  {  internal class Program  {  static void Main(string[] args)  {  int a = Convert.ToInt32(Console.ReadLine());  for(int i=1;i<=a;i++)  {  for (int j = 1; j <= i; j++)  {  Console.Write("\*");  }  Console.WriteLine();  Console.ReadLine();  }  }  }  } |
| Output: |
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