

SCRATCH



Ifs/Loops

SCRATCH

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SCRATCH

What is a LOOP?

SCRATCH

the loop

**Until I can hear the song
Make it louder**

**Loops repeat as long
as something is true**

Ifs/Loops

SCRATCH

the loop

**As long as I am hungry
I eat something**

**While I have pretzels
I eat one**

ifs/Loops

SCRATCH

Loop Demonstration

**loop if (student is hungry
and more pretzels left)**

{

**student will eat
1 pretzel stick**

}

condition



SCRATCH

Control



Loops are used to repeat a command or set of commands forever or for a set number of times.

SCRATCH

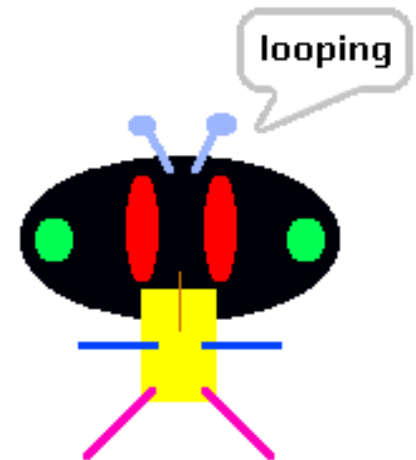
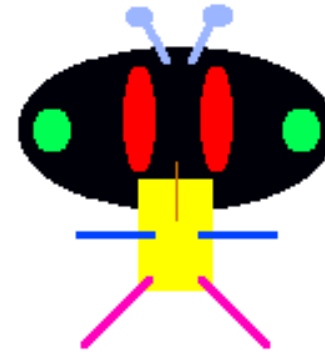
Control



When the green flag is clicked, the Bug will say "looping" for 2 seconds and then wait 2 seconds before saying it again. This loop will run forever.

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Ifs/Loops

SCRATCH

Control

open

loop_one.sb

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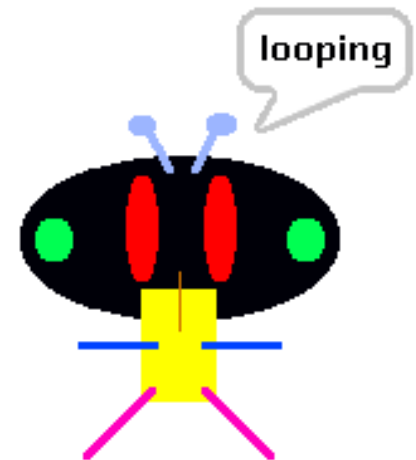
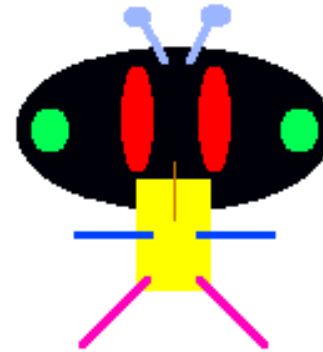
Control



When the green flag is clicked, the Bug will say "looping" for 2 seconds and then wait 2 seconds before saying it again. This loop will run 5 times and then stop.

