

Arrays

CSE 114 INTRODUCTION TO OBJECT-ORIENTED PROGRAMMING

1

Announcements

Topics:

- Arrays (Chapter 7 in Think Java)
- Scope of a variable
- Memory diagrams involving arrays
- `null` as the default object reference value
- Random numbers (7.6 and notes)

2

Reading Data and Random Numbers

Random numbers

- Random numbers will be useful as we write programs with arrays later
- So, let's study random numbers first before we study arrays, which we will do next
- Yes, we will still be expanding the part of a function in our program structure when we introduce arrays next
- See [RandomNumbers.java](#)

3

Arrays (also `for` loop)

Discuss the idea of arrays

See [Average.java](#) to see how arrays are created and used

Another example:

- See [ArrayExamples.java](#)

4

Arrays as Arguments and Return values

Memory Representation

Function taking an array as argument

- See [largest](#) and [scale](#) methods in [ArrayExamples.java](#)

Function returning an array as its return value

- See [randomIntArray](#) in [ArrayExamples.java](#)

Scope of a variable

- See [Scope.java](#)

Memory representation with arrays

- Will do this together in class
- It is very **important** that you understand this!
 - See [MemoryRep.java](#)
- See [scale](#) in [ArrayExamples.java](#) as well

5