

Slide 1

Administrivia

- Reminder: Homework 4 due today.

Slide 2

Loops in Scala — Review/Recap

- Scala provides three loop-like constructs — `while`, `do while`, and `for`.
- `while` and `do while` work as their names might suggest (and the difference is in whether the test to check whether the loop should continue happens before each iteration or after). These constructs would likely be familiar to programmers who know some other imperative language. They're a little un-Scala-like because they require mutable (`var`) variables.
- `for` is actually not a loop but a “comprehension” — a way of repeating some operation on all elements of a sequence. However, in some of its simple forms it would be familiar to programmers who know another imperative language.
- (Let's rewrite our array/list demo programs to use loops.)

Multidimensional Arrays

Slide 3

- Arrays and lists are useful for representing the kinds of things we might use subscripted variables in math. What about variables with multiple subscripts, though? such as matrices?
- Like many programming languages, Scala provides “multidimensional arrays” for this purpose. Like Java (on which it is based), Scala represents these as arrays of arrays — which makes a kind of sense, no?
- As an example (and also to illustrate more things about loops), we could write a simplified “ASCII art” program that works on two-dimensional arrays of characters and lets us do some simple drawing operations.

Minute Essay

Slide 4

- None — quiz.