Announcements

- Program 2 due Monday
- Program 3 assigned today
- Midterm in one week
Questions?
What does this code do?

```c
int oddSum = 0;
int evenSum = 0;
for (int i = 1; i <= 6; i++)
{
    if (i % 2 == 0)
    {
        evenSum = evenSum + i;
    }
    else
    {
        oddSum = oddSum + i;
    }
}
```
What is wrong with this code?

```c
int oddSum = 0;
int evenSum = 0;
for (int i = 1; i <= 6; i++)
{
    if (i % 2 == 0)
        evenSum = evenSum + i;
    else
        oddSum = oddSum + i;
}
```
What is wrong with this code?

```c
int oddSum = 0;
int evenSum = 0;
for (int i = 1; i <= 6; i++)
{
    if (i % 2 == 0)
    {
        evenSum = evenSum + i;
    }
}
else
{
    oddSum = oddSum + i;
}
```
Indentation

- Indentation
  - Makes code easier to read
  - Helps with finding syntax and logic errors
  - Indent code that goes between { and }

- Be consistent!
Using Brackets

- Brackets are required when your if/else or loop contains > 1 line of code!

- Brackets are highly recommended *even when* your if/else or loop contains 1 line of code

- Please use brackets around all your if/else or loop statements from now on!
Variables declared in outer scopes are visible to code inside inner scopes

```java
public static void main(String[] args) {
    int total = 15;
    int n = 5;
    if (n <= 10) {
        total = total + n;  // inner block
    }
    System.out.println(total);
}
```
Variables declared in inner scopes are NOT visible to outer code

```java
public static void main(String[] args) {
    int n = 5;
    if (n <= 10) {
        int total = 15 + n;
    }
    System.out.println(total);  // ERROR!!!
}
```
if (inputString.equals(""))
    canvas.setColor(Color.BLACK);
else if (inputString.equals("BLUE"))
    canvas.setColor(Color.BLUE);
else if (inputString.equals("GREEN"))
    canvas.setColor(Color.GREEN);
else if (inputString.equals("RED"))
    canvas.setColor(Color.RED);
else
    canvas.setColor(Color.WHITE);
else not needed when empty

```java
if (inputString.equals("MOUTH"))
{
    mouthStartAngle = 0;
}
else
{
}
```

Also not needed when you are setting a variable to the same value it already has: (mouthStartAngle = 180; )
Using `else if` instead of just `if`

```java
if (inputString.equals("MOUTH"))
{
    mouthStartAngle = 0;
}
if (inputString.equals("EYES"))
{
    eyeColor = JOptionPane.showInputDialog("Enter an eye color.");
}

Compiler tests both statements even if 1st one is true
if (inputString.equals("MOUTH"))
{
    mouthStartAngle = 0;
}
else if (inputString.equals("EYES"))
{
    eyeColor = JOptionPane.showInputDialog("Enter an eye color.");
}

Compiler only tests else if statement if the 1st if statement is false
Tomorrow

- Read Section 5.1

- Classes
  - You will need them to complete Program 3