

## CONVERSION OF MULTIPLE C- PROGRAMS TO C# PROGRAMS

BY

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### PROGRAM (1): WRITE A C# PROGRAM ON MULTIPLICATION TABLE:

#### CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System. Text;
using System.Threading.Tasks;

namespace Day4MorningAssignment_20_programs_
{
    internal class Program
    {
        static void Main (string [] args)
        {
            int input, i;
            Console.WriteLine("enter any number");
            input = Convert.ToInt32(Console.ReadLine());

            for (i = 0; i <= 8; i++)
            {
                Console.WriteLine("____");
                Console.WriteLine("{0} * {1} = {2}", input, i, input * i);
            }
            Console.ReadLine();
        }
    }
}
```

enter any number

5

---

5 \* 0 = 0

---

5 \* 1 = 5

---

5 \* 2 = 10

---

5 \* 3 = 15

---

5 \* 4 = 20

---

5 \* 5 = 25

---

5 \* 6 = 30

---

5 \* 7 = 35

---

5 \* 8 = 40

OUTPUT:

## PROGRAM (2): WRITE A C# PROGRAM ON FACTORIAL OF A NUMBER:

### CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Factorial Project
{
    internal class Program
    {
        static void Main (string [] args)
        {
            int i, fact = 1, number;
            Console. Write ("Give any Number: ");
            number = Convert.ToInt32(Console.ReadLine());
            for (i = 1; i <= number; i++)
            {
                fact = fact * i;
            }
            Console. Write ("Factorial of " + number + " is: " + fact);

            Console.ReadLine();
            Console. Write ("*****Press any key to exit*****");
            Console.ReadLine();
        }
    }
}
```

### OUTPUT:

```
Give any Number: 6
Factorial of 6 is: 720
*****Press any key to exit*****
```

### PROGRAM (3): WRITE A C# PROGRAM ON SUM OF N OF NUMBERS:

#### CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace exercise
{
    internal class Program
    {
        static void Main (string [] args)
        {
            int i, sum = 0;
            Console.WriteLine("The sum of 10 natural numbers:");
            for (i = 0; i <= 10; i++)
            {
                sum = sum + i;
            }
            Console.WriteLine("{0}", i);
            Console.ReadLine();
            Console.WriteLine(sum);
            Console.ReadLine();
        }
    }
}
```

The first 10 natural number are :

0

1

2

3

4

5

6

7

8

9

10

The Sum is

OUTPUT: 55

#### **PROGRAM (4): WRITE A C# PROGRAM ON FACTORIAL USING FUNCTIONS:**

##### **CODE:**

```
using System;
using System.Collections.Generic;
using System.Linq;
using System. Text;
using System.Threading.Tasks;

namespace Factorial
{
    internal class Program
    {
        static void Main (string [] args)
        {
            int  num, factorial =1;
            Console.WriteLine("Factorial of a given number:");
            num= Convert.ToInt32(Console.ReadLine());

            if(num<0)
                Console.WriteLine("negative number");
            else if(num<=1)
                Console.WriteLine("{0}! = {1}", num, factorial);
            else {

                for (int counter = num; counter >= 2; counter--)
                {
                    factorial = factorial * counter;
                }

            }
            Console. Write ("The Factorial of {0} is: {1}", num, factorial);
            Console.ReadLine();

        }
    }
}
```

```
}
```

```
Factorial of a given number:
```

```
9
```

```
The Factorial of 9 is: 362880
```

OUTPUT:

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### PROGRAM (5): WRITE A C# PROGRAM ON FACTORS OF NUMBERS:

CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System. Text;

namespace Program
{
    class Program
    {
        static void Main (string [] args)
        {
            int num, a;
            Console.WriteLine("Enter any Number ");
            num = Convert.ToInt32 (Console.ReadLine());
            Console.WriteLine("The Factors are: ");
            for (a = 1; a <= num; a++)
            {
                if (num % a == 0)
                {
                    Console.WriteLine(a);
                }
            }
            Console.ReadLine();
        }
    }
}
```

**OUTPUT:**

```
Enter any Number
6
The Factors are :
1
2
3
6
```



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## PROGRAM (6): WRITE A C# PROGRAM ON POWER OF NUMBERS:

### CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day4morProject_Multiplication_
{
    internal class Program
    {
        static void Main (string [] args)
        {
            int num, exp1, exp2;
            Console.WriteLine("Enter the Base Value: ");
            num = Convert.ToInt32(Console.ReadLine());
            Console.WriteLine("Give the First Exponent:");
            exp1 = Convert.ToInt32(Console.ReadLine());
            Console.WriteLine("Give the Second Exponent:");
            exp2 = Convert.ToInt32(Console.ReadLine());
            int add;
            add = exp1 + exp2;
            Console.WriteLine("Result is: {0} ^ {1}: {2}", num, add, Math. Pow (num,
add));
            Console.ReadLine();

        }
    }
}
```

```
Enter the Base Value :  
2  
Give the First Exponent :  
2  
Give the Second Exponent :  
2  
Result is : 2^4 : 16
```

OUTPUT: 

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## PROGRAM (7): WRITE A C# PROGRAM ON PRIME NUMBERS USING FUNCTIONS:

### CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System. Text;
using System.Threading.Tasks;

namespace Day4morProject_Multiplication_
{
    internal class Program
    {
        static void Main (string [] args)
        {
            int n = 5, a = 0;

            for (int i = 1; i <= n; i++)
                if (n % i == 0)
                {
                    a++;
                }

            if (a == 2)
            {
                Console.WriteLine("{0} is a Prime Number", n);
            }
            else
            {
                Console.WriteLine("Not a Prime Number");
            }

            Console.ReadLine();

        }
    }
}
```

OUTPUT:

```
5 is a Prime Number
```

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## PROGRAM (8): WRITE A C# PROGRAM ON FACTORIAL OF NUMBERS USING RECURSION:

### CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day4morProject_Multiplication_
{
    internal class Program
    {
        static void Main (string [] args)
        {

            Console. Write (" Enter any number: ");
            int n1 = Convert.ToInt32(Console.ReadLine());
            long fact = FactCalc(n1);
            Console.WriteLine(" The factorial of {0} is: {1} ", n1, fact);
            Console.ReadLine();
        }

        private static long FactCalc(int n1)
        {
            if (n1 == 0)
            {
                return 1;
            }
            return n1 * FactCalc(n1 - 1);
        }
    }
}
```

Enter any number : 10

The factorial of 10 is : 3628800

OUTPUT:

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### PROGRAM (9): WRITE A C# PROGRAM ON RANGE OF PRIME NUMBER:

#### CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day4morProject_Multiplication_
{
    internal class Program
    {
        static void Main (string [] args)
        {
            int num, i, ctr, a, b;
            Console. Write ("Enter a number Starting range: ");
            a=Convert.ToInt32(Console.ReadLine());
            Console. Write ("Ending range: ");
            b = Convert.ToInt32(Console.ReadLine());
            Console. Write ("The prime numbers between {0} and {1} are: \n", a, b);
            for (num = a; num <= b; num++)
            {
                ctr = 0;

                for (i = 2; i <= num / 2; i++)
                {
                    if (num % i == 0)
                    {
                        ctr++;
                        break;
                    }
                }

                if (ctr == 0 && num != 1)
                    Console. Write (" {0} ", num);
            }

            Console.ReadLine();
        }
    }
}
```



```
}  
}  
}
```

```
Enter a number Starting range: 20  
Ending range : 50  
The prime numbers between 20 and 50 are :  
23 29 31 37 41 43 47
```

OUTPUT:

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### PROGRAM (10): WRITE A C# PROGRAM ON SWAP OF NUMBERS:

#### CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day4morProject_Multiplication_
{
    internal class Program
    {
        static void Main (string [] args)
        {
            int a = 5, b = 8;
            Console.WriteLine("Before swap a= " + a + " b= " + b);
            a = a + b; // a= 13
            b = a - b; // b= 5
            a = a - b; // a= 8
            Console.WriteLine("After swap a= " + a + " b= " + b);
            Console.ReadLine();
        }
    }
}
```

```
Before swap a= 5 b= 8
After swap a= 8 b= 5
```

#### OUTPUT:

### PROGRAM (11): WRITE A C# PROGRAM ON SWAP OF NUMBERS USING THIRD VARIABLE:

#### CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day4morProject_Multiplication_
{
    internal class Program
    {
        static void Main (string [] args)
        {
            int a = 5, b = 10, temp;
            Console.WriteLine(" Before swapping a= {0} and b= {1}", a, b);
            //swapping Logic
            temp = a;
            a = b;
            b = temp;
            Console. Write (" After swapping a= {0} and b= {1}", a, b);
            Console.ReadLine();
        }
    }
}
```

```
Before swapping a= 5 and b= 10
After swapping a= 10 and b= 5
```

