Arrays in C++

Introduction to Arrays in C++

An array in C++ is a collection of variables of the same type stored in contiguous memory locations. It allows you to store multiple items of the same type together. Arrays can be useful when you need to keep track of many pieces of data of the same type.

Declaration:

To declare an array in C++, you specify the type of its elements and the number of elements required by an array as follows:

```
type arrayName[arraySize];
```

For example:

```
int numbers[5];
```

Initialization:

You can initialize an array in C++ either one by one or using a single statement as follows:

```
int numbers[5] = {1, 2, 3, 4, 5};
```

Accessing Array Elements:

Array elements are accessed using the index, which starts at 0. For example:

```
int numbers[5] = {1, 2, 3, 4, 5};
cout << numbers[0]; // Output: 1
```

Key Points:

Arrays in C++

- Arrays have a fixed size.

- The index of the first element is 0.

- The index of the last element is size - 1.

- Elements in an array are stored in contiguous memory locations.

- C++ does not perform bounds checking on array access.