<https://www.w3resource.com/csharp-exercises/>

## Basic

1. Write a C# Sharp program to print Hello and your name in a separate line.
2. Write a C# Sharp program to print the output of the multiplication of three numbers entered by the user.
3. Write a C# program to create a new string from a given string where the first and last characters change their positions.
4. Write a C# program to find the longest word in a string.
5. Write a C# program to reverse the words of a sentence.
6. Write a C# program to rotate an array (length 3) of integers in the left directions.
7. Write a program in C# Sharp to display a pattern like a right angle triangle with a number.  
   The pattern like :

1

12

123

1234.

## Array

1. Write a C# Sharp program to read n values in an array and display them in reverse order.
2. Write a program in C# Sharp to print all unique elements in an array.
3. Write a C# Sharp program for multiplication of two square matrices.
4. Write a C# Sharp program to find the transpose of a given matrix.

## String

1. Write a C# Sharp program to find the length of a string without using a library function.

## Stack

1. Write a C# program to implement a stack with push and pop operations. Find the top element of the stack and check if the stack is empty or not.
2. Write a C# program to sort the elements of a given stack in ascending order.
3. Write a C# program to sort the elements of a given stack in descending order.
4. Write a C# program to remove duplicates from a given stack.

## Exception Handling

 Write a C# program that implements a method that takes an array of integers as input and calculates the average value. Handle the exception if the array is empty.

Write a C# program that reads a file path from the user and tries to open the file. Handle exceptions if the file does not exist.

 LINQ

Write a program in C# Sharp to show how the three parts of a query operation execute.  
Expected Output:  
The numbers which produce the remainder 0 after divided by 2 are :  
0 2 4 6 8  
[Click me to see the solution](https://www.w3resource.com/csharp-exercises/linq/csharp-linq-exercise-1.php)

Write a program in C# Sharp to find the +ve numbers from a list of numbers using two where conditions in LINQ Query.  
Expected Output:  
The numbers within the range of 1 to 11 are :  
1 3 6 9 10  
[Click me to see the solution](https://www.w3resource.com/csharp-exercises/linq/csharp-linq-exercise-2.php)

Write a program in C# Sharp to convert a string array to a string.  
Test Data :  
Input number of strings to store in the array :3  
Input 3 strings for the array :  
Element[0] : cat  
Element[1] : dog  
Element[2] : rat  
Expected Output:  
Here is the string below created with elements of the above array :  
cat, dog, rat  
[Click me to see the solution](https://www.w3resource.com/csharp-exercises/linq/csharp-linq-exercise-13.php)

Write a program in C# Sharp to arrange the distinct elements in the list in ascending order.  
Expected Output :  
Biscuit  
Brade  
Butter  
Honey  
[Click me to see the solution](https://www.w3resource.com/csharp-exercises/linq/csharp-linq-exercise-30.php)

## STRUCTURE

Write a program in C# Sharp to declare a simple structure.  
Expected Output:

Declare a simple structure :

--------------------------------

The sum of x and y is 40

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/structure/csharp-structure-exercise-1.php)

 Write a program in C# Sharp that shows what happens when a structure and a class instance are passed to a method.  
Expected Output:

When a structure and a class instance is passed to a method :

--------------------------------------------------------------

ns.n = 5

nc.n = 8

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/structure/csharp-structure-exercise-5.php)

Write a program in C# Sharp to demonstrates structure initialization using both default and parameterized constructors.  
Expected Output:

Structure declares using default and parameterized constructors :

-----------------------------------------------------------------

newStruct 1: m = 0, n = 0

newStruct 2: m = 25, n = 25

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/structure/csharp-structure-exercise-7.php)

Write a program in C# Sharp to demonstrates structure initialization without using the new operator.  
Expected Output :

Structure initialization without using the new operator :

--------------------------------------------------------

newStruct : m = 30, n = 40

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/structure/csharp-structure-exercise-8.php)

## DateTime

Write a C# Sharp program to extract the Date property and display the DateTime value in the formatted output.

