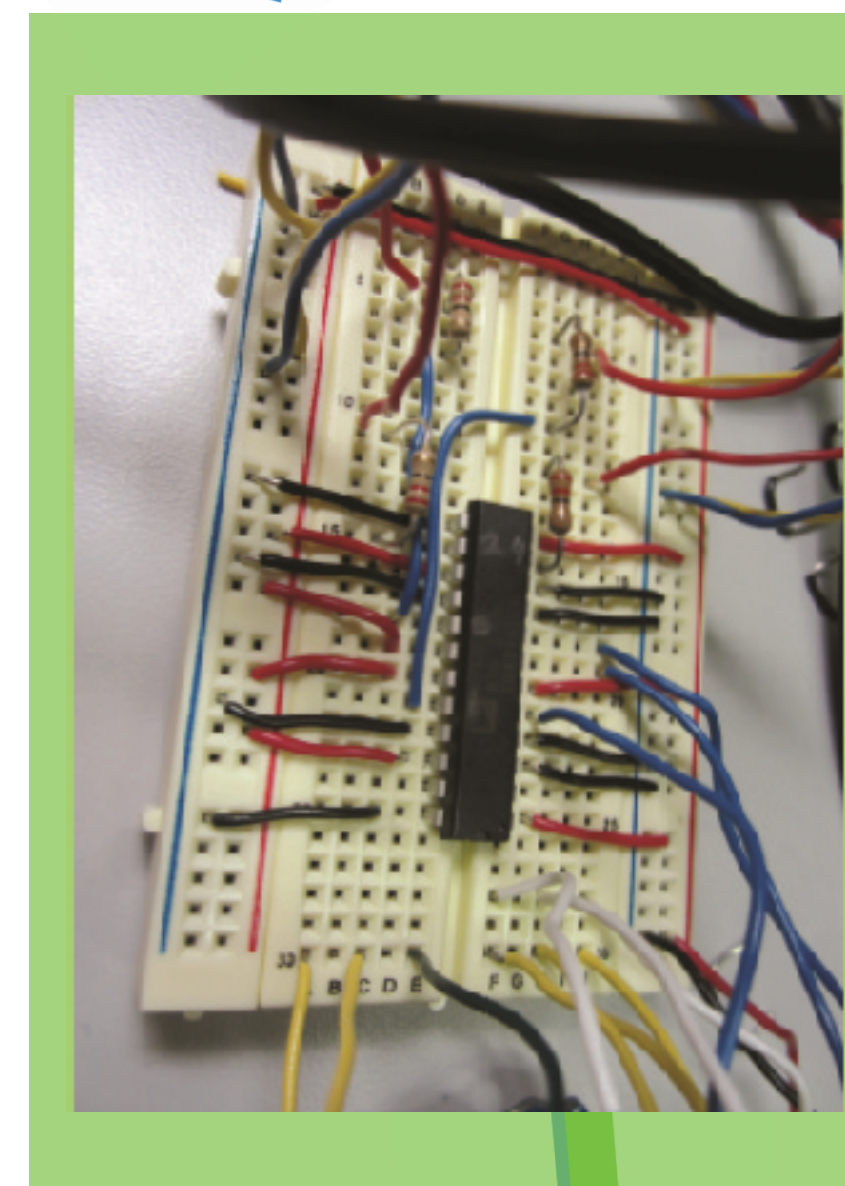
