Computer Science 1 (Java) – CSC 130 – Duke Hutchings

Notes (Day 9)

More on Java Ifs

Extra stuff for PW3

Start PW3

First: Google

Internship and Job Fair

2pm – 5pm in Alumni Gym

Lots of IT companies, including [Google](#) (Elon alumni)

More on Java Ifs

Last time we saw this

```
if (x < 0 || x > width) {
  // bounce in x-direction
}


if (y < 0 || y > height) {
  // bounce in y-direction
}
```

More on Java Ifs

We also saw this: nesting

```java
if (triX > barX && triX < barX + barW) {
  if (triY > barY && triY < barY + barH) {
    // speed up
  }
}
```

More on Java Ifs

There is also this configuration

```
if (x == 0) {
    // do this when x is 0
}
else {
    // do this when x is not 0
}
```

More on Java Ifs

But this is not allowed

```
if (x == 0) {
    // do this when x is 0
}
y = 1; // nope, can't interrupt if/else
else {
    // do this when x is not 0
}
```

More on Java Ifs

Finally, there is also this configuration

```
if (x == 0) {
   // do this when x is 0
}
else if (x > 0) {
   // do this when x is positive
}
else {
   // do this when x is negative
}
```

More on Java Ifs

And this one

```
if (x == 0) {
    // do this when x is 0
}
else if (x > 0) {
    // do this when x is positive
}


// do nothing special when x is negative
```

Extra stuff for PW3

Java has a boolean data type

```
int i = 0;
double d = 4.4;
boolean b = true;

// sometime later...
b = false;
```

Extra stuff for PW3

You can use the boolean type in ifs

```
boolean lWall = (x < 0);
boolean rWall = (x > width);

if (lWall || rWall) {
  // do this when lWall or rWall is true
}
else {
  // do this when lWall and rWall are false
}
```

Extra stuff for PW3

This works too

```
boolean goFast = true;

// some code here that might change goFast

if (goFast == false) {
  // do this when goFast is false
}

// do nothing special when goFast is true
```

Extra stuff for PW3

Java has a `char` data type to model a keyboard character

```
int i = 0;
double d = 4.4;
boolean b = true;
char c = '1'; // use single quotes, not double
```

Extra stuff for PW3

You can use the char type in ifs

```
char c = '1';

// possibly change the value of c

if (c == '7') {
  // do this when c is the character 7
}

// do nothing special when c is something else
```

Extra stuff for PW3

Be careful with char and numbers on the keyboard!

```
if (c == '7') {
  // do this when c is the character 7
}


if (c == 7) {
  // do this when the numerical code
  // for the character c is 7
}


// http://asciitable.com
```

Start PW3