

Homework 2  
CS Fundamentals: Scratch Review [due Tuesday]  
June 21, 2017

## 1 Review: Doodle Jump Pt. 2 [Expected Duration: 15 - 60 min]

If you have any questions about the directions or any blocks you have not used before, let me know via email or text!

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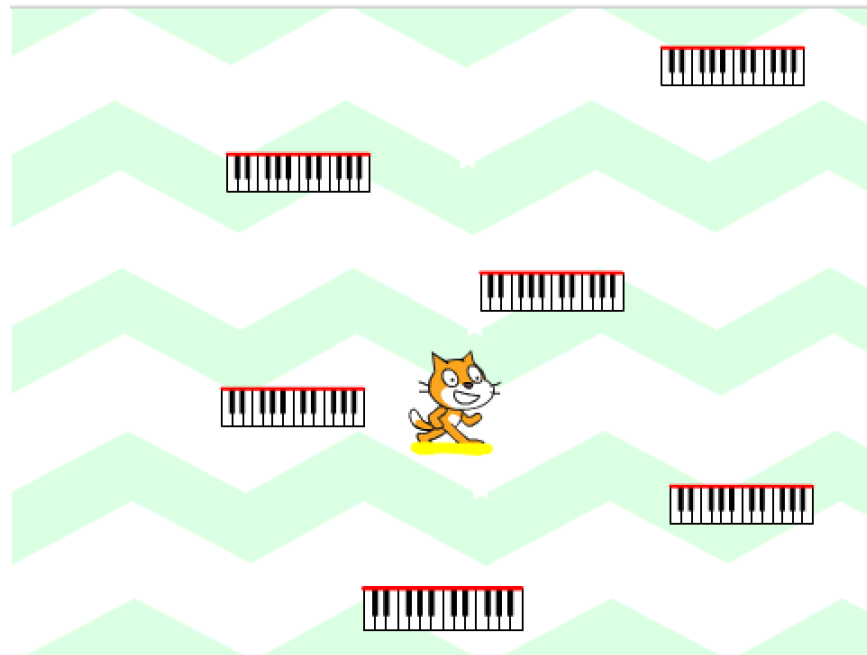
Although we will not be working on anything on Sketch for today, I would **strongly recommend installing the [offline version of Scratch 2](#)** for future projects.

[Click this line to see a YouTube video of this game running!](#)

In the last lesson, we went over the code that we built together. For homework, I want you to describe what is happening in each block shown below. There will be code labeled. I want you to use the **word bank** below to complete this assignment. Note that **the words in the word bank is used exactly once... all words are used**.

If you have any questions regarding the terms in the word bank, **please** let me know!

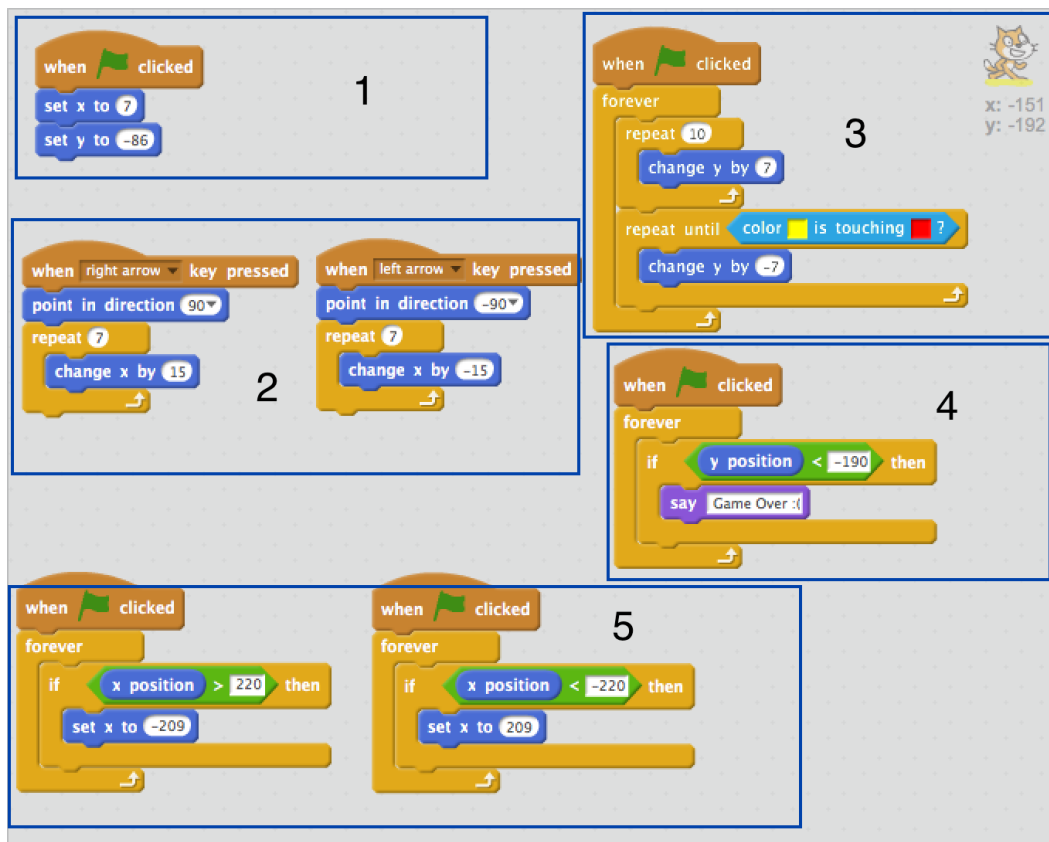
You may find the preview of the game useful.



Do your best and have fun!

**Word Bank:**

-180	180	bottom	bottom edge
clone	clone	direction	down
edge	endless	endless	fall
hides	initial	jump	jump
key	left	position	red
shows	smooth	up	yellow



1. The Cat
  - a. Block 1 sets the [initial] position of the Cat.
  - b. Block 2 changes the [direction] of the cat based on the [key] pressed.
  - c. In Block 2, we repeat changing the x value 7 times because we want to show a [smooth] transition from one position to another.
  - d. In Block 3, we loop a few code blocks forever because we want the cat to [jump] forever.
  - e. In Block 3, where we repeat change y by 7 10 times, the cat is going [up].

- f. In Block 3, where we repeat change y by -7 until color yellow is touching red, the cat is going [down].
- g. In Block 3, the “color yellow is touching red” is a condition for when the cat’s [yellow] feet touching the piano tile’s [red] top.
- h. Block 4 tells the player that the game is over when the Cat touches the [bottom] edge of the screen.
- i. Block 5 lets the user go to the [left] edge of the screen to appear in the right, and vice versa.
- j. In Block 5, we set the x value to 209 instead of around 220 because the cat may end up getting stuck on the [edge] of the screen.



## 1. The Tiles

- a. Block 1 sets the initial [position] of the tile, then makes the tile [fall] until the tile reaches the [bottom edge] of the screen, then [hides] the piano tile, and finally creates a [clone] of the Piano Tile.
- b. In Block 1, we hide the piano block so that the cat will no longer be able to [jump] on the tiles that already hit the bottom of the screen.
- c. In Block 1, we create a clone of the Piano Tile so that this game will be [endless].
- d. Block 2 first [shows] the piano tile, then sets the y position of the piano tile to be at the [top] of the screen, then sets the x position of the piano tile to be anywhere between [-180] to [180].
- e. At the end of Block 2, we [clone] the Piano Tile again so that the game will continue to be [endless].