

Bootcamp Day 4

Thursday, July 31 2014

Review Previous Day (animation)

$x = x + 1;$

Frame 1: $x = 3$



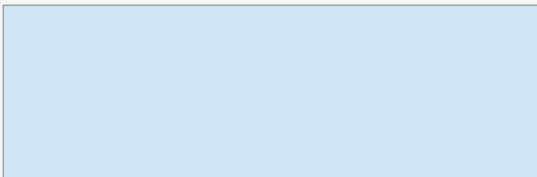
x

Frame 2: $x = 4$



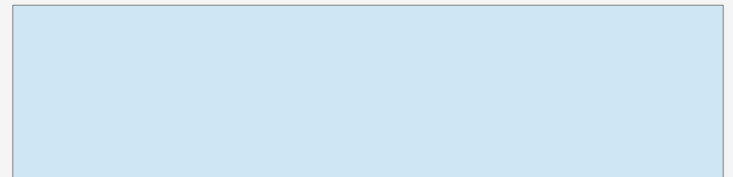
x

Frame 3: $x = 5$



x

Frame 4: $x = 6$



x

Conditionals

If I am hungry, then I will eat food.
Otherwise, I will not eat.

"If" I am hungry, **"then"** I will eat food.
Otherwise (**"else"**), I will not eat.

If **I am hungry**, then I will eat food.
Otherwise, I will not eat.

If I am hungry, then I will eat food.
Otherwise ("**else**"), I will not eat.

```
if (hungry){  
    EAT FOOD;  
}  
  
else {  
    DO NOT EAT;  
}
```


If I am thirsty and I am hot, I will drink cold water.

If I am thirsty **and** I am hot, I will drink cold water.

```
if (thirsty && hot){
```

```
    //if “thirsty” AND “hot” are both true, do the following:
```

```
    DRINK COLD WATER;
```

```
}
```

```
if (thirsty && cold){
```

```
    //if “thirsty” AND “cold” are both true, do the following:
```

```
    DRINK HOT TEA;
```

```
}
```

//Note: if one is true and the other is false, then the if statement will not run

If I am tired or it is late, I will go to sleep.

If I am tired **or** it is late, I will go to sleep.

(But not in Boot Camp)

```
if (tired || late){
```

```
    //if “tired” is true or “late” is true, then do the following:
```

```
    GO TO SLEEP;
```

```
}
```

== vs. =

==

(Test)

Double equal sign compares two values and returns true if they are equal

Asks a question

```
if (x == 10) {  
    do this  
}
```

"Is x equal to ten?"

=

(Assign)

Single equal sign sets a variable equal to a value.

Does not ask a question

```
x = 32;
```

"Set x equal to 32."

CORRECT

```
if(x == 10){  
    do this;  
}
```

INCORRECT

```
if(x = 10){  
    do this;  
}
```

Other ways to compare...

Symbol	Meaning	Example
<	“less than”	if (x < 10) { //do something}
<=	“less than or equal to”	if (x >= 15) { //do something}
>	“greater than”	if (x > 3) { //do something}
>=	“greater than or equal to”	if (x >= 7) { //do something}
!=	“not equal to”	if (x != 100) { //do something}

```
grade = 86;
```

```
if(grade >= 90){  
    //“Your grade is an A”;  
}  
else if (grade >= 80) {  
    //“Your grade is a B”;  
}  
else if (grade >= 70) {  
    //“Your grade is a C”;  
}  
else if (grade >= 60) {  
    //“Your grade is a D”;  
}  
else {  
    //“You are a failure”;  
}
```

```
grade = 98;
```