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Control



Ifs/Loops

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open

loop_two.sb

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SCRATCH

**What is
an If?**

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the if statement

**if I am hungry
I eat something**

**if I am tired
I go to sleep**

Ifs/Loops

SCRATCH

the if statement

if it is dark

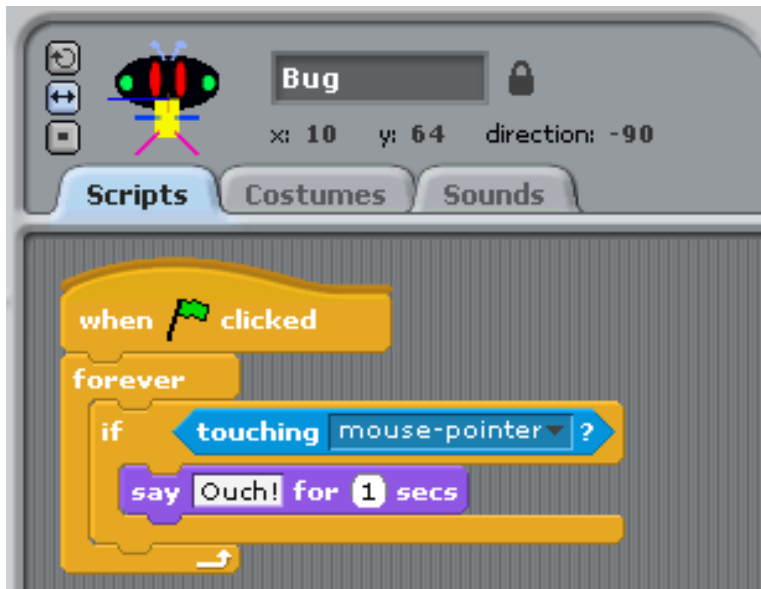
I turn a light on

if I can't hear the song

I make it louder

SCRATCH

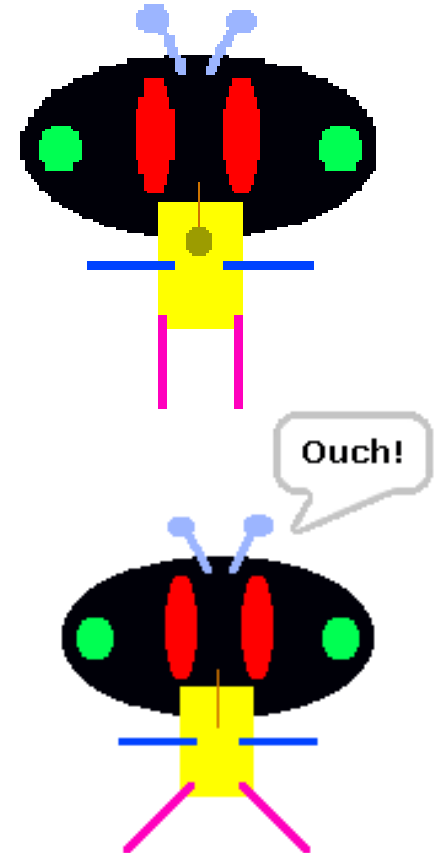
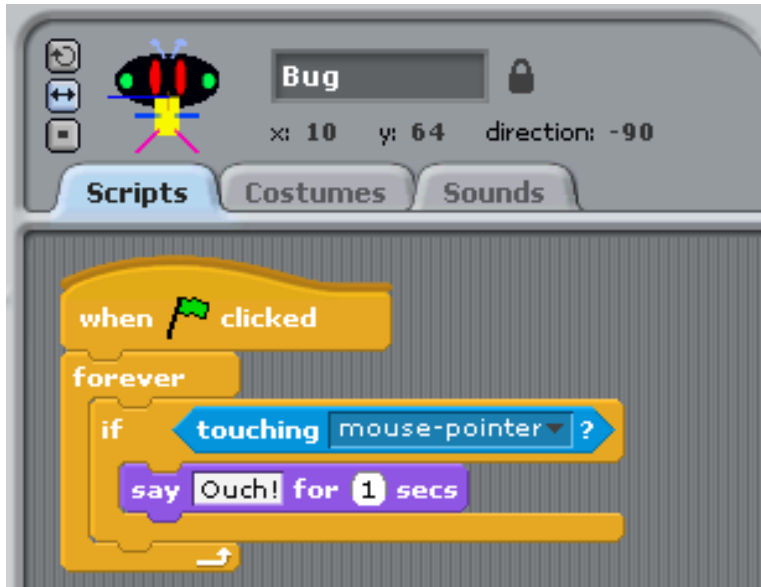
Control



When the green flag is clicked, the Bug will say ouch each time it is clicked with the mouse.

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Control



Ifs/Loops

SCRATCH

Control

open

if_one_sb

SCRATCH

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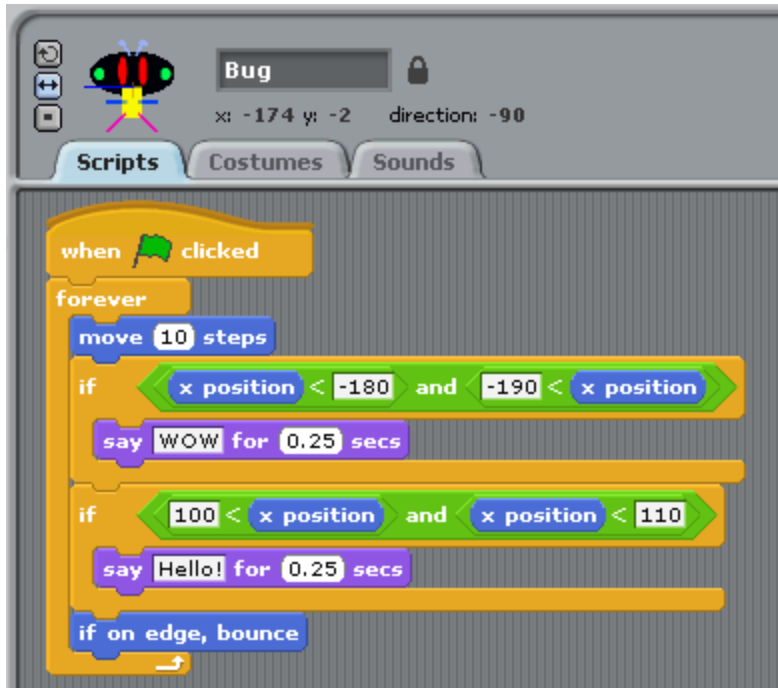
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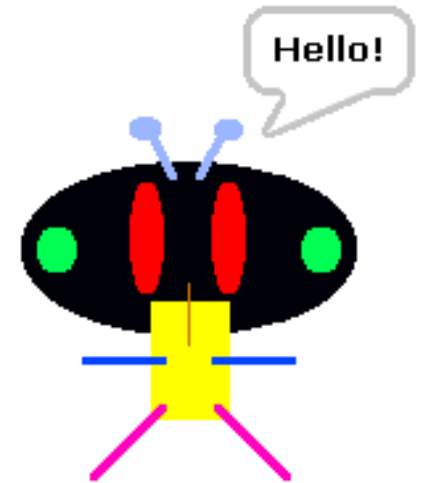
When the green flag is clicked, the Bug move back and forth across the screen. He will say Wow and Yahoo if he is at a certain position on the screen.

Ifs/Loops

SCRATCH

Control

```
when green flag clicked
  forever loop
    move 10 steps
    if x position < -180 and -190 < x position
      say WOW for 0.25 secs
    if 100 < x position and x position < 110
      say Hello! for 0.25 secs
    if on edge, bounce
```



Ifs/Loops

SCRATCH

Control

open

if_two.sb

SCRATCH

**Complete a
Scratch Lab.**