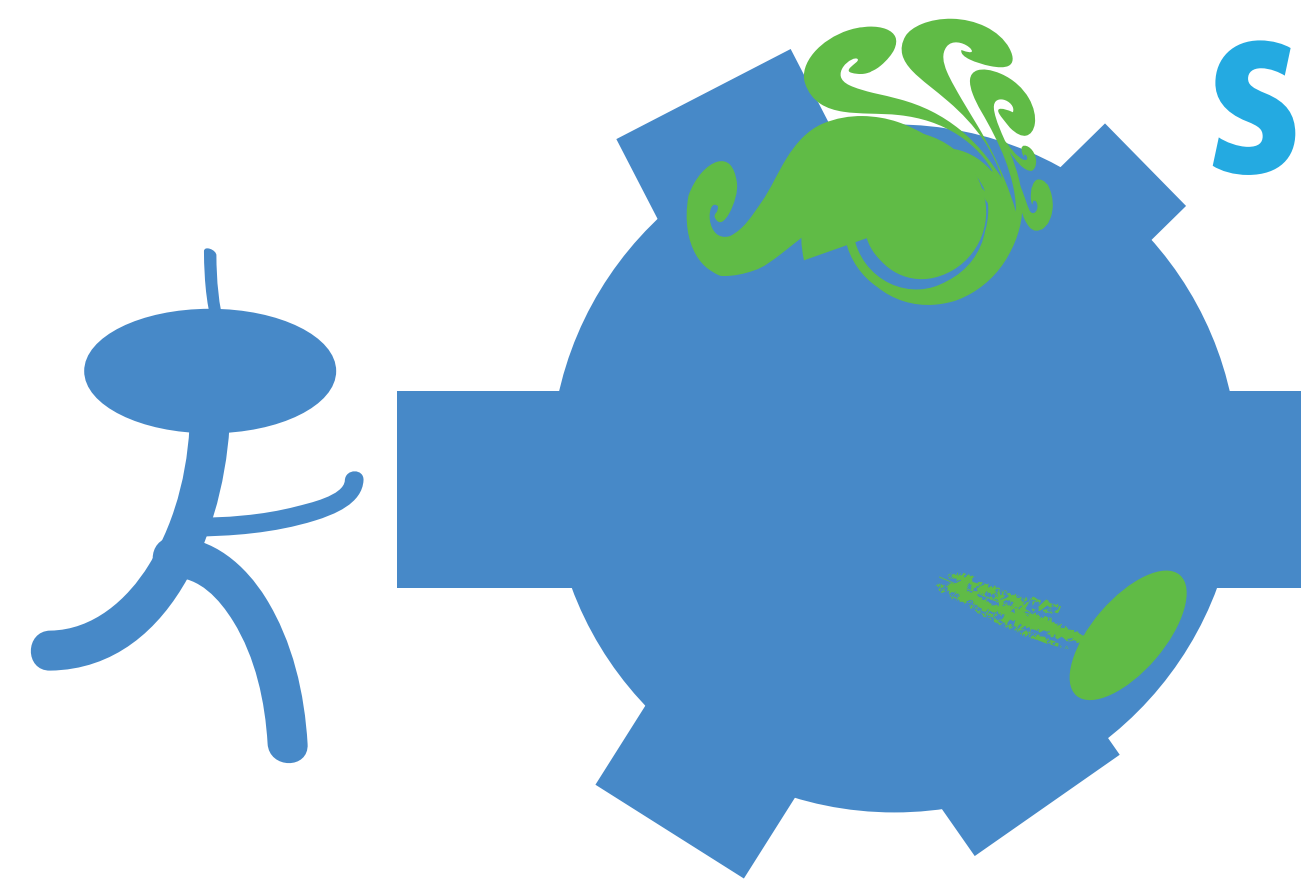


