

Intro to Programming with Scratch



Lesson 2

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Quick Review

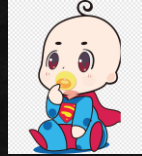
- Structure of Scratch Program

Quick Review

- Structure of Scratch Program

- Layers

- Characters



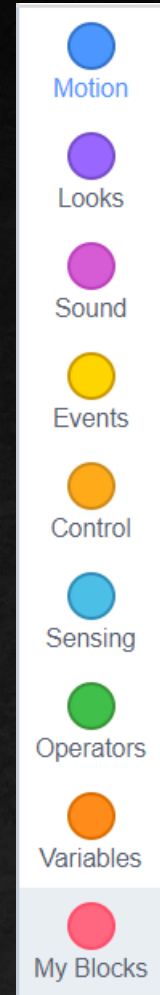
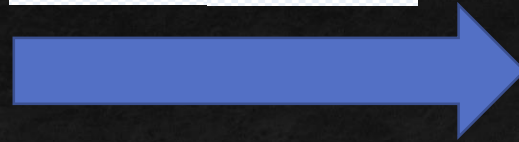
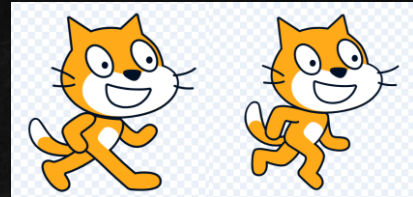
- Background



Structure of a Scratch Program

Layers:

- Characters
 - Costumes
 - Code
- Background
 - Paint
 - Code

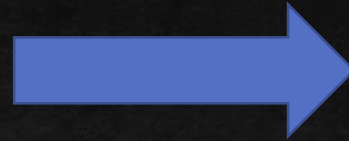


How did we make the kitten run?

(Simulate human's motion of running)

2 Step Process:

- Move your left leg forward
- Move your right leg forward



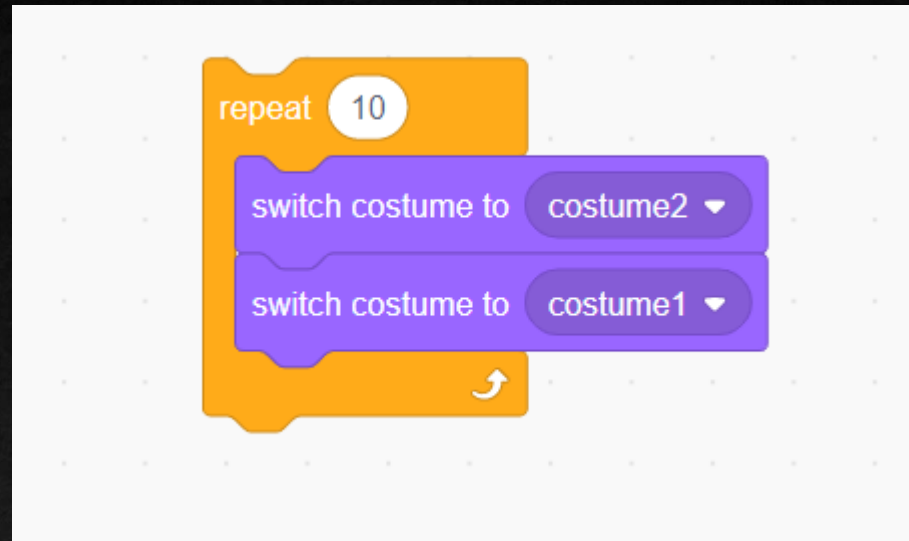
2 Step Process:

