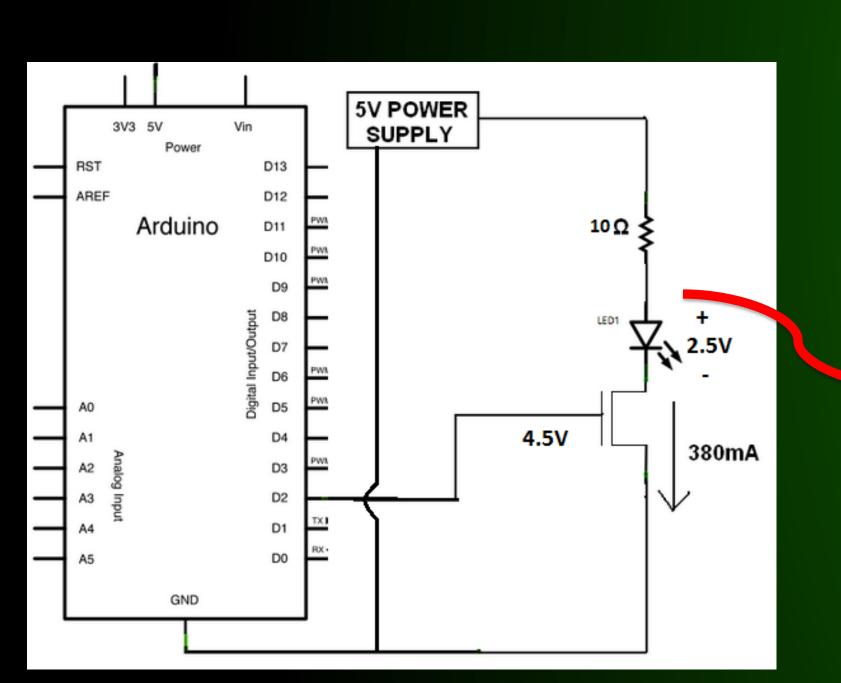


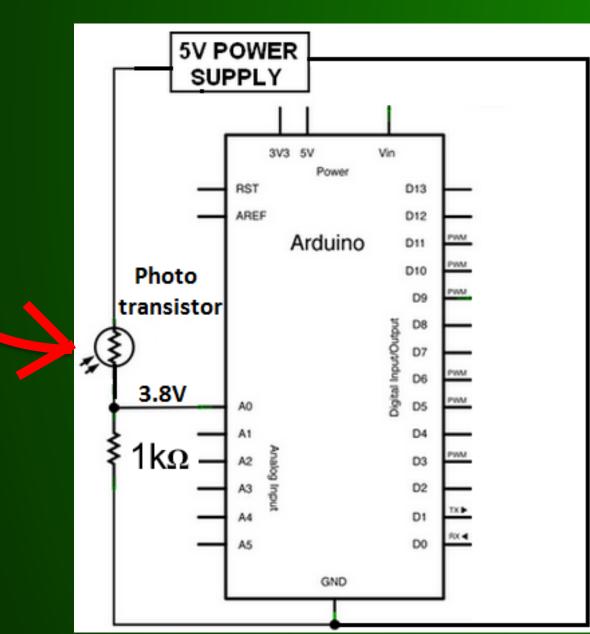


By John Hausle, Timothy Fong, Shujian Li Sponsored and Mentored by: FindTheBest Department of Electrical and Computer Engineering University of California, Santa Barbara

Abstract

This project creates a unique entertainment experience for the employees of FindTheBest. The project is a game that immerses the player into a "High-tech Bank Robbery". There is a dark room with an entrance on one end with a start button, an exit with a finish button on the other end, and a mesh of laser beams in between. The player must go through the room without touching any of the lasers forming the mesh, and get to the end button in the least amount of time. The game has multiple levels of difficulty from which the user can choose from. There is a central controller which will track time, record the success/failure of each session, and allow the user to select the difficulty level and start and stop the game. The controller outputs a display of the participants' times in order to rank the participants.

