



Array

Array

- Special type of Variable
- Hold multiple values of the same data type
- Size is fixed
- Supports both primitives & non-primitives
- Every Element has index numbers



Declaring arrays

There are 2 ways to declare one-dimensional arrays:

1. Specify the type, and then specify square brackets `[]` and finally array variable name.

```
int[] scores;  
String[] names;  
Student[] students;
```

2. Specify the type, and then specify the array variable name which is followed by square brackets `[]`.

```
int scores[];  
String names[];  
Student students[];
```

Instantiating arrays

To instantiate one dimensional array, use the keyword **new**, followed by **type** and then finally specify the size within square brackets **[]**

1. Declare and instantiate in separate statements

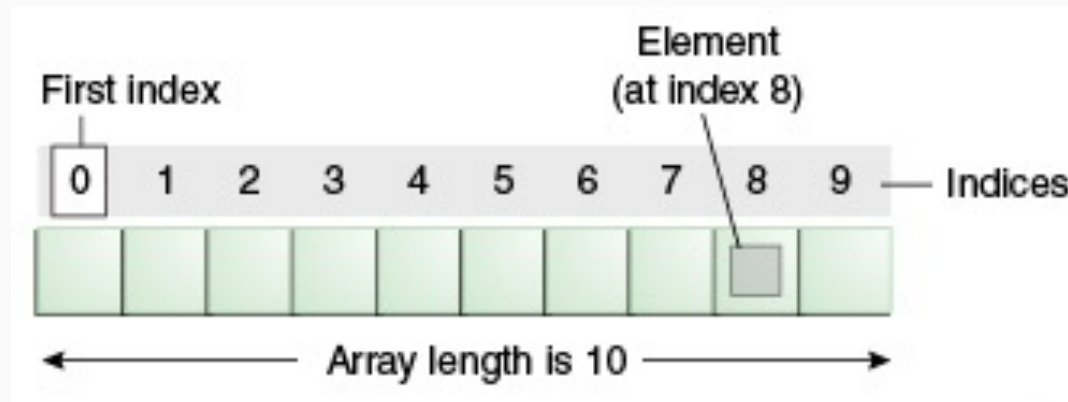
```
int[] scores;  
scores = new int[4];
```

2. Declare and instantiate in single statements

```
int[] scores = new int[4];  
String[] names = new String[5];
```

Accessing Array Elements

- Elements of an array can be accessed by using the square brackets `[]`.
- Index number needs to be provided



Assigning values to Array Elements

```
numbers[0] = 20;
```

arrayRefVar index value

```
numbers[3] = 30;
```



numbers[0] numbers[1] numbers[2] numbers[3] numbers[4] numbers[5]

Array Initialization

- Like regular variables, Java also allows you to initialize an array's elements when you create the array

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