- Costume 1
- Costume 2

Repeat this process again and again

Repeat this process again and again

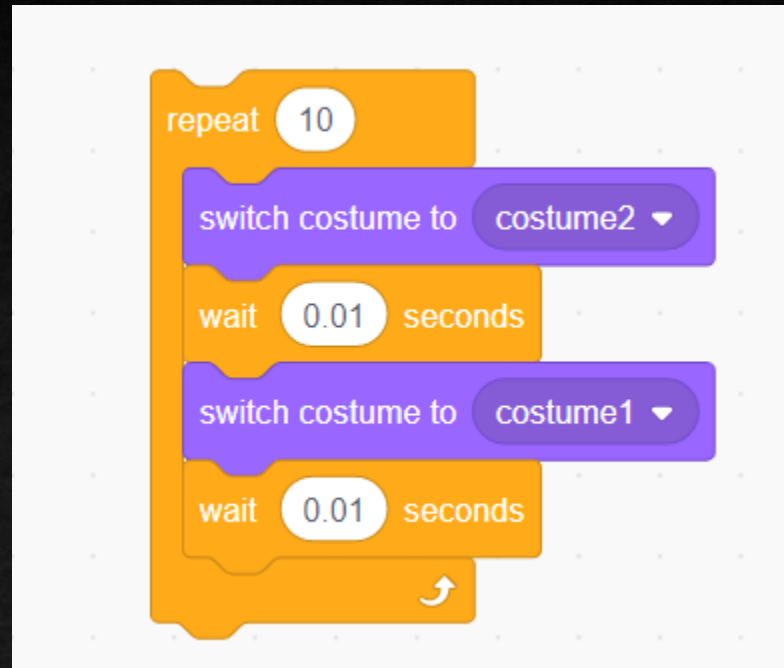
Naïve approach:



Does it work? Why?

Computer Programs are very fast
fast enough that your eyes cannot capture

Second approach:



Does it work? Why?

Can only repeat a certain number of times

Unable to control the exact stopping time

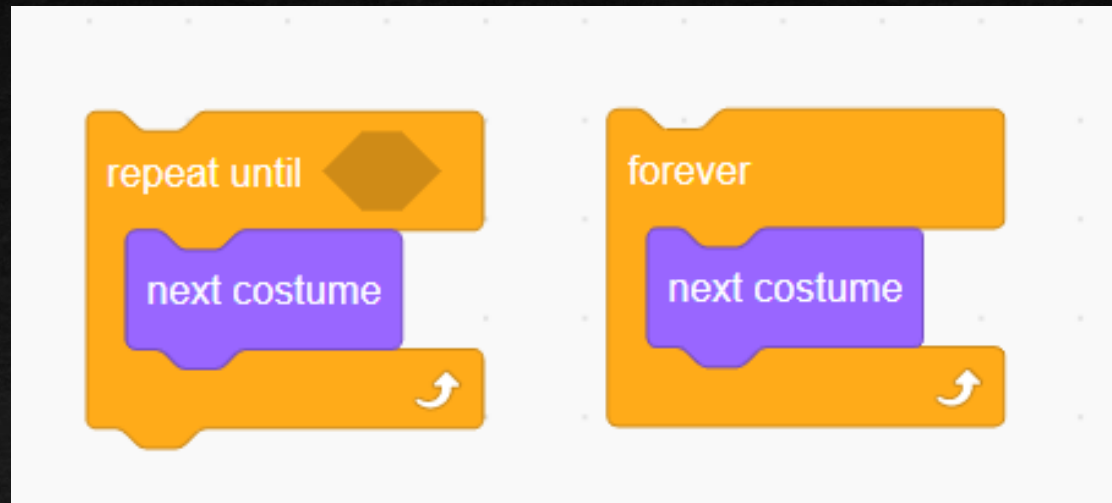
Third approach:



Which one is better?

How to improve even more?

Final approach:



Exercise:

Can you make the bear walk?



Costume Drawing

- Can do your own painting
 - Idea of layers
- Upload an image file

Challenge:

Create a father's day project and surprise your dad on the day

- Try to create your own sprite.
- Let's brainstorm
 - Recall from last lesson: Story/Animation/Game

Variables:

A variable is a changeable value recorded in Scratch's memory

It can be used to store an attribute of the sprite

Has set & change attribute

Example



Health Point

Exercise

Create a health system: Set the initial health point as 100 for your sprite. If “a” is pressed, drop it by 10, if “b” is pressed, drop it by 50. If health gets below 0, hide the sprite.

My Approach

