

C#

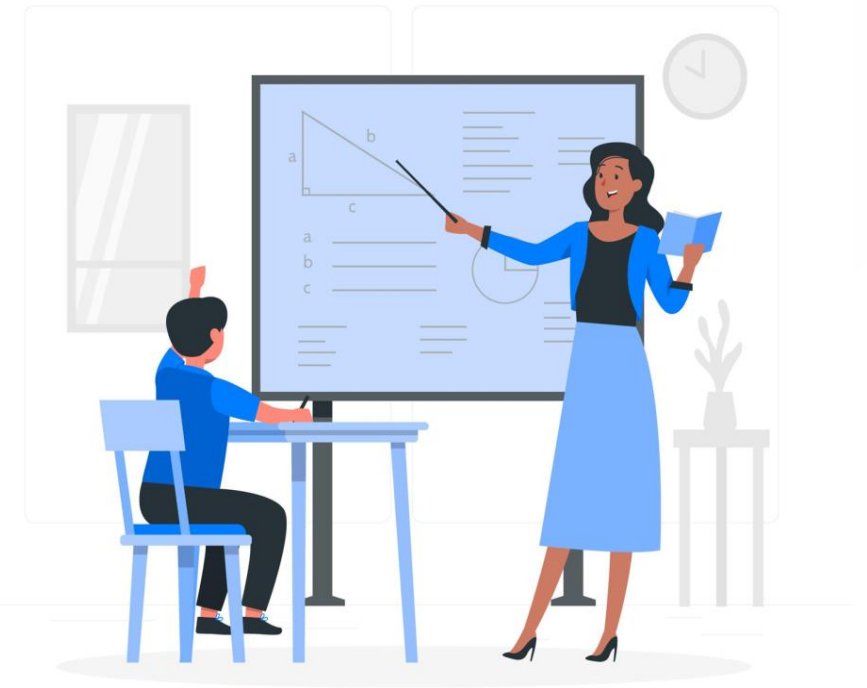


Array

A dynamic array does not have a predefined size.
The size of a dynamic array increases as you add new items to the array.

Syntax of defining an array

```
data_type[] array_name = new data_type[size];
```



Initializing Arrays.

Once an array is declared, the next step is to initialize an array.

The initialization process of an array includes adding actual data to the array.

First:

// Initialize a fixed array

```
int[] FixedArray = new int[3] {1, 3, 5};
```

// Initialize a dynamic array items during declaration

```
string[] jobs= new string[] { "Manager", "Developer",  
"Accountant", "Marketing};
```



Single-dimensional arrays

Single-dimensional array is a collection of elements of the same type, arranged in a sequential manner. It is the most basic form of an array and can be declared and used as follows:

```
// Example: Creating an integer array with 4 elements  
string[] roles= new string[4];
```

```
// Assigning values to array elements  
roles[0] = "CompanyMember";  
roles[1] = "JobSeeker";  
roles[2] = "JobProvider";  
roles[3] = "Admin";
```

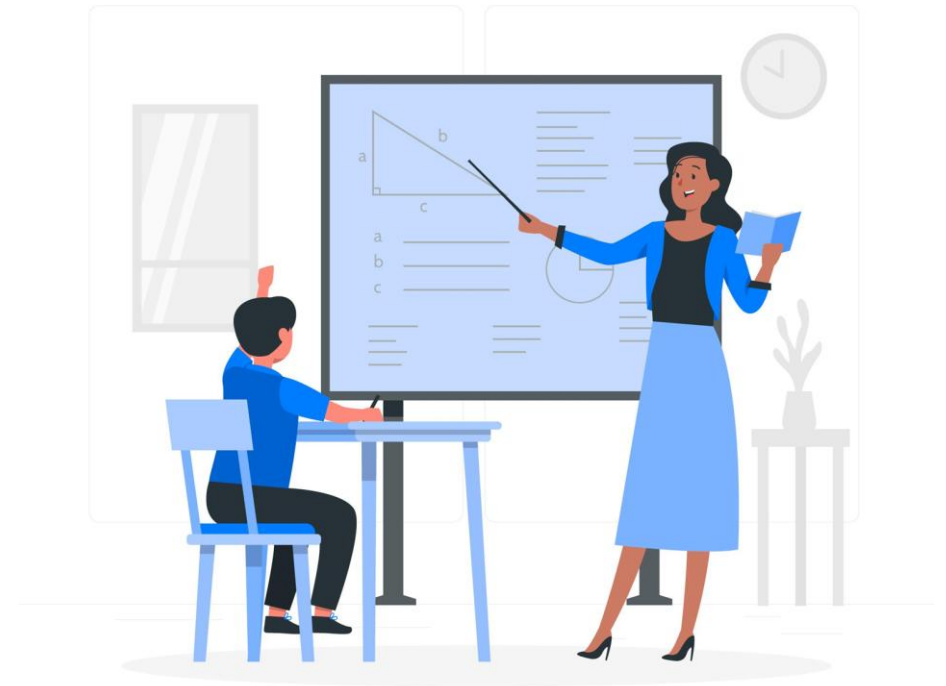
```
// Iterating over array elements using a loop  
for (int i = 0; i < roles.Length; i++)  
{  
    Console.WriteLine(roles[i]);  
}  
Console.ReadLine();
```

```
CompanyMember  
JobSeeker  
JobProvider  
Admin  
|
```

Array Types

Arrays can be divided into the following categories.

