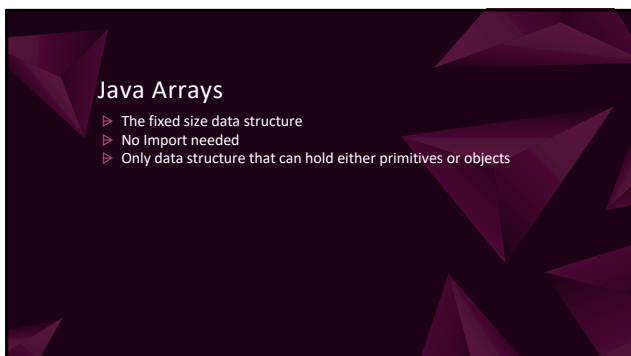
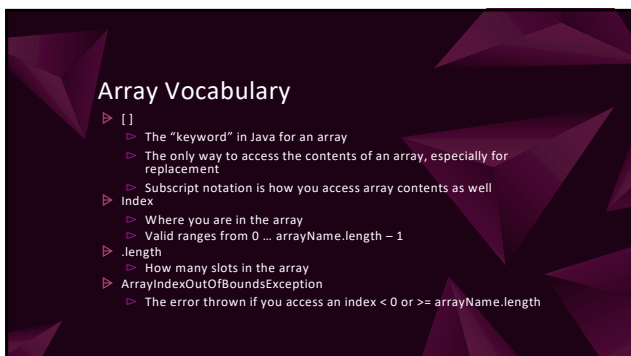




1



2



3

Array Syntax

```
T/type [] name = new T/type [how big];
```

4

Why so hipster?

- ▶ An array is an Object with NO constructors, or methods of its own
 - ▶ Not a single use of ()!!!
- ▶ An array has a public data member!
- ▶ Array are the only use of the [] symbols in Java
- ▶ No keyword
- ▶ Fixed size
- ▶ Holdover from C/C++

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Arrays: Replace not remove

- ▶ Since it is fixed in size you can only replace values with another value of the same t/Type
- ▶ Place the `arrayName[index]` on the left hand side of the assignment operator to assign/replace the current contents at that index
- ▶ In the case of primitive value arrays the default value is the default for the data type so you may want to use a better value to check
- ▶ Object based arrays contain null as the default value

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Arrays: Retrieval

- ▶ Place the `arrayName[index]` on the right hand side of the assignment operator to retrieve the value at the current index
- ▶ Retrieving a primitive value gives you a COPY of the value stored at that index
- ▶ Retrieving an object gives you a reference to the object.
 - ▶ So if you modify its internal state it will change

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Arrays: Take a look inside

- ▶ Contents are most often accessed via loop
- ▶ The index parameter must meet these conditions
 - ▶ `Index >= 0`
 - ▶ `Index < arrayName.length`
- ▶ Use a standard for loop for any replacement based operations or algorithms
- ▶ A for-each loop is best when accessing regardless of position or providing output
 - ▶ Reminder for-each has no access to index
 - ▶ For-each does not allow replacement

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Reminders

- ▶ Java Strings are NOT an Array
 - ▶ No use of subscript `[]` notation works in Java Strings
- ▶ ArrayLists are also NOT an Array
 - ▶ No subscript `[]` notation
 - ▶ Methods rock 🤖
 - ▶ Dynamically sized

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