Expected Output:

Complete date: 6/8/2016 11:49:00 AM

Short Date: 6/8/2016

Display date using 24-hour clock format:

6/8/2016 12:00 AM

06/08/2016 00:00

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/datetime/csharp-datetime-exercise-1.php)

Write a C# Sharp program to display the Day properties (year, month, day, hour, minute, second, millisecond etc.).

Expected Output :

year = 2016

month = 8

day = 16

hour = 3

minute = 57

second = 32

millisecond = 11

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/datetime/csharp-datetime-exercise-2.php)

Write a C# Sharp program to get the day of the week for a specified date.

Expected Output :

The day of the week for 7/11/2016 is Monday.

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/datetime/csharp-datetime-exercise-3.php)

Write a C# Sharp program to get a DateTime value that represents the current date and time on the local computer.

Expected Output :

English (Ireland):

Local date and time: 20/08/2016 15:49:03, Local

UTC date and time: 20/08/2016 10:19:03, Utc

English (South Africa):

Local date and time: 2016-08-20 03:49:03 PM, Local

UTC date and time: 2016-08-20 10:19:03 AM, Utc

......

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/datetime/csharp-datetime-exercise-5.php)

Write a C# Sharp program to retrieve the current date.

Expected Output :

General format 8/20/2016 12:00:00 AM

Display the date in a variety of formats:

8/20/2016

Saturday, August 20, 2016

8/20/2016 12:00 AM

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/datetime/csharp-datetime-exercise-8.php)

 Write a C# Sharp program that compares two dates.

Expected Output :

8/1/2016 12:00:00 AM is earlier than 8/1/2016 12:00:00 PM

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/datetime/csharp-datetime-exercise-16.php)

Write a C# Sharp program to get the number of days in the specified month and year.

Expected Output:

31

28

29

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/datetime/csharp-datetime-exercise-19.php)

## File Handling

Write a program in C# Sharp to create a blank file on the disk.  
Expected Output :

A file created with name mytest.txt

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/file-handling/csharp-file-handling-exercise-1.php)

Write a program in C# Sharp to remove a file from the disk.  
Expected Output :

Remove a file from the disk (at first create the file ) :

--------------------------------------------------------------

The file mytest.txt deleted successfully.

Remove a file from the disk (at first create the file ) :

--------------------------------------------------------------

File does not exist

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/file-handling/csharp-file-handling-exercise-2.php)

Write a C# Sharp program to create a blank file on the disk if the same file already exists.  
Expected Output :

A file created with name mytest.txt

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/file-handling/csharp-file-handling-exercise-3.php)

**4.** Write a program in C# Sharp to create a file and add some text.  
Expected Output:

A file created with content name mytest.txt

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/file-handling/csharp-file-handling-exercise-4.php)

**5.** Write a C# Sharp program to create a text file and read it.  
Expected Output :

Here is the content of the file mytest.txt :

Hello and Welcome

It is the first content

of the text file mytest.txt

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/file-handling/csharp-file-handling-exercise-5.php)

**6.** Write a program in C# Sharp to create a file and write an array of strings to the file.  
Test Data :  
Input number of lines to write in the file :2  
Input 2 strings below :  
Input line 1 : this is 1st line  
Input line 2 : this is 2nd line  
Expected Output :

The content of the file is :

----------------------------------

this is 1st line

this is 2nd line

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/file-handling/csharp-file-handling-exercise-6.php)

Write a program in C# Sharp to read a specific line from a file.  
Test Data and Expected Output :

Input number of lines to write in the file :3

Input 3 strings below:

Input line 1 : line1

Input line 2 : line2

Input line 3 : line3

Input which line you want to display :3

The content of the line 3 of the file mytest.txt is :

line3

[Click me to see the solution](https://www.w3resource.com/csharp-exercises/file-handling/csharp-file-handling-exercise-13.php)