

# 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

# Array Variable Creation

indicates array

```
int[] arnold;
```

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  
name

integer value for  
index 0

**arnold**[0] = 0;

index

places a 0 into the  
first element of the  
array *arnold*

# 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 of 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