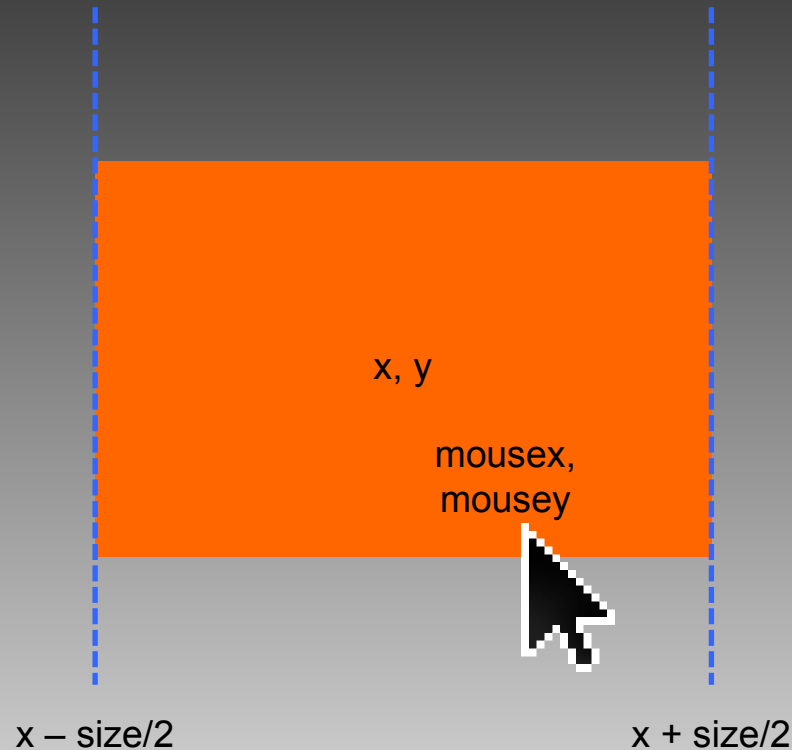
```
if(grade >= 60){  
    //“Your grade is an D”;  
}  
else if (grade > 70) {  
    //“Your grade is a C”;  
}  
else if (grade > 80) {  
    //“Your grade is a B”;  
}  
else if (grade > 90) {  
    //“Your grade is a A”;  
}  
else {  
    //“fail”;  
}
```

