
ArrayList as fields

COMP 102

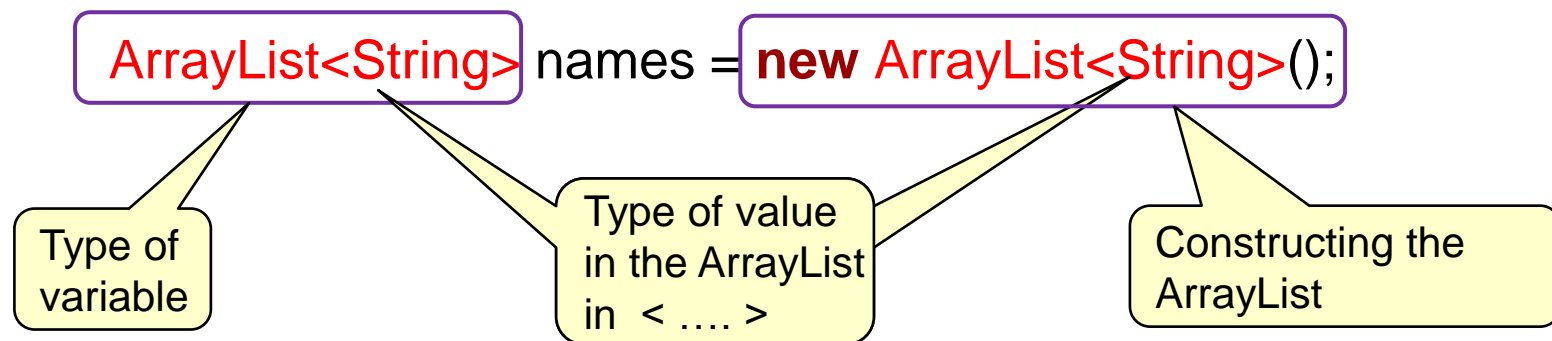
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Dealing with lots of values

- We've used ArrayLists and Lists
 - ArrayLists of numbers, Strings, other objects.
- Created by methods
 - `UI.askNumbers(...)` and `UI.askStrings(...)`
 - `Files.readAllLines(Path.of(filename))` (actually, gave us a List, not ArrayList)
- Used **for** each loops to step through items in an ArrayList
- What more can you do with an ArrayList?
 - How can we modify an ArrayList?

Using ArrayList: create new

- Creating empty ArrayList:



- Must specify the type of value
 - Can't be a primitive data type (`int` or `double` or `boolean`)
Have to use `Integer` or `Double` or `Boolean` (“wrapper” objects)
- `ArrayList<Integer> numbers = new ArrayList<Integer>();`
- Must have the () - standard constructor, with no arguments.
 - `names.add(UI.askString(“Name”));`

Acting on each item in an ArrayList:

```
private ArrayList< CartoonCharacter > characters = new ArrayList< CartoonCharacter >();
```

```
...
```

```
for (CartoonCharacter cc : characters) {  
    cc.doWalk();  
}
```

Changes the `cc`s, but doesn't change the list – the characters are still the same objects.

You cannot **change** the list inside a foreach loop

