**C# Practice**

* **Example of Overriding**

**using System;**

**namespace overriding{**

**public class BaseClass**

**{**

**public virtual void print()**

**{**

**Console.WriteLine("Base class method");**

**}**

**}**

**public class DerivedClass: BaseClass**

**{**

**public override void print()**

**{**

**Console.WriteLine("Derived class method");**

**}**

**}**

**class Program**

**{**

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

**{**

**BaseClass B = new DerivedClass();**

**B.print();**

**}**

**}}**

**1.Printing Odd and even number from array**

class Program {

  static void Main(string[] args) {

     int i, n, even = 0, odd = 0;

Console.WriteLine("Enter the number of elements to be inserted:");

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

     int[] a = new int[n];

     Console.WriteLine("Enter the array elements:");

for (i = 0; i < n; i++) {

               a[i] = Convert.ToInt32(Console.ReadLine());              }

for (i = 0; i < n; i++) {

 if (a[i] % 2 == 0) {

even = even;

                 even++;

            } else {

                    odd = odd;

                    odd++;

                }

          }

Console.WriteLine("Number of even terms are: " + even);

 Console.WriteLine("Number of odd terms are: " + odd);

Console.ReadLine();

        }      }

**2.Find the unique Character in the String**

public class Program

{

public static void Main()

{

string str = "jfhwuierhind";

//char[] charArr = str.ToCharArray();

var q = str.Distinct();

foreach(char c in q)

Console.WriteLine(c);

}}

**3.How many times a particular character is repeated in a string**

using System;

using System.Linq;

public class Example

{

public static void Main()

{

string str = "Techie Delight";

char ch = 'e';

int freq = str.Count(f => (f == ch));

Console.WriteLine(freq);

}}

**4.WAP to read name (program) and print letters in ascending order (agmoprr)**

using System;

public class Program14

{

public static void Main()

{

string str;

char[] arr1;

char ch;

int i,j,l;

Console.Write("\n\nSort a string array in ascending order :\n");

Console.Write("--------------------------------------------\n");

Console.Write("Input the string : ");

str = Console.ReadLine();

l=str.Length;

arr1 = str.ToCharArray(0, l);

for(i=1;i<l;i++)

for(j=0;j<l-i;j++)

if(arr1[j]>arr1[j+1])

{

ch=arr1[j];

arr1[j] = arr1[j+1];

arr1[j+1]=ch;

}

Console.Write("After sorting the string appears like : \n");

foreach (char c in arr1)

{

ch=c;

Console.Write("{0} ",ch);

}

Console.WriteLine("\n");

}

}

**5. How many times a particular character is repeated in a string**

using System;

using System.Linq;

public class Example

{

public static void Main()

{

string str = "Good Morning";

char ch = 'o';

int freq = str.Count(f => (f == ch));

Console.WriteLine(freq);

}

}

**6.Count the no of vowels and constants in a string**

using System;

public class Program

{

public static void Main()

{

int vCount = 0, cCount = 0;

string str = "This is a really simple sentence";

//Converting entire string to lower case to reduce the comparisons

str = str.ToLower();

for(int i = 0; i < str.Length; i++) {

if(str[i] == 'a' || str[i] == 'e' || str[i] == 'i' || str[i] == 'o' || str[i] == 'u') {

//Increments the vowel counter

vCount++;

}

//Checks whether a character is a consonant

else if(str[i] >= 'a' && str[i]<='z') {

//Increments the consonant counter

cCount++;

}

}

Console.WriteLine("Number of vowels : " + vCount);

Console.WriteLine("Number of consonant : " + cCount);

}

}

**7.Convert a String into integer?**

// C# program to convert string to

// integer using Parse Method

using System;

class Program{

    // Main Method

    public static void Main(string[] args)

    {

        // Taking a string

        string l = "10";

        // using the Method

        int length = Int32.Parse(l);

        // Finding the area of a square

        int aofs = length \* length;

        Console.WriteLine("Area of a circle is: {0}", aofs);

    }

}

**8.Find the Smallest Sum of consecutive Number from given Array.**

using System;

class consecative{

// function to find the smallest sum

// contiguous subarray

static int smallestSumSubarr(int[] arr, int n)

{

// to store the minimum value that is

// ending up to the current index

int min\_ending\_here = 2147483647;

// to store the minimum value encountered

// so far

int min\_so\_far = 2147483647;

// traverse the array elements

for (int i = 0; i < n; i++) {

if (min\_ending\_here > 0)

min\_ending\_here = arr[i];

// else add the value arr[i] to

// min\_ending\_here

else

min\_ending\_here += arr[i];

// update min\_so\_far

min\_so\_far = Math.Min(min\_so\_far, min\_ending\_here);

}

return min\_so\_far;

}

public static void Main()

{

int[] arr = { 3, -4, 2, -3, -1, 7, -5 };

int n = arr.Length;

Console.Write("Smallest sum: " + smallestSumSubarr(arr, n));

}

}

**9.WAP to check armstrong number**

using System;

  public class ArmstrongExample

   {

     public static void Main(string[] args)

      {

       int  n,r,sum=0,temp;

