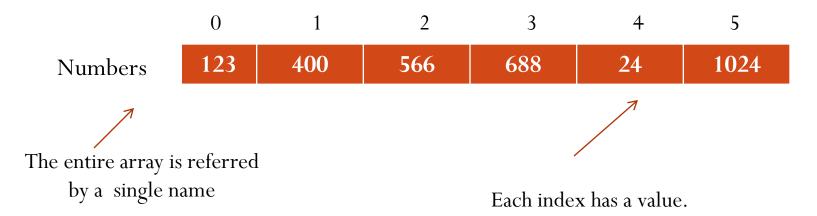
# ARRAYS IN JAVA

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### **ARRAYS**

An array can be considered as a group which is a collection of like variables referred by a common name



- An array can be of any data type for example: Float, String etc
- An element of an array is referred by its index.

#### ARRAY DECLARATION

• The declaration of an array is as follows:-

```
type variable_name[];

Data type Array name
```

```
For example: int [] result= new int[10];

float [] result= new float[400];

char[] codes= new char[1700];

boolean[] flags= new boolean[30];
```

### ARRAY INITIALIZATION

- Initialization of an array is defined by giving values to an array.
- The values are seperated by commas and enclosed in braces.
- Examples:-

```
int [] scores={26,89,233,344,24,789};
char [] grades ={'A','B','C'};
```

Note when an array is initialized:

- new operator is not used.
- size value is not specified.

### PROCESSING ARRAYS

- All array indexes start with index zero.
- A specified element of an array can be accessed by specifying its index within square brackets.

```
Example: int [] scores={26,89,233,344,24,789};
System.out.println(scores[4]);
```

- A for ( ) loop is used to process each of the elements present in an array turn by turn.
- The loop is controlled by a controlled variable i, which is used to access array elements.

#### For Example:

## **BOUND CHECKING**

- Once an array is created, it has a fixed size and the index must be in bounds (0 to N-1).
- The java interpreter throws

  ArrayIndexOutOfBoundsException if an array index is out of bounds.
- If an array result contains 100 values then its index must range from 0 to 99. If it does not happen it will cause the above exception to be thrown.

```
For example: for(int i=0; i<=100; i++) result[i]=i*100;
```

Thank You.

Any Questions?