

The background of the slide is a grayscale image of a circuit board. It features a complex network of black lines representing traces and several large black circular pads. A prominent dark horizontal band runs across the middle of the image, creating a central area for text. The overall aesthetic is technical and modern.

CMSC 131

Fall 2018

Announcements

- Project #1 (Orioles Baseball) due Sunday

Computers are Fast!

FastArithmetic.java

Stopping an Infinite Loop!

Eclipse Demo...

Nested Loops

Examples:

GuessingGame.java

Rectangle.java

Stripes.java

One Example, 3 Techniques

User enters a size. For size 5, print:

X0000

XX000

XXX00

XXXX0

XXXXX

1. Using a “formula” to compute number of O’s on current row
2. Maintaining a variable for number of O’s on current row
3. Using a comparison to decide whether to print X or O

Increment Operator

- Some expressions carry a “value”
- Some expressions have “side effect(s)”
- These three expressions have the same *side effect*:

`x = x + 1`

`x++`

`++x`

- `x++` and `++x` carry different *values*.

Self-Test

```
int a = 7;  
int b = a++ + 4;  
int c = ++a - 3;
```

After this code runs, what are the values of a, b, and c?

Decrement Operator

- These three expressions have the same *side effect*:

`x = x - 1`

`x--`

`--x`

- `x--` and `--x` carry different *values*.