

Interview Questions and Answers of Array

What is an array and how to declare array?

An array is a special type of data type which can store fixed number of values sequentially using special syntax.

```
using System;
namespace IntroductionToArray
{
    class Program
    {
        static void Main(string[] args)
        {
            string[] Days = {
"Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday", "Sunday" };

            foreach (var day in Days)
            {
                Console.WriteLine("Name of day:{0}", day);
            }
            Console.ReadLine();
        }
    }
}
```

What are the types of array?

There are basically 3 types of array

1. Single-dimensional arrays
2. Multidimensional arrays or rectangular arrays
3. Jagged arrays

Single-Dimensional: Single-dimensional arrays are the simplest form of arrays. These types of arrays are used to store number of items of a predefined type. All items in a single dimension array are stored contiguously starting from 0 to the size of the array -1.

```
int[] arr = new int[5];
```

```
using System;
namespace IntroductionToArray
{
    class Program
    {
        static void Main(string[] args)
        {
            string[] Days = {
"Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday", "Sunday" };

            foreach (var day in Days)
            {
                Console.WriteLine("Name of day:{0}", day);
            }
            Console.ReadLine();
        }
    }
}
```

Multidimensional or Rectangular: A multi-dimensional array, also known as a rectangular array is an array with more than one dimension. The form of a multi-dimensional array is a matrix.

```
int[,] arr=new int[3,3];
```

```
using System;
namespace IntroductionToArray
{
    class Multi_DimentionalArray
    {
        static void Main()
        {
            int[,] DimetionalArray = new int[3,3]{ {11,12,13}, {14,15,16}, {17,18,19} };

            foreach (var array in DimetionalArray)
            {
                Console.WriteLine(array);
            }
        }
    }
}
```

Jagged Arrays: Jagged arrays are arrays of arrays. The elements of a jagged array are other arrays.

```
int[][] intJaggedArray = new int[3][];
```

```
using System;
namespace IntroductionToArray
{
    class JaggedArray
    {
        static void Main()
        {
            int[][] jaggedArray = new int[2][];
            jaggedArray[0] = new int[3] { 1, 2, 3 };
            jaggedArray[1] = new int[2] { 4, 5 };

            Console.WriteLine(jaggedArray[0][0]);
            Console.WriteLine(jaggedArray[1][0]);
            Console.WriteLine(jaggedArray[0][2]);
            Console.ReadLine();
        }
    }
}
```

How to sort given array

```
using System;
namespace IntroductionToArray
{
    class SortArray
    {
        static void Main()
        {
            int[] Number =new int[10]{1,0,1,0,1,0,1,0,1,0};

            Array.Sort(Number);
        }
    }
}
```

```

        foreach (var num in Number)
        {
            Console.WriteLine(num);
        }
    }
}

```

How will you sum given array?

```

using System;
using System.Linq;
namespace IntroductionToArray
{
    class SumArray
    {
        static void Main()
        {
            int[] Marks = new int[6] { 80,75,60,72,68,90};

            int TotalMarks = Marks.Sum();

            Console.WriteLine("Student Total Marks:{0}",TotalMarks);
            Console.ReadLine();
        }
    }
}

```

Sort given array in descending order?

```

using System;
namespace IntroductionToDelegate
{
    class MultiCastDelegate
    {
        static void Main()
        {
            int[] Numbers = new int[10] {50,20,10,60,70,80,90,30,40,100};

            Array.Sort(Numbers);
            Array.Reverse(Numbers);

            foreach (var item in Numbers)
            {
                Console.WriteLine("Sorted Array:{0}",item);
            }
        }
    }
}

```