COMP 110
Introduction to Programming

Fall 2015
Time: TR 9:30 – 10:45
Room: AR 121 (Hanes Art Center)

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Previous Class

• What did we discuss?
Today

• Announcements
  • Assignment 1: Due TODAY @ 11:55 PM
    http://cs.unc.edu/~aikat/courses/comp110/assignments/Assignment1

• More For Loops

For Statement

• Syntax:
  – for (Initializing_Action; Boolean_Expression; Update_Action){
    Body;
  }

```plaintext
for (count = 1; count <= number; count++) {
    // all the actions
}
```
For Statement

- Flow chart
  - for (Initializing_Action;
    Boolean_Expression;
    Update_Action){
    Body;
  }

For Loop: Infinite Loop

- Still, if you get things wrong, it may never end

```java
int num = 3;
// initializing action; boolean expression; update action
for (count = 5; count >= num; count++)
{
    System.out.print(count + " ");
}
```
Ending a Loop

• If you know number of loop iterations?
  – Count-controlled loops
  – \texttt{for(count = 0; count < iterations; count++)}
• User controlled ending
  – Ask-before-iterating (e.g. “yes/no”)
  – Sentinel value
• \texttt{break;}
  – Break statements cause any loop to exit immediately

Exercise 1

• Ask user to input an integer
• If input is a one-digit number, then print the product of three consecutive integers, starting with the input
• If input is a two-digit number, then print the square of the number
• If input is a three or more digits, then quit the program with a message to user
• Setup a loop for the above to run this 5 times
Local Variables

- Open Eclipse
- New Java project etc.. You know the drill!

```java
public class test123 {
    public static void main(String[] args) {
        int num1 = 5;
        int count;

        for (count = 0; count <= num1; count++) {
            System.out.println(count);
        }
    }
}
```

```java
public class test123 {
    public static void main(String[] args) {
        int num1 = 5;
        int count;

        for (count = 0; count <= num1; count++) {
            int num2 = 10;
            System.out.println(count);
            System.out.println(num2);
        }
    }
}
```
Local Variables

public class test123 {
    public static void main(String[] args) {
        int num1 = 5;
        int count;
        for (count = 0; count <= num1; count++) {
            int num2 = 10;
            System.out.println(count);
            System.out.println(num2);
        }
        System.out.println(num2);
    }
}

Next class

• More on loops