

Object Arrays

Mr. Poole
Java

Using Arrays with Objects

When using Objects in an array, we must remember a couple of things.

Methods and constructors are used the exact same way as a normal variable.

```
Chicken[] x = new Chicken[100];
```

This creates 100 Chickens

BUT they're empty!

We need to make sure to construct them!

| Index | Chicken |
|-------|---------|
| 0 | |
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |

Constructing Array Objects

```
Chicken[] x = new Chicken[100];  
x[0] = new Chicken();
```

This creates 100 Chickens

Now the first Chicken has been created!

Above is using the **empty constructor**,
You can use **any constructor** you want at this point.

| Index | Chicken |
|-------|---------|
| 0 | Bob |
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |

Using Methods on Array Objects

```
Chicken[] x = new Chicken[100];  
x[0] = new Chicken();  
x[0].cluck();
```

Just like a regular object,
we can **use methods on these Chickens.**

Here the first chicken is clucking.
It can only cluck **AFTER** it's been created

| Index | Chicken |
|-------|---------|
| 0 | Bob |
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |

Lab: War!

Given: Warrior and Wizard classes

1. Both classes have the following
 - a. Empty constructors and String constructors (sets name)
 - b. **public boolean isDead()**
 - i. Returns if the target is dead or not
2. Wizard has: **public void attack (Warrior)**
 - a. This attacks the Warrior for a certain amount of health. Warriors health is updated.
3. Warrior has: **public void attack (Wizard)**
 - a. This attacks the Wizard for a certain amount of health. Wizard health is updated.

Lab: War!

You're creating the main. The War!

1. Warriors and Wizard will be pitted against each other!
2. **Create 100 Warriors and Wizards**
3. Use the given methods to alternate attacking from Wizard to Warrior
 - a. Start at the first Warrior and Wizard
 - b. Wizards always attack first (they can cast from a far)
 - c. Once a player is dead, move onto the next player.
4. Once either the last Warrior or Wizard are dead, then you stop the war
 - a. Mention who won and how many fighters are left