

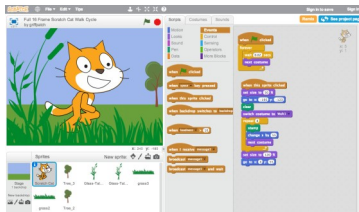
# Hello World Game Design

April 6, 2015

## Intro

Today, video games are one of the most popular sources of entertainment for all ages. Providing hours of fun, they are a perfect mix with art and technology. One of the most popular games created in 2014 was Flappy Bird, where users have to navigate a pixel bird through green pipes.

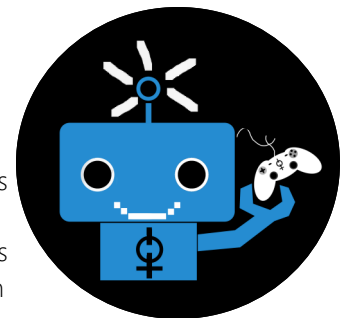
## Scratch



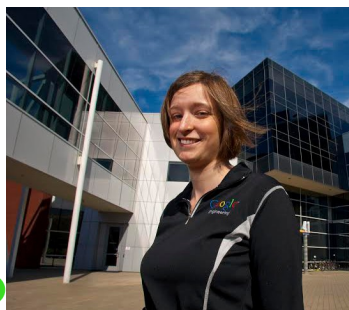
- Games are written in a variety of languages these days, including C, C#, Java, Python, and even Scratch. Programmers use game engines to create and develop for video game consoles, mobile phones, and computers. They include a physics engine, a rendering engine for graphics, sound, animation, etc.
- Scratch is free software developed by MIT that allows students to create 2D games in a drag and drop programming environment on <http://scratch.mit.edu/>. Students can learn about control structures and loops, clones, action listeners, etc. to create a fully-functioning game.

## Projects

- Hello World-make Scratch the cat say "Hello World"
- Flappy Bird game
  - Create a bird sprite to manipulate in the game
  - Create a pipe sprite with different costumes for the bird to navigate
  - Using a loop and action listeners, make the bird fall constantly unless the user presses the space bar
  - Using clones and the random number generator, make the pipes reappear on the screen with different holes for the bird to fly through
  - Using global variables, keep the score for the game



## Speaker(s)



Sparky (Danielle VanDyke) is a staff software engineer at Google working on Ads Compare, which helps users find the best banking and financial products. She has worked at Google since 2006, initially at the Googleplex headquarters in Mountain View, CA and now in London, UK. Her projects include Display Advertising, Mobile Monetization, Ad Quality, and Test Engineering. Sparky is often walking her two large dogs or practicing American Sign Language.