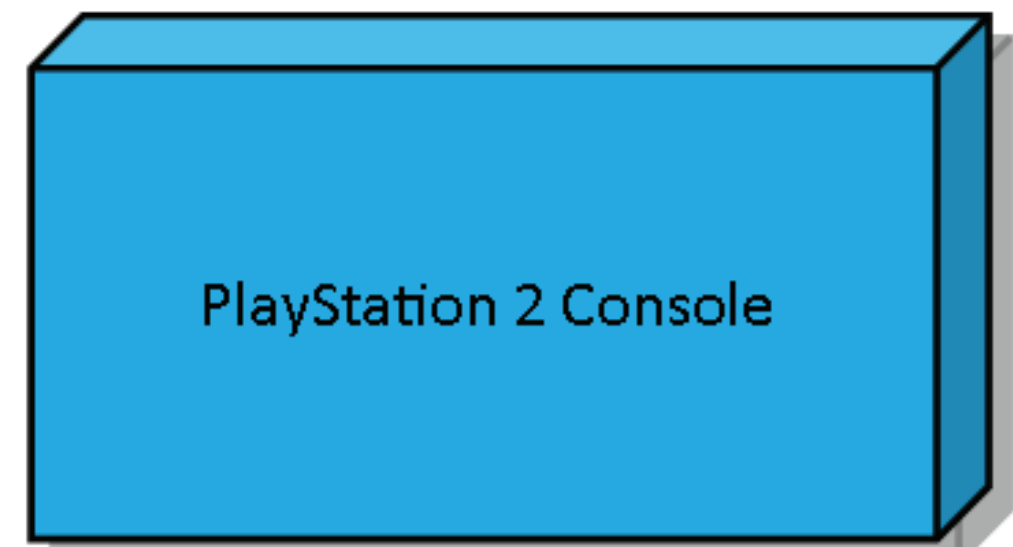
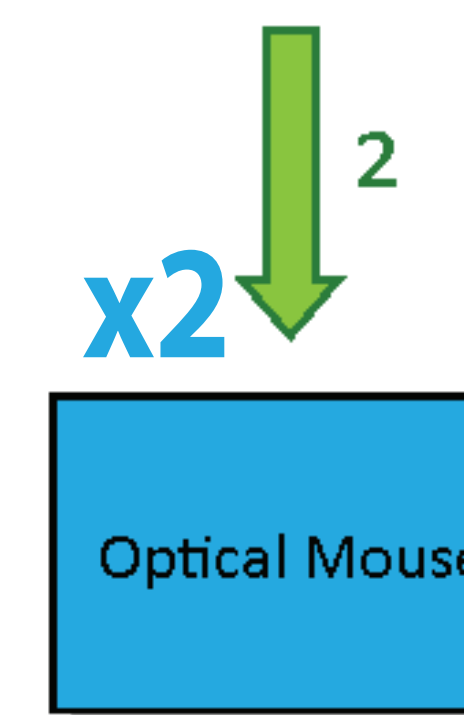
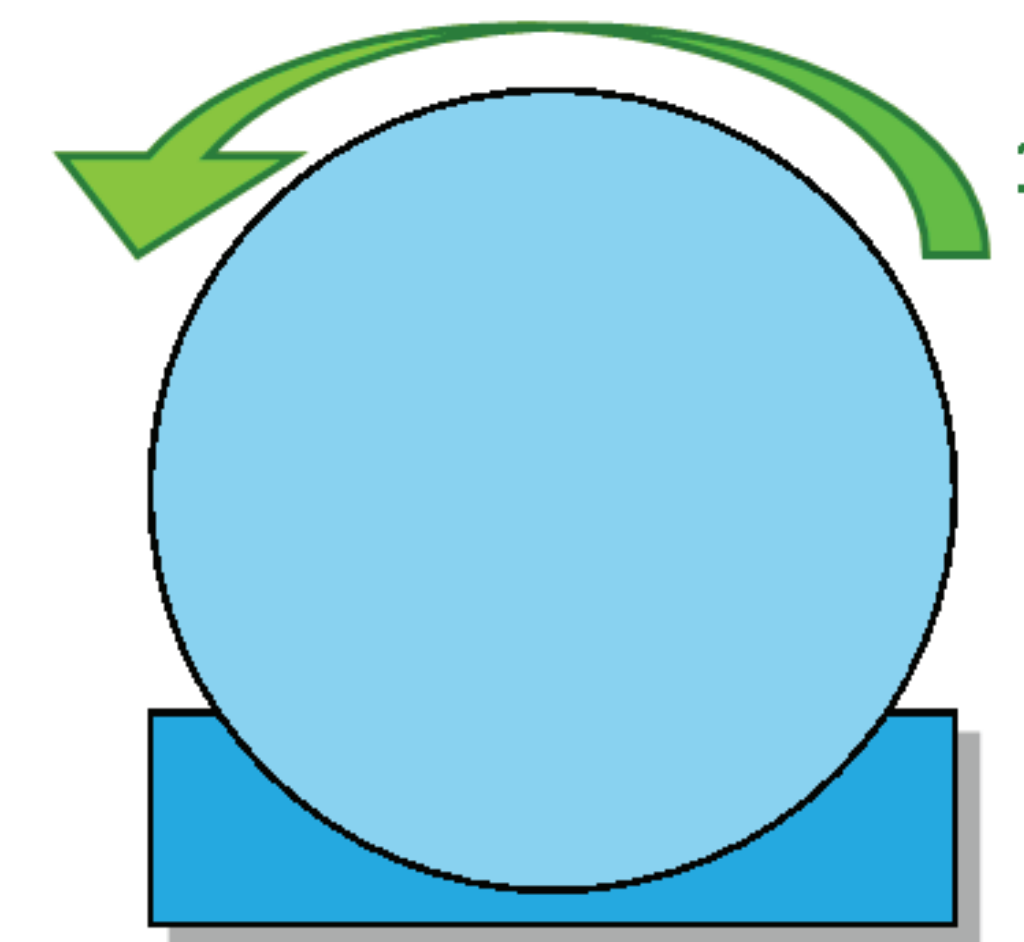
# KATAMARI SEIGYO: AN IMMERSIVE GAMING EXPERIENCE

