pset0: Scratch

Tommy MacWilliam

tmacwilliam@cs50.net

September 4, 2011
Announcements

- Welcome to CS50!
- These happen every week!
  - can’t make it? watch the video!
Today’s Music

- The White Panda
  - Infinite Dream
  - Stereo Hands
  - Stuntin’ Like My Energy
  - Eminem Front
Scratch
Actually Scratch
Sprites

- each object (e.g. cat) is a sprite
  - want 2 cats? make 2 sprites
- sprites have **scripts** to define their behavior and **costumes** to define their appearance
Creating Sprites

- use existing image
- draw image
- random!
Stage

- sprites are placed on the stage
  - stage also has **scripts** and **backgrounds**
  - have a script that doesn’t really apply to a single sprite? use the stage
Entry Point

- **event**: green flag clicked to begin project
  - no limit on how many sprites can have the same piece
Events

- respond to other events the same way
take separate paths depending on a condition
Conditions

- compare values using =, <, >
  - combine comparisons with and, or, not
Sensing

- used inside of conditions
Variables

- store numbers or words
  - value can change
  - set to specific value, or increment/decrement
Loops

- repeat something more than once
  - how many times? until condition is met
Loops

good idea?
Loops

» good idea!
Messages

- communicate among sprites
  - one sprite sends a **message** to all other sprites
  - any number of sprites receive the message
example time!