

COMP 1010- Summer 2015 (A01)

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Mid term conflicts

AS1 Q4

Example: click a button

Create a small rectangle to be your button

Name all the parameters as variables

Test one case first – mouse to the right of the button left wall – change button color if true

Test all four walls – use &&

Only change when mouse clicked

Example – rebounding ball

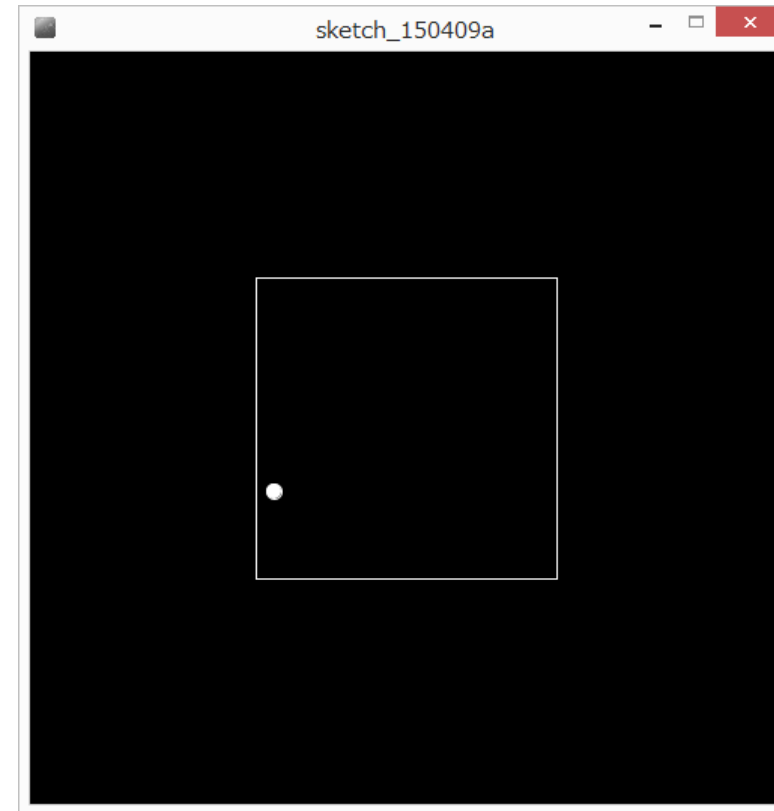
Make variables for a ball
position, movement, size

Draw the ball

Move the ball (neg. movement?)

Make variables for a box and
draw it

How to bounce the ball?



Bounce the ball!

If hit left or right wall – reverse X direction

If hit top or bottom wall, reverse Y direction

How?

Multiply by -1

Exercises:

The ball bounces when the center of the ball – not an edge – hits. Fix so that it bounces when an edge hits

Add a smaller box in the center (say, 10x10) that the ball also bounces off of and stays outside of

boolean logic nesting

```
boolean result = ! ( c || !(a<b)); // this is legal
```

Assuming that this runs, what do you know about the data types of the variables a, b, and c?

a and b must be numerical because we are doing a less-than operator.

c must be boolean because it is an operand to the boolean OR operator.

what is the result if a=3, b=1, and c=true; ?

boolean logic nesting

`boolean result = ! (c || !(a<b)); // this is legal`

what is the result if `a=3`, `b=1`, and `c=true`; ?

`! (c || !(a<b))`

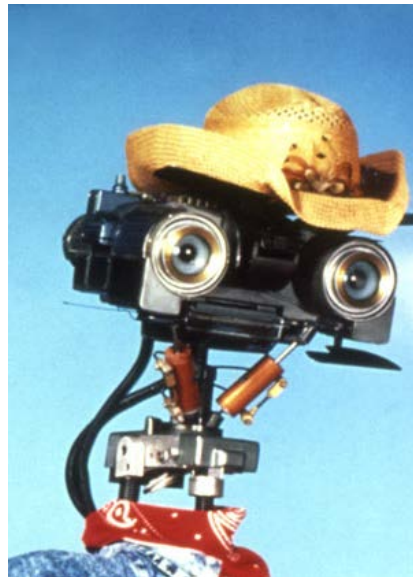
`! (T || !(3<1))`

`! (T || !(F))`

`! (T || T)`

`! (T)`

F



If you know that `c` is true, does it matter what `a` and `b` are?

No! `T || anything is TRUE`

Your computer may save work here