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[www.ece.cmu.edu/~ece549/spring12/team6/index.html](http://www.ece.cmu.edu/~ece549/spring12/team6/index.html)



## architecture



1. Ball Movement
2. Motion Detection
3. PS/2
4. Digital Control Signals
5. Analog Control Signals
6. PS2 Controller Protocol

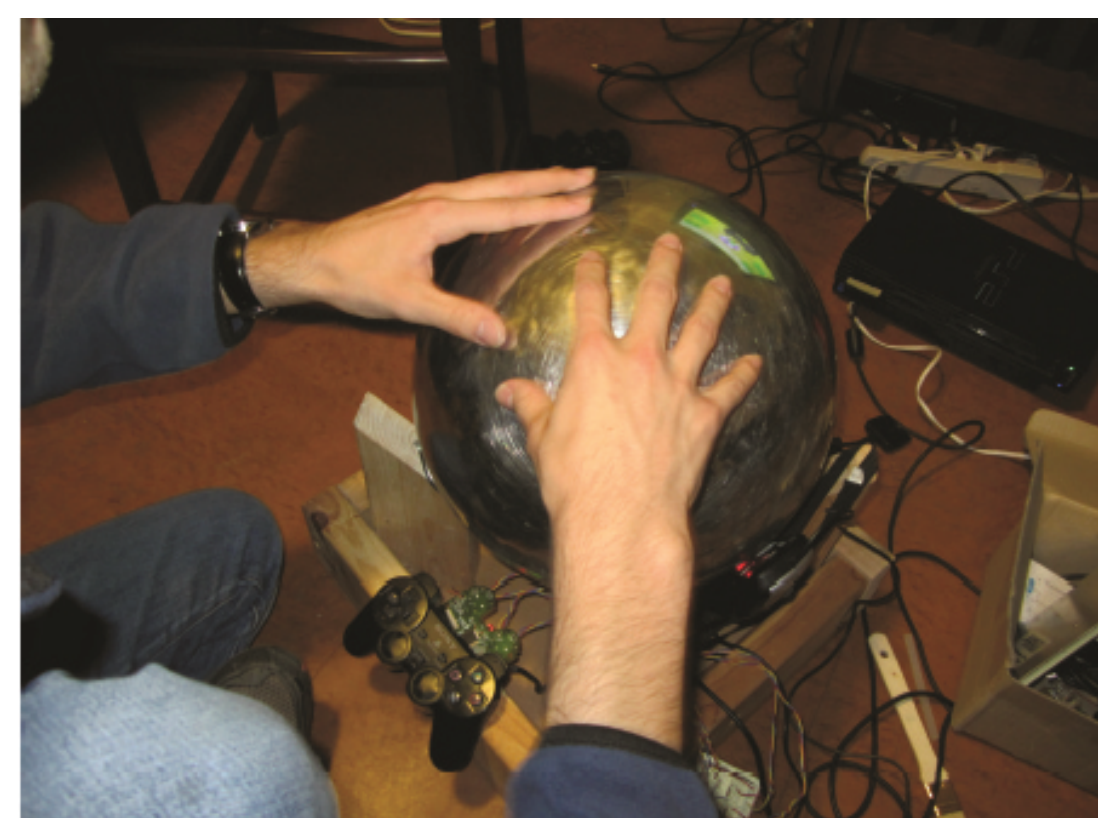
## motivation

### Real ball = real fun:

Instead of using a simple playstation 2 controller, we wanted fans of the katamari damacy sequels to enjoy the video game by rotating a real ball



VS



## development environment

### Hardware:

- 12" diameter steel sphere
- Cradle mechanism
- Arduino Uno (16 MHz)
- 4 omnidirectional ball bearings
- AD5206 digital potentiometer
- 1 PlayStation2 controller
- PS/2 optical mouse
- Playstation 2

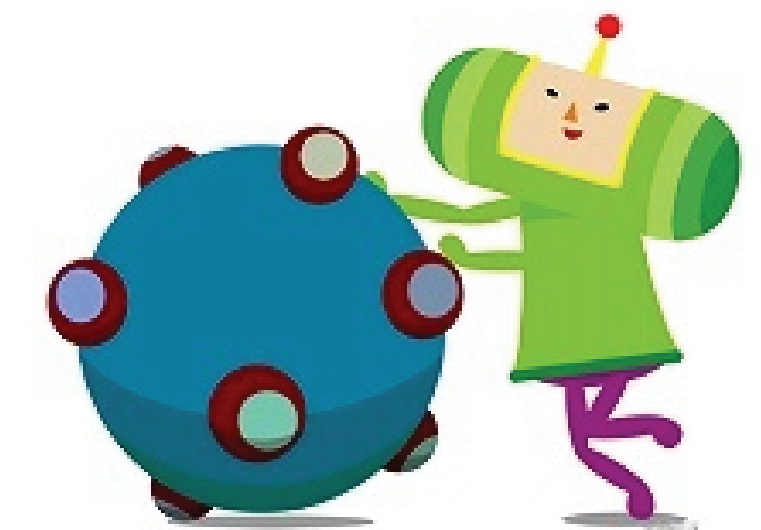
### Protocols:

PS/2 mouse to Arduino

### Software:

- Katamari Damacy PS2 game
- Arduino code for PS/2 translation

## results



Prototype works so that it is able to move forward, backward, left, and right. Includes the PS2 buttons for menu items.

### Added Features:

- Added z-axis motion detection to pivot left and right.
- Added "rush" feature for additional acceleration.

## GET SUPER HUGE!

