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**Let’s say I need to store a bunch of shoes**

**So what is an array?**

A group of adjacent memory locations

An array stores many pieces of data of the same type.

Each has a distinct **index (i.e. location in the group)**, starting at

**How do I create it?**

Step 1: Declare – 1 of 2 ways Memory:

Step 2: Initialize

OR – Do Step 1 and 2 together!

**How do I access values?**

We use values stored in an array just like any other variable

int [ ] coeff = {4, 10, 3}; Memory:

double answer = coeff[0] \* 25;

Indices:

**How do I know how big my array is later?**

To find the length of an array named “coeff”:

int coeffslength =

**How do I store LOTS of values?**

Suppose I want to ask the user for 100 grades, and store them for later use.

1. Declare and initialize my array named grades:

2. Initialize the values in grades so that they are all -1:

How could I change step 2 so that all values come from the user?

Scanner myscan = new Scanner(System.in);

What about reading it all in from a file, if we know there are exactly 100 grades in the file?

File file = new File(“myfile.txt”);

Scanner scan = new Scanner(file)

while(

Let’s say I’ve stored the ages of Best Actress winners into an array, by reading them in from a file. How can I show the user the ages, and find the average age?

**Output everything in the array**

//let’s assume we have an array named ages

//use System.out.println to output everything in ages

for ( int

**Find the average of all array values**

sum = 0;

for (int i = 0;

**Now I need a new copy of ages, so that I have 2 arrays of all ages**

//I want to create another array named “ages2” that has all of the same data as ages

int[] ages2 = ages; // what happens?

**The user has changed some of my array’s values. How can I tell if they both still hold the same data?**

if (ages == ages2)// will this work?

System.out.println (“they’re equal.”);

// to actually determine whether 2 arrays contain the same data

boolean isEqual = true;

if // check the lengths

else // lengths equal so check the data

for (

**I need to add 2 more ages to the array. How can I enlarge the existing array?**