C# Lab Assignment 2:

Name : Twinkle Dhake

1. WAP in C# to display the pattern like below:

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namespace Q1

{

class Program

{

static void Main(string[] args)

{

int i, j, rows;

Console.WriteLine("Star Pattern :\n");

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

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

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

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

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

{

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

Console.Write("\*");

Console.Write("\n");

}

}

}

}

1. WAP in C# to display the pattern like below:

1

22

333

4444

namespace Q2

{

class Program

{

static void Main(string[] args)

{

int i, j, rows;

Console.WriteLine("Number pattern :\n");

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

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

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

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

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

{

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

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

Console.Write("\n");

}

}

}

}

1. WAP to copy the elements one array into another array.

namespace Q3

{

class Program

{

static void Main(string[] args)

{

int[] Source = new int[] { 0, 1, 2, 3, 4, 5 };

// or int[]Source = {0,1,2,3,4,5}

int[] Target = Source;

for(int i = 0; i<6; i++)

{

Console.WriteLine(Target[i]);

}

}

}

}

1. WAP to find the length of a string without using library function.

namespace Q4

{

class Program

{

static void Main(string[] args)

{

string str; /\* Declares a string of size 100 \*/

int l = 0;

Console.Write("\n\nFind the length of a string :\n");

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

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

str = Console.ReadLine();

foreach (char chr in str)

{

l++;

}

Console.Write("Length of the string is : {0}\n\n", l);

}

}

}

1. WAP to print individual characters of the string in reverse order.

namespace Q5

{

class Program

{

static void Main(string[] args)

{

string str;

int l = 0;

Console.Write("\n\nprint individual characters of string in reverse order :\n");

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

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

str = Console.ReadLine();

l = str.Length - 1;

Console.Write("The characters of the string in reverse are : \n");

while (l >= 0)

{

Console.Write("{0} ", str[l]);

l--;

}

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

}

}

1. WAP to count the total number of words in a string.

namespace Q6

{

class Program

{

static void Main(string[] args)

{

int a = 0, Word = 1;

string str = "Hello World!";

while (a <= str.Length - 1)

{

if (str[a] == ' ' || str[a] == '\n' || str[a] == '\t')

{

Word++;

}

a++;

}

Console.Write("Number of words in the string = {0}\n", Word);

}

}

}

1. WAP in C# to calculate the fine in Rs. as follows:

* If the book is returned on before 2 days, no fine will be charged.
* If the book is returned after the expected return day (between 3 and 5 days) – fine: Rs. 5 per day
* If the book is returned after the expected return day (between 6 and 10 days) fine: Rs. 10 per day
* If the book is not returned after 30 days, cancel library membership. fine: Rs. 20 per day

namespace Q7

{

class Program

{

static void Main(string[] args)

{

int days;

int fine = 0;

Console.Write("Enter total days:");

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

if (days <= 2)

{

fine = 0;

}

else if (days > 3 && days <= 5)

{

fine = (days - 3) \* 5;

}

else if (days > 6 && days <= 10)

{

fine = (3 \* 5) + (days - 6) \* 10;

}

else

{

fine = (3 \* 5) + (4 \* 10) + (days - 30) \* 20;

Console.WriteLine("Cancelled your Membership");

}

Console.WriteLine("Your fine:" + fine);

Console.ReadLine();

}

}

}

1. WAP using ArrayList to do the following operation listed

below:

1. Adding elements into Arraylist
2. Print an ArrayList using for-each loop
3. Count the number of items in ArrayList
4. Remove the elements at the index(2)
5. Sort the arraylist
6. Reverse the arraylist

8.a- Adding elements into Arraylist

namespace Q8a

{

class Program

{

static void Main(string[] args)

{

// Create an ArrayList and add 3 elements.

ArrayList arr = new ArrayList();

arr.Add("One");

arr.Add("Two");

arr.Add("Three");

Console.WriteLine("Added elements in ArrayList:");

Console.WriteLine(arr[0]);

Console.WriteLine(arr[1]);

Console.WriteLine(arr[2]);

//Console.WriteLine("1st : ", arr[0]);

//Console.WriteLine("2nd : ", arr[1]);

//Console.WriteLine("3rd : ", arr[2]);

Console.WriteLine("DONE");

Console.ReadKey();

}

}

}

8.b- Print an ArrayList using for-each loop

using System.Collections;

namespace Q8b

{

class Program

{

static void Main(string[] args)

{

int[] Numbers = { 4, 5, 9, 6, 1, 0, 6, -7, -6, -3 };

Console.WriteLine("The contents of an array is: ");

foreach (int k in Numbers)

{

Console.Write("{0} \t", k);

}

Console.ReadKey();

}

}

}

8.c- Count the number of items in ArrayList

using System.Collections;

namespace Q8c

{

class Program

{

static void Main(string[] args)

{

ArrayList items = new ArrayList();

items.Add("One");

items.Add("Two");

// Count the elements in the ArrayList.

int result = items.Count;

Console.WriteLine(result);

}

}

}

8.d- Remove the elements at the index(2)

using System.Collections;

namespace Q8d

{

class Program

{

static void Main(string[] args)

{

ArrayList myList = new ArrayList(10);

// Adding elements to ArrayList

myList.Add("A");

myList.Add("B");

myList.Add("C");

myList.Add("D");

myList.Add("E");

myList.Add("F");

// Displaying the elements in ArrayList

Console.WriteLine("The elements in ArrayList initially are :");

foreach (string str in myList)

Console.WriteLine(str);

// Removing the element present at index 2

myList.RemoveAt(2);

// Displaying the elements in ArrayList

Console.WriteLine("The elements in ArrayList are :");

foreach (string str in myList)

Console.WriteLine(str);

}

}

}

8.e- Sort the arraylist

namespace Q8e

{

class Program

{

static void Main(string[] args)

{

int[] arr = new int[5];

int i, j, temp = 0;

Console.WriteLine("Enter 5 numbers: ");

for (i = 0; i <= 4; i++)

{

arr[i] = (int)Convert.ToInt64(Console.ReadLine());

}

for (i = 0; i <= 4; i++)

{

for (j = i + 1; j <= 4; j++)

{

if (arr[i] < arr[j])

{

temp = arr[i];

arr[i] = arr[j];

arr[j] = temp;

}

}

}

Console.WriteLine("The following is the sorted array is: ");

for (i = 0; i <= 4; i++)

{

Console.WriteLine(arr[i]);

}

}

}

8.f- Reverse the arraylist

namespace Q8f

{

class Program

{

static void Main(string[] args)

{

// Creating an ArrayList

ArrayList myList = new ArrayList(5);

// Adding elements to ArrayList

myList.Add("First");

myList.Add("Second");

myList.Add("Third");

myList.Add("Fourth");

myList.Add("Fifth");

// Reversing the order of elements in entire ArrayList

myList.Reverse();

// Displaying the elements in myList

for (int i = 0; i < myList.Count; i++)

{

Console.WriteLine(myList[i]);

}

}

}

}