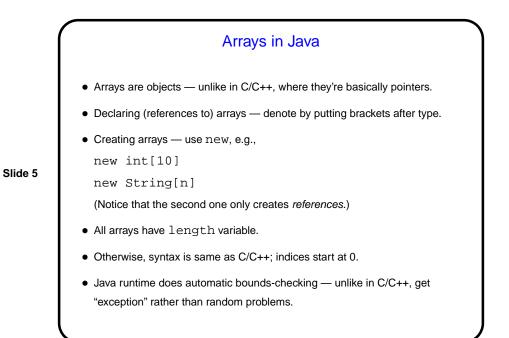
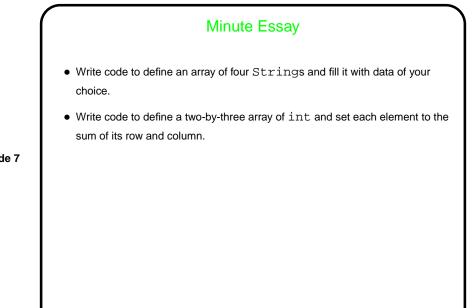


Sidebar — Immutable Objects String is an example of a class that's "immutable" — once created, objects

- String is an example of a class that's immutable once created, object can't be changed. If you look at the API for String, you notice that methods that "change" the string actually return a new one.
- This sounds inconvenient, right? What advantages might it have? (Remember that "object" variables in Java are really references. So two variables may both refer to the same object.)



Multidimensional Arrays • "Arrays of arrays", e.g., int[][] x = new int[10][100]; declares an array of 10 arrays of 100 ints. • Reference elements with row, column indices, e.g., x[row][col] = 10; • Both dimensions accessible: x.length = ? x[0].length = ?



	Minute Essay Answer
	 One solution (array of Strings): String[] s = new String[4]; s[0] = "hello"; /* other three lines similar */
Slide 8	<pre>• One solution (array of ints): int[][] a = new int[2][3]; for (int row = 0; row < a.length; ++row) for (int col = 0; col < a[0].length; ++col) a[row][col] = row + col;</pre>