**C# MCQ**

1. What is the need for ‘Conversion of data type’ in C#?
2. To store a value of one data type into a variable of another data type
3. To get desired data

### To prevent situations of runtime error during change or conversion of data type

1. None of the mentioned
2. What are the types of ‘Data Conversion’ in C#?
3. Implicit Conversion

### Explicit Conversion

1. Implicit Conversion and Explicit Conversion
2. None of the mentioned
3. What is the subset of ‘int’ datatype?
4. long, ulong, ushort
5. long, ulong, uint

### long, float, double

1. long, float, ushort
2. CLR stands for .
3. Common Type System
4. Common Language Specification

### Common Language Runtime

1. Java Virtual Machine

## What will be the output of the following C# code? static void Main(string[] args)

{

## int a, b, c, x; a = 90; b = 15;

c = 3;

## x = a - b / 3 + c \* 2 - 1; Console.WriteLine(x); Console.ReadLine();

| } |  |
| --- | --- |
| **A.** | **90** |
| B. | 92 |
| C. | 89 |
| D. | 88 |

1. What will be the output of the following C# code?

static void Main(string[] args)

{

int []a = { 1, 2, 3, 4, 5, 6, 7, 8, 9, 10};

func(ref a); Console.ReadLine();

}

static void func(ref int[] x)

{

Console.Write(" numbers are : "); for (int i = 0; i < x.Length; i++)

{

if (x[i] % 2 == 0)

{

x[i] = x[i] + 1; Console.Write(x[i] +" ");

}

}

}

### numbers are : 3 5 7 9 11

1. numbers are : 2 4 6 8 10
2. numbers are : 2 3 4 5 6
3. none of the mentioned
4. The correct way of incrementing the operators are:
5. d =+ 1

### c += 1

1. b ++ 1

D. ++ a ++

1. Which reference modifier is used to define reference variables?

### &

1. ref
2. #
3. $

### What are the types of classes in C#?

**Ans:** static classes, abstract classes, and sealed classes.

### What is a managed and unmanaged code?

**Ans:** The resource, which is with in your application domain is, managed code. The resources that are within domain are faster. Managed code uses CLR which in turns looks after your applications by managing memory, handling security, allowing cross - language debugging, and so on.

The code, which is developed outside .NET, Framework is known as unmanaged code. Applications that do not run under the control of the CLR are said to be unmanaged.

### What are extension methods in C#?

Ans: Extension methods enable you to "add" methods to existing types without creating a new derived type, recompiling, or otherwise modifying the original type. Extension methods are static methods, but they're called as if they were instance methods on the extended type.

### What is the difference between an Array and ArrayList in C#?

**Ans:** Array:An array is a group of like-typed variables that are referred to by a common name Nd Arraylist:ArrayList represents an ordered collection of an object that can be indexed individually. It is basically an alternative to an array. It also allows dynamic memory allocation, adding, searching and sorting items in the list.

### What is Boxing and Unboxing in C#?

**Ans:** Boxing and unboxing in C# allows developers to convert

.NET data types from value type to reference type and vice versa. Converting a value type to a reference type is called called boxing in C# and converting a reference type to a value type is called unboxing in C#.

### Difference between the Equality Operator (==) and Equals() Method in C#?

**Ans:** The equality operator == checks whether two operands are equal or not, and the Object. Equals() method checks whether the two object instances are equal or not.

### What is the difference between constant and readonly in C#?

**Ans:**Constants are copied into every assembly that uses them, while readonly fields are shared across assemblies. Constants don't have memory allocation during runtime because they are embedded into the IL code. On the other hand, readonly fields allocate memory because they are stored in the loader heap

### What is the difference between String and StringBuilder in C#?

**Ans:** String is immutable, Immutable means if you create string object then you cannot modify it and It always create new object of string type in memory.

StringBuilder is mutable, means if create string builder object then you can perform any operation like insert, replace or append without creating new instance for every time.it will update string at one place in memory doesnt create new space in memory.

# C# Coding Problems

### Write a program in C# Sharp to reverse a string?

using System; class Sol {

public static void Main(string[] args) {

Console.WriteLine("Enter a string: "); string Str= Console.ReadLine();

char[] array = inputString.ToCharArray(

Array.Reverse(array);

string rev= new string(array);

Console.WriteLine("Reversed string:"+rev);

}

}

### Write a program in C# Sharp to reverse the order of the given words?

using System; class Sol {

public static void Main(string[] args) { Console.WriteLine("Enter a string: "); string Str= Console.ReadLine();

string[] Str2 = inputString.Split(' '); Array.Reverse(Str2);

string revStr = string.Join(" ", Str2);

Console.WriteLine("Reversed string:"+ reversedString);

}

}

### Write a program in C# Sharp to find if a given string is palindrome or not?

using System; class Sol {

public static void Main(string[] args) {

Console.WriteLine("Enter a string: "); string str = Console.ReadLine();

bool Pal = true;

int a = 0;

int b = str.Length - 1;

while (a < b) {

if (str[a] != str[b]) {

Pal= false;

break;

}

a++; b--;

}

if (Pal) {

Console.WriteLine("palindrome.");

} else {

Console.WriteLine("not a palindrome.");

}

}

}

### Write a C# program to find the substring from a given string.

using system

class Sol {

public static void Main(string[] args) { Console.WriteLine("Enter a string: "); string str = Console.ReadLine();

Console.WriteLine("Enter a substring to search for: "); string sub = Console.ReadLine();

int i = str.IndexOf(sub);

if (i!= -1) {

Console.WriteLine("Substring found at index "+i);

}

else {

Console.WriteLine("Substring not found");

}

}

}