#### OUTPUT:

**PROGRAM (12): WRITE A C# PROGRAM ON PATTERN OF NUMBERS:****CODE:**

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day4morProject_Multiplication_
{
    internal class Program
    {
        static void Main (string [] args)
        {
            int i, a, b = 0;

            for (i = 0; i < 10; i++) //loop for row
            {
                for (a = 0; a <= i; a++) //loop for column
                {
                    b++; //increment in count variable
                    if (b % 5 == 0)
                        Console. Write (0);
                    else
                        Console. Write (1);
                }
                Console.WriteLine(); //for new line
            }
            Console.ReadLine();

        }
    }
}
```

OUTPUT:

```
1
11
101
1110
11110
111101
1110111
10111101
111011110
1111011110
```

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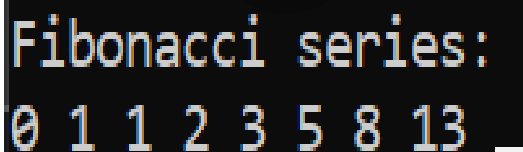
### PROGRAM (13): WRITE A C# PROGRAM ON FIBONACCI SERIES NUMBERS:

#### CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System. Text;
using System.Threading.Tasks;

namespace Day4morProject_Multiplication_
{
    internal class Program
    {
        static void Main (string [] args)
        {
            int val1 = 0, val2 = 1, val3, i, n;
            n = 8;
            Console.WriteLine("Fibonacci series:");
            Console. Write (val1 + " " + val2 + " ");
            for (i = 2; i < n; ++i)
            {
                val3 = val1 + val2;
                Console. Write (val3 + " ");
                val1 = val2;
                val2 = val3;
            }
            Console.ReadLine();
        }
    }
}
```

#### OUTPUT:

A screenshot of a terminal window with a black background. The text 'Fibonacci series:' is displayed in a light blue, monospaced font. Below it, the numbers '0 1 1 2 3 5 8 13' are displayed in the same font and color, followed by a small white cursor block.

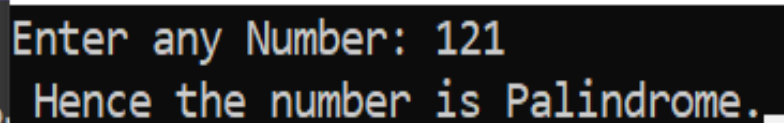
Fibonacci series:  
0 1 1 2 3 5 8 13

## PROGRAM (14): WRITE A C# PROGRAM ON PALINDROME NUMBERS:

### CODE:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day4morProject_Multiplication_
{
    internal class Program
    {
        static void Main (string [] args)
        {
            int n, e, sum = 0, temp;
            Console. Write ("Enter any Number: ");
            n = Convert.ToInt32(Console.ReadLine());
            temp = n;
            while (n > 0)
            {
                e = n % 10;
                sum = (sum * 10) + e;
                n = n / 10;
            }
            if (temp == sum)
                Console. Write (" Hence the number is Palindrome.");
            else
                Console. Write (" Hence the number is not a Palindrome");
            Console.ReadLine();
        }
    }
}
```

A screenshot of a terminal window showing the output of the C# program. The first line is "Enter any Number: 121" and the second line is "Hence the number is Palindrome." followed by a cursor. The text is displayed in a monospaced font with a light blue background.

```
Enter any Number: 121
Hence the number is Palindrome._
```

### OUTPUT:

**PROGRAM (15): WRITE A C# PROGRAM ON REVERSE OF NUMBERS:****CODE:**

```
int n, rev = 0, rem, m;  
Console. Write ("\n\nEnter any Number to Reverse It: ");  
n = Convert.ToInt32(Console.ReadLine());  
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.ReadLine();  
}  
  
