Intro to Arrays

Mr. Neat Java How many variables in a program before it gets too hard to perform the operation?

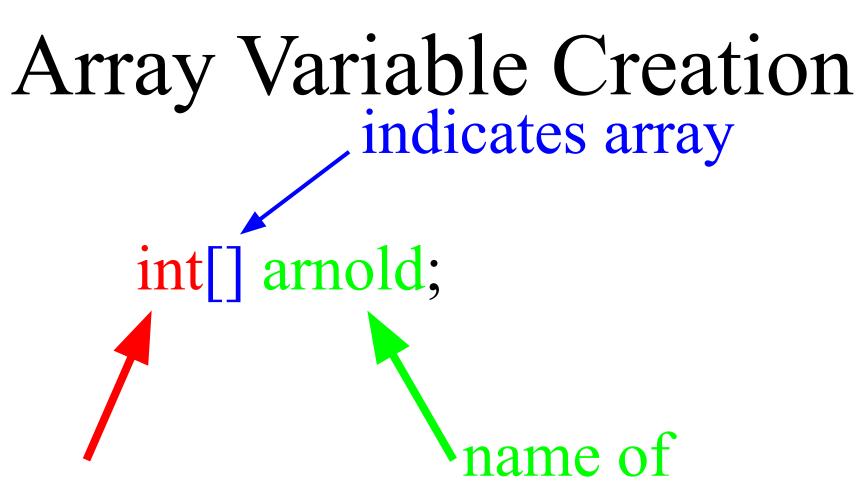
- averaging 3 scores (3 variables?)
- averaging 10 scores (10 variables?)
- averaging 100 scores (100 variables?)

New Topic: Ta Da

Array: one variable, refers to a whole group values of the same type

Array Definition

- list of values of the same type stored in one variable
- each value in the list is an element
- the array is just one variable (array variable)
- the array variable initially has no elements
- assign number of elements with "new"
- each element initially has no value



type stored in array

name of array

Array Variable: Set the Size

variablename = new type[#elements]

```
reserved word
(constructs)
arnold = new int[100];
```

Note: This command constructs the array.

Array Variable: Set the Size

arnold = new int[100];

In words:

The array arnold holds 100 integers

Array Variable: Get the Size

System.out.print(arnold.length);

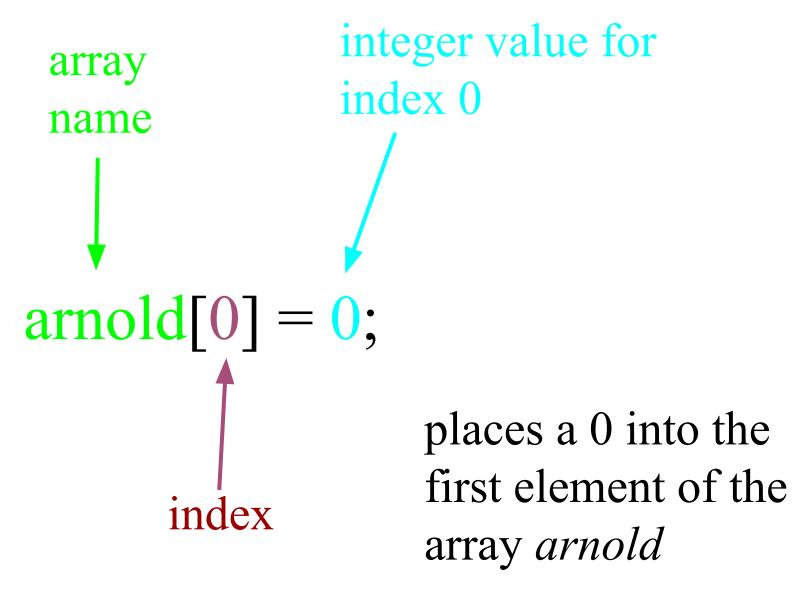
Note: have to set the size before you can get the size

Array Variable: Learn to Start from zero

- array elements start at zero
- access each element with []

-"Ok, on the count of three. Ready? Zero, one, two!"

Let's fill arnold with zero's



Array Variable: Setting Element Values

```
arnold[0] = 0;
arnold[1] = 0;
arnold[2] = 0;
arnold[3] = 0;
.../all the way to 99
```

Array Variable: Accessing each element

How would we output the tenth element of arnold?

System.out.println(arnold[9]);

Lab

- Make an array if integers
 - Set size to 10
- Give all 10 values of the following:
 - Respectively 9 to 0.
 - Ex: index 0 has 9 and index 9 has 0
- Print out all numbers