Export Application

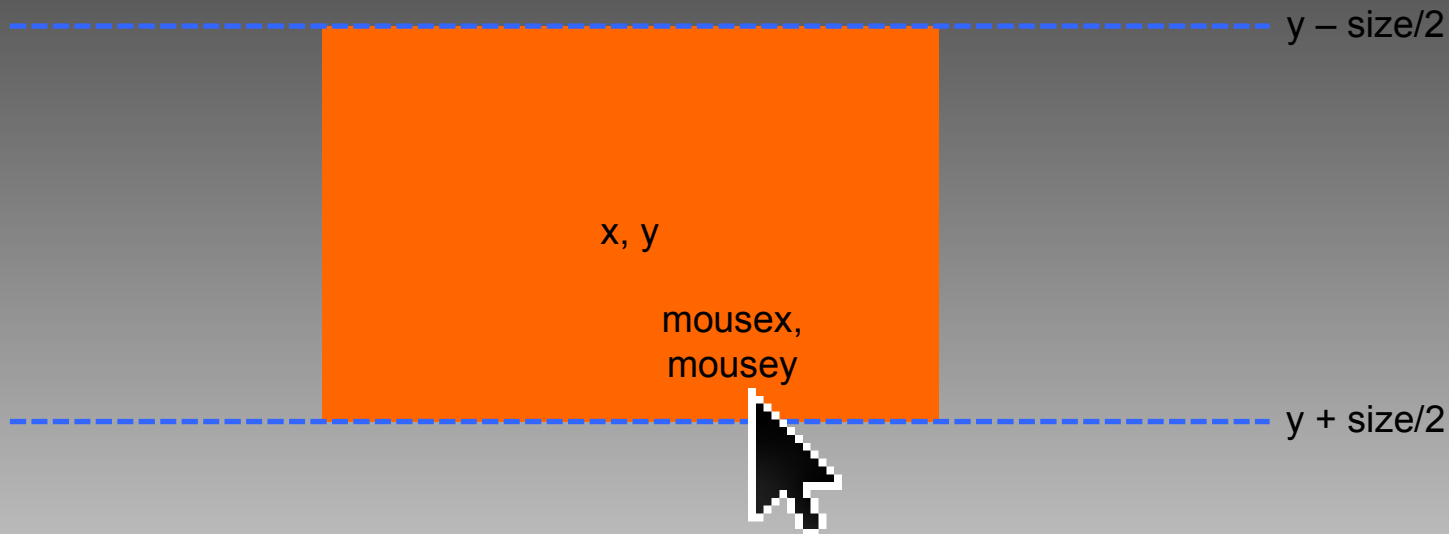


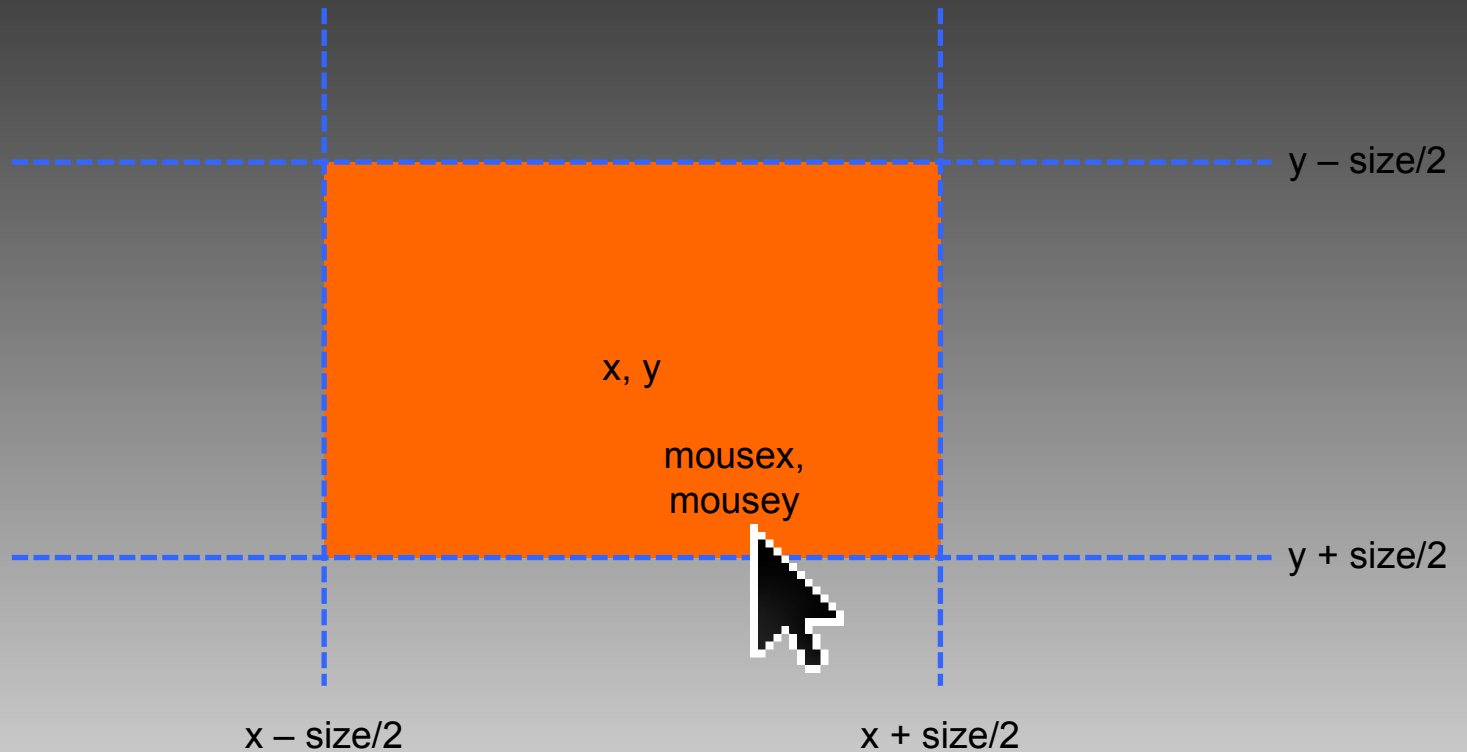
Collisions

Two objects collide when their positions overlap



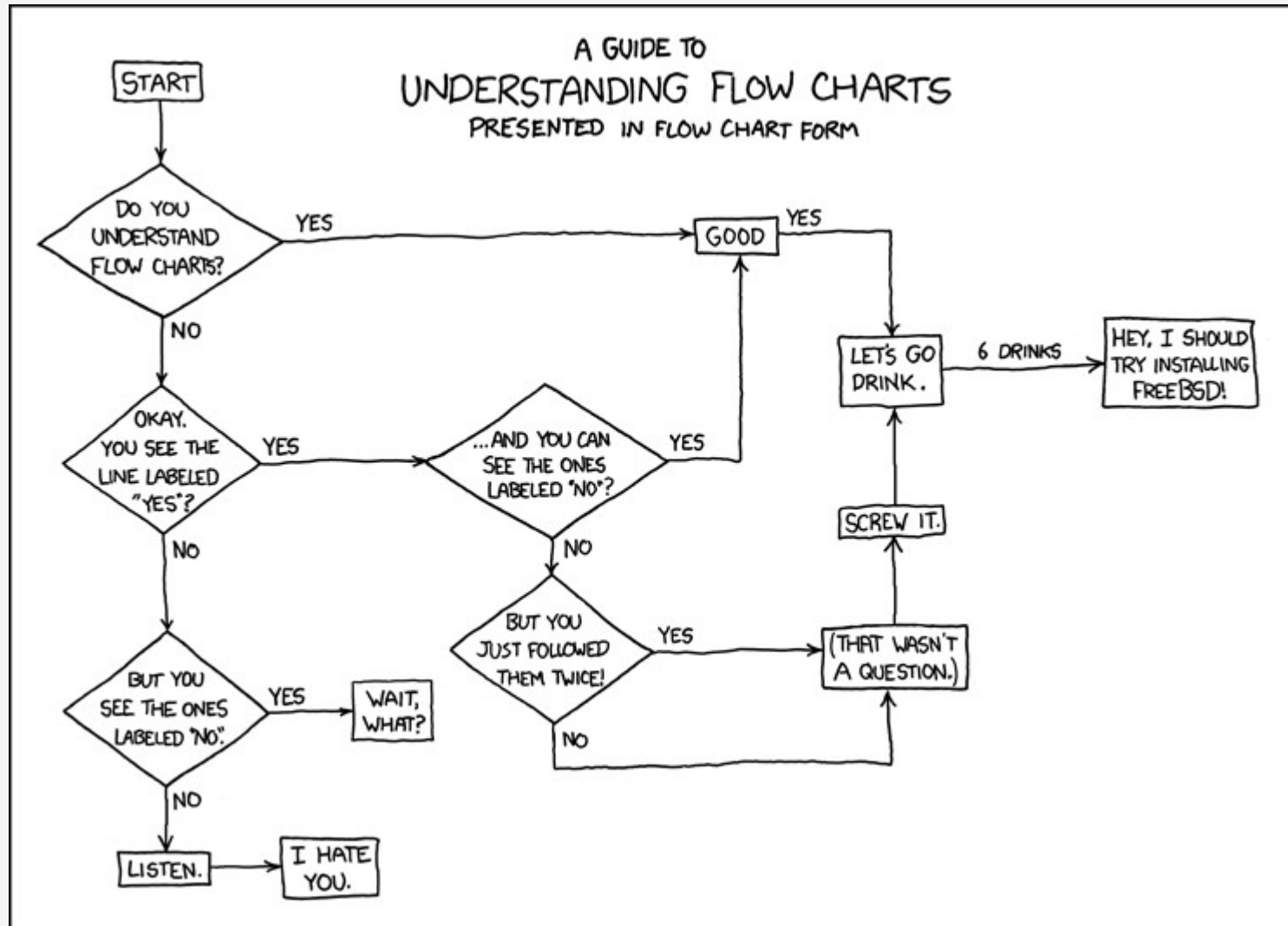
We can use this logic to check if the mouse is hovering over an object





If all these conditions are true,
the mouse is over the object

Homework



Opening the brown sack reveals:

A clove of garlic.

A lunch.

> take lunch

Taken.

> take garlic

Taken.

> look around

I don't understand that.

> look

You are in the kitchen of the white house. A table seems to have been used recently for the preparation of food. A passage leads to the west, and a dark staircase can be seen leading upward. To the east is a small window which is open.

On the table is an elongated brown sack, smelling of hot peppers.

> go up

It is pitch dark. You are likely to be eaten by a grue.

> go down|

You are in the top-left.

You are on the left.

You are in the bottom-left.

You are in the bottom-left corner.

You are in the top-right.

You are on the right.

You are in the bottom-right.

You are in the bottom-right corner.