       Console.Write("Enter the Number= ");

       n= int.Parse(Console.ReadLine());

       temp=n;

       while(n>0)

       {

        r=n%10;

        sum=sum+(r\*r\*r);

        n=n/10;

       }

       if(temp==sum)

        Console.Write("Armstrong Number.");

       else

        Console.Write("Not Armstrong Number.");

      }

  }

**10.Merging 2 array into one array**

using System;

int[] array1 = new int[] { 1, 2, 3 };

int[] array2 = new int[] { 4, 5, 6 };

int[] result = new int[array1.Length + array2.Length];

for (int i = 0; i < array1.Length; i++) {

result[i] = array1[i];

}

for (int i = 0; i < array2.Length; i++) {

result[array1.Length + i] = array2[i];

}

Console.WriteLine("Result Array: [{0}]", string.Join(", ", result));

**11. Write a program to check whether the first two characters present at the end of a given string in C#.**

using System;

public class Main

{

    public bool firstInLast(string str)

    {

        if (str.Length < 2)

        {

            return false;

        }

        else if (str.Substring(0,2-0).Equals(str.Substring(str.Length - 2,str.Length-str.Length - 2)))

        {

            return true;

        }

        else

        {

            return false;

        }

    }

    public static void Main(string[] args)

    {

        var m = new Main();

        var str1 = "educated";

        Console.WriteLine(string.Join(", ","The given strings is: " + str1));

        Console.WriteLine(string.Join(", ","The first two characters appear in the last is: " + m.firstInLast(str1).ToString()));

    }

}

**12. Write a program that keeps a number from the user and generates an integer between 1 and 7 and displays the name of the weekday.**

using System;

using System.IO;

public class Program{

    public static void Main(string[] args)

    {

        var in =  "Inputs";

        Console.Write(string.Join(", ","Input number: "));

        var day = Convert.ToInt64(Console.ReadLine());

        if (day == 1)

        {

            Console.WriteLine(string.Join(", ","Monday"));

        }

        else if (day == 2)

        {

            Console.WriteLine(string.Join(", ","Tuesday"));

        }

        else if (day == 3)

        {

            Console.WriteLine(string.Join(", ","Wednesday"));

        }

        else if (day == 4)

        {

            Console.WriteLine(string.Join(", ","Thursday"));

        }

        else if (day == 5)

        {

            Console.WriteLine(string.Join(", ","Friday"));

        }

        else if (day == 6)

        {

            Console.WriteLine(string.Join(", ","Saturday"));

        }

        else if (day == 7)

        {

            Console.WriteLine(string.Join(", ","Sunday"));

        }

        else

        {

Console.WriteLine(string.Join(", ","Invalid Input! Please enter week number between 1-7."));

        }

    }

}

**13.Write a program in C# to display the pattern like right angle triangle with a number.**

using System;

public class RightAngle

{

public static void Main()

{

int i,j,rows;

Console.Write("\n\n");

Console.Write("Display the pattern as right angle triangle using number:\n");

Console.Write("-----------------------------------------------------------");

Console.Write("\n\n");

Console.Write("Input number of rows : ");

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

for(i=1;i<=rows;i++)

{

for(j=1;j<=i;j++)

Console.Write("{0}",j);

Console.Write("\n");

}

}}

**14. Write a program to find the difference between equals and ==**

string str1 = "Hello",

str2 = "Hello",

str3 = "hello";

Console.WriteLine(str1 == str2); // true

Console.WriteLine(str1 == str3 ); // false

Console.WriteLine(str1.Equals(str2));// true

Console.WriteLine(str1.Equals(str3));// false

**15.Remove Spacesfrom string**

using System;

public class Program

{

    public static void Main()

  {

        string str1="Remove white spaces";

        //Removes the white spaces using regex

        str1 = str1.Replace(" ",String.Empty);

        Console.WriteLine("String after removing all the white spaces : " + str1);  }  }

**16.Find the length of string without using function**

class Program {

static void Main(string[] args) {

    string ValString;

            Console.Write("Enter Your String:");

            ValString = Console.ReadLine();

            int x = 0;

            foreach(char c in ValString) {

                Console.Write(ValString[x]);

                x++;

            }

            Console.WriteLine("\nLength Of String:{0}", (x));

            Console.Read();

        }

    }

**17. WAP to find the prime number**

using System;

  public class PrimeNumberExample

   {

     public static void Main(string[] args)

      {

          int n, i, m=0, flag=0;

          Console.Write("Enter the Number to check Prime: ");

          n = int.Parse(Console.ReadLine());

          m=n/2;

          for(i = 2; i <= m; i++)

          {

           if(n % i == 0)

            {

             Console.Write("Number is not Prime.");

             flag=1;

             break;

            }

          }

          if (flag==0)

           Console.Write("Number is Prime.");

     }

   }

**18.How do you shuffle an array in C#.**

using System;

using System.Linq;

namespace randomarray

{

class Program

{

static void Main(string[] args)

{

int[] arr = { 1, 2, 3, 4, 5,6,7 };

Random random = new Random();

arr = arr.OrderBy(x => random.Next()).ToArray();

foreach (var i in arr)

{

Console.WriteLine(i);

}

}

}

}