



**CSE 115/503**  
April 11-15, 2011

## Announcements

- Lab 7 continued this week in recitation
- Exam 4 returned this week in recitation
  - If you have exams 1-3 that you have not picked up – see me.
- Lab 8 (continuation of Lab 7) will be due May 2<sup>nd</sup> for all sections
- Grades on UBLearns
  - If you have not come to see me about an issue, please do so.
- Exam 5 is Monday, April 25<sup>th</sup>

## Announcements - Lectures

- Friday, April 15 – Drew will be finishing the example we started this week
  - Adrienne is at a conference Thursday -> Saturday
  
- Friday, April 22 – no lecture

## Repetition

- The ability for a program to repeat a task
- Java has five different repetition mechanisms built in
  - Three types of general purpose loops
    - for, while, do-while
  - One type of special purpose loop
    - for-each loop
  - Recursion

## Repetition – for loop

- Syntax

```
for(initialization; expression; increment) {  
    //code to be repeated  
}
```

- **initialization** – typically we create a loop counter and assign it an initial value.

## Repetition – for loop

- Syntax

```
for(initialization; expression; increment) {  
    //code to be repeated  
}
```

- **expression** – this expression is a boolean expression (one that evaluates to true or false) and usually represents the end condition for the counter variable.

## Repetition – for loop

- Syntax

```
for(initialization; expression; increment) {  
    //code to be repeated  
}
```

- **increment** – change the value of the loop counter by some increment (or decrement)

## Repetition – for loop

- Syntax

```
for(initialization; expression; increment) {  
    //code to be repeated  
}
```

- **code to be repeated** – the code we want repeated each time. This is called the body of the loop.

## Repetition - Example

- Write a loop that executes 50 times

```
for(Integer count = 1; count <=50; count++) {  
}
```

## Equivalent Examples (Some)

```
for(Integer count = 0; count < 50; count++) {  
}  
for(Integer count = 1; count < 51; count++) {  
}  
for(Integer count = 0; count <= 49; count++) {  
}
```

## Equivalent Examples (A few more)

```
for(Integer count = 1; count < 51; count = count + 1) {  
}  
for(Integer count = 50; count > 0; count--) {  
}  
for(Integer count = 0; count < 100; count = count + 2) {  
}
```

## For-loop (Execution)

- The order the parts of the loop are executed in are perhaps best described in terms of a diagram.

