

C++ Arrays

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Arrays are used to store multiple values in a single variable, instead of declaring separate variables for each value.

To declare an array, define the variable type, specify the name of the array followed by **square brackets** and specify the number of elements it should store:

```
string cars[4];
```

We have now declared a variable that holds an array of four strings. To insert values to it, we can use an array literal - place the values in a comma-separated list, inside curly braces:

```
string cars[4] = {"Volvo", "BMW", "Ford", "Mazda"};
```

To create an array of three integers, you could write:

```
int myNum[3] = {10, 20, 30};
```

Access the Elements of an Array

You access an array element by referring to the index number inside square brackets `[]`.

This statement accesses the value of the **first element** in **cars**:

Example

```
string cars[4] = {"Volvo", "BMW", "Ford", "Mazda"};  
cout << cars[0];  
// Outputs Volvo
```

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Note: Array indexes start with 0: [0] is the first element. [1] is the second element, etc.

Change an Array Element

To change the value of a specific element, refer to the index number:

```
cars[0] = "Opel";
```

Example

```
string cars[4] = {"Volvo", "BMW", "Ford", "Mazda"};
```

```
cars[0] = "Opel";
```

```
cout << cars[0];
```

```
// Now outputs Opel instead of Volvo
```