}
```

Enter a Number to Reverse It: 1234

**OUTPUT:** Revers of 1234 is 4321\_



## **PROGRAM (16): WRITE A C# PROGRAM ON ARMSTRONG OF NUMBERS:**

### **CODE:**

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day4eve_20_project
{
    internal class Program
    {
        static void Main(string[] args)
        {
            int n, rem, m, result = 0;

            Console.WriteLine("\n\nEnter any Number To Check the number is Armstrong Number or Not : ");
            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("\n Yes, {0} is an ARMSTRONG Number", n);
            else
                Console.WriteLine("\n No, {0} is Not an ARMSTRONG Number", n);

            Console.ReadLine();
        }
    }
}
```

Enter any Number To Check the number is Armstrong Number or Not : 344

**OUTPUT:** No, 344 is Not an ARMSTRONG Number

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**PROGRAM (17): WRITE A C# PROGRAM ON ARMSTRONG OF NUMBERS USING FUNCTION:**

**CODE:**

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
```

```
namespace Day4eve_20_project
```

```
{
```

```
    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;
```

```
            }
```

```
            if (result == n)
```

```
                return true;
```

```
            else
```

```
                return false;
```

```
        }
```

```
        static void Main(string[] args)
```

```
        {
```

```
            int n;
```

```
            Console.WriteLine("\n\nEnter any Number To Check, Armstrong Number or Not : ");
```

```
            n = Convert.ToInt32(Console.ReadLine());
```

```
            if (IsArmstrong(n))
```

```
        Console.WriteLine("\nYes, {0} is an ARMSTRONG Number", n);  
    else  
        Console.WriteLine("\nNo, {0} is Not an ARMSTRONG Number", n);  
    Console.ReadLine();  
    }  
    }  
}
```

Enter any Number To Check, Armstrong Number or Not : 333

No, 333 is Not an ARMSTRONG Number

**OUTPUT:** 

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**PROGRAM (18): WRITE A C# PROGRAM ON ARMSTRONG OF NUMBERS USING FUNCTION:**

**CODE:**

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day4eve_20_project
{
    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;
            }

            if (result == n)
                return true;
            else
                return false;
        }

        static void Main(string[] args)
        {
            int a, b, i;

            Console.WriteLine("\n\nEnter Starting Range of Numbers : ");

            a = Convert.ToInt32(Console.ReadLine());

            Console.WriteLine("\n\nEnter Ending Range of Numbers : ");
```

```
b = Convert.ToInt32(Console.ReadLine());
```

```
Console.WriteLine("\n The Armstrong Numbers in the Given Range {0} to {1} are  
:", a, b);  
for (i = a; i <= b; i++)  
{  
    if (IsArmstrong(i))  
        Console.WriteLine(" {0}", i);  
}  
Console.ReadLine();  
}  
}  
}
```

```
Enter Starting Range of Numbers : 45
```

```
Enter Ending Range of Numbers : 56
```

**OUTPUT:** The Armstrong Numbers in the Given Range 45 to 56 are :

**PROGRAM (19): WRITE A C# PROGRAM TO PRINT SUM OF DIGITS:****CODE:**

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day4eve_20_project
{
    internal class Program
    {
        static void Main(string[] args)
        {
            int n, m, rem, result = 0;

            Console.WriteLine("\n\nEnter a number to find Sum of Digits : ");
            n = Convert.ToInt32(Console.ReadLine());

            m = n;
            while (m > 0)
            {
                rem = m % 10;
                m = m / 10;
                result = result + rem;
            }

            Console.WriteLine("\nSum of Digits of {0} is {1}", n, result);

            Console.ReadLine();
        }
    }
}
```

Enter a number to find Sum of Digits : 333

**OUTPUT:**

Sum of Digits of 333 is 9\_

**PROGRAM (20): WRITE A C# PROGRAM TO PRINT PRIME NUMBERS WITHOUT USING FUNCTIONS :**

**CODE:**

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day4eve_20_project
{
    internal class Program
    {
        static void Main(string[] args)
        {
            int input, i;

            Console.WriteLine("\n\nEnter any Number : ");
            input = Convert.ToInt32(Console.ReadLine());

            for (i = 2; i < input; i++)
            {
                if (input % i == 0)
                    break;
            }

            if (i == input)
                Console.WriteLine("\nYes, {0} is a Prime Number", input);
            else
                Console.WriteLine("\nNo, {0} is Not a Prime Number", input);

            Console.ReadLine();
        }
    }
}
```



Enter any Number : 33

No, 33 is Not a Prime Number

OUTPUT:

-

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