- ✓ Single-dimensional arrays
- ✓ Multidimensional arrays or rectangular arrays
- ✓ Jagged arrays



Enum

Example:

```
public enum Roles  
{  
    JobSeeker, Admin, JobProvider, CompanyMember  
}
```

Type Conversions

Type conversion is converting one type of data to another type. It is also known as Type Casting.

In C# Type casting has two forms

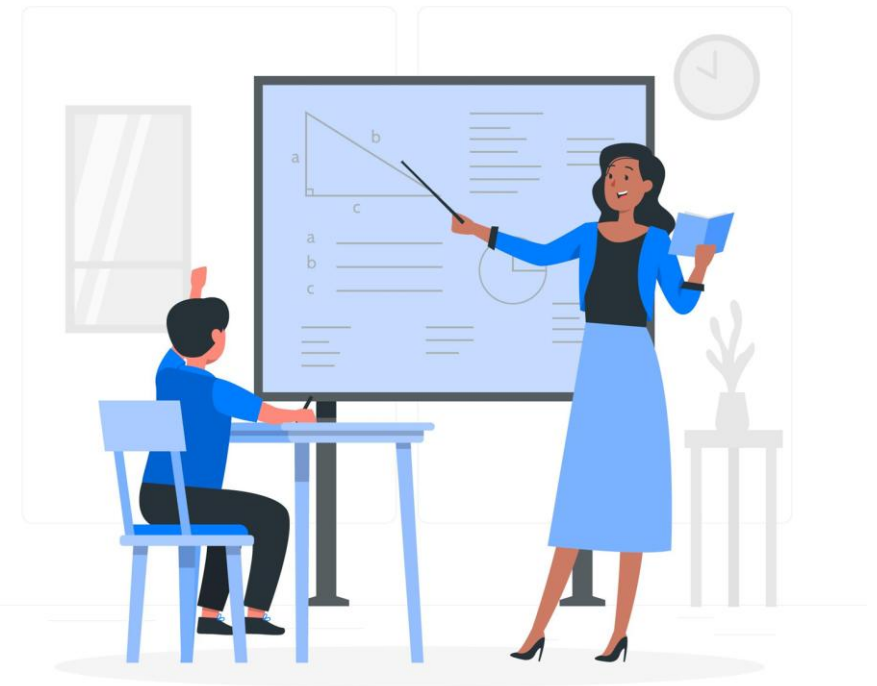
1. Implicit type conversion
2. Explicit type conversion



Implicit type conversion

- conversions from smaller to larger integral types

```
int salary= 250000;  
long sal= salary;  
// implicit conversion from int type to long type
```



Explicit type conversion

- ❑ Explicit type conversion:- These conversions are done explicitly by users using the pre-defined functions.

```
long salary= 25000;  
int sal= (int)salary;  
// explicit conversion from long type to int type
```

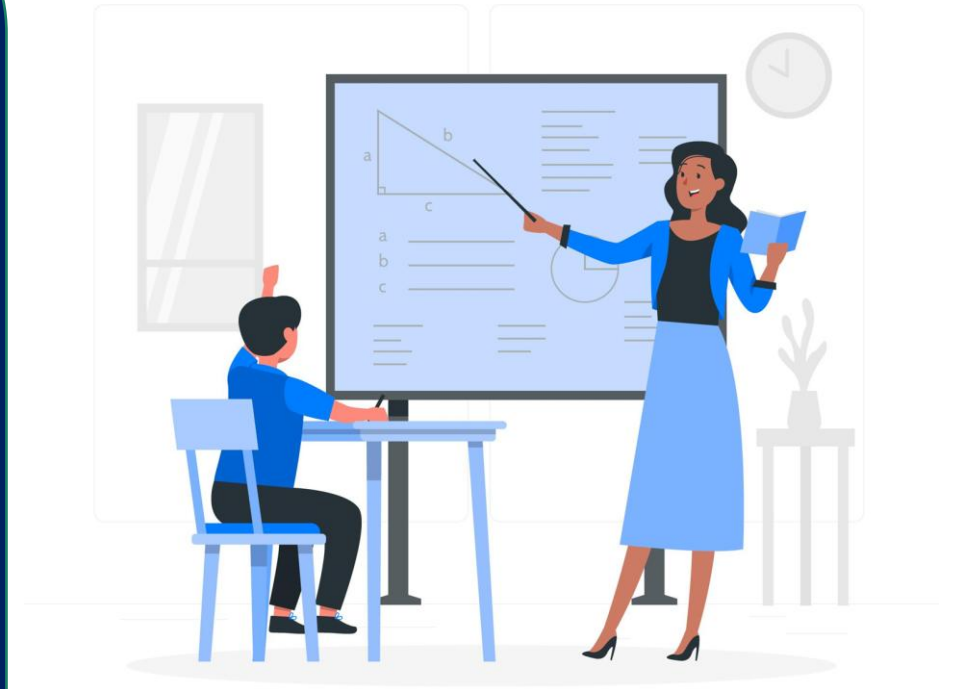


Structures

A structure is a value type data type. It helps you to make a single variable hold related data of various data types. The struct keyword is used for creating a structure.

Structures are used to represent a record.

```
struct Books {  
    public string title;  
    public string Name;  
    public int Price;  
};
```



Thank You