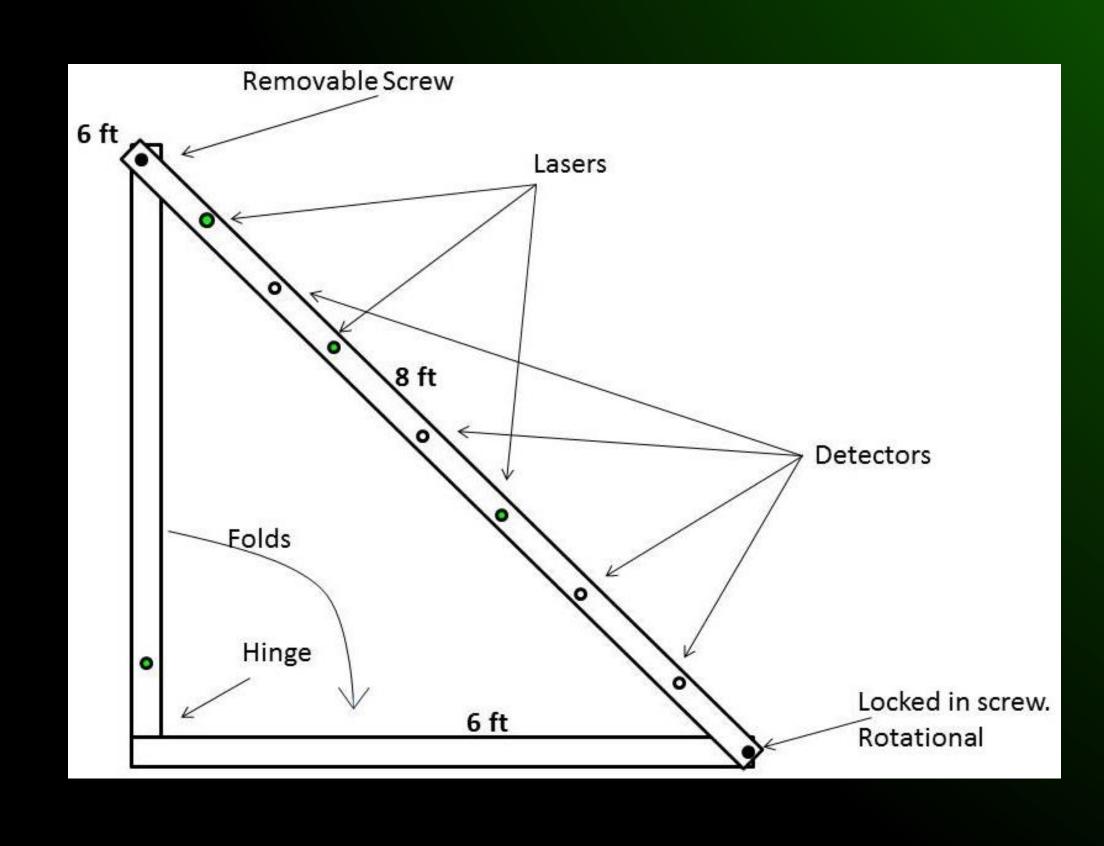


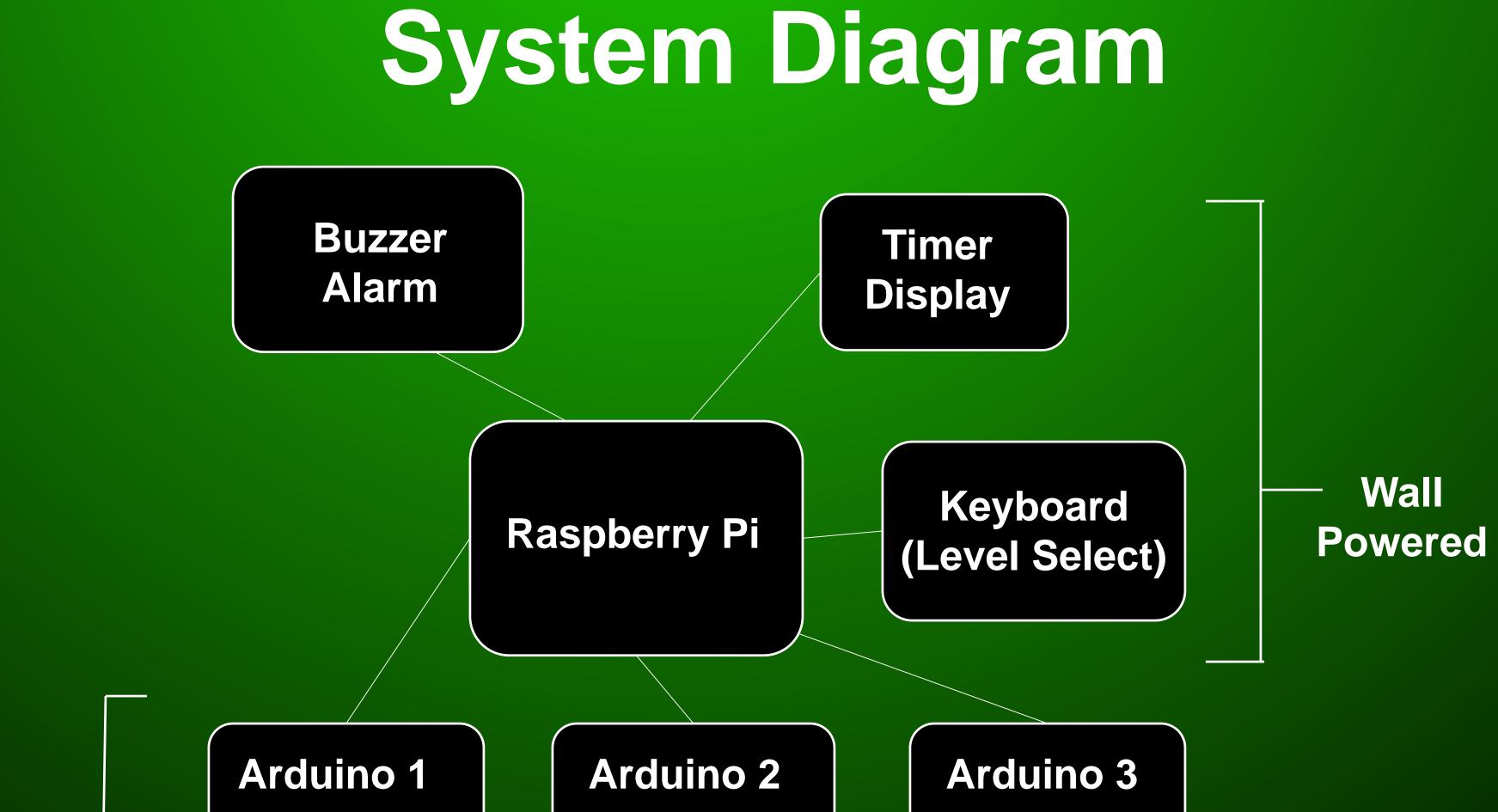


5V

Powered

Laser Mount Structure





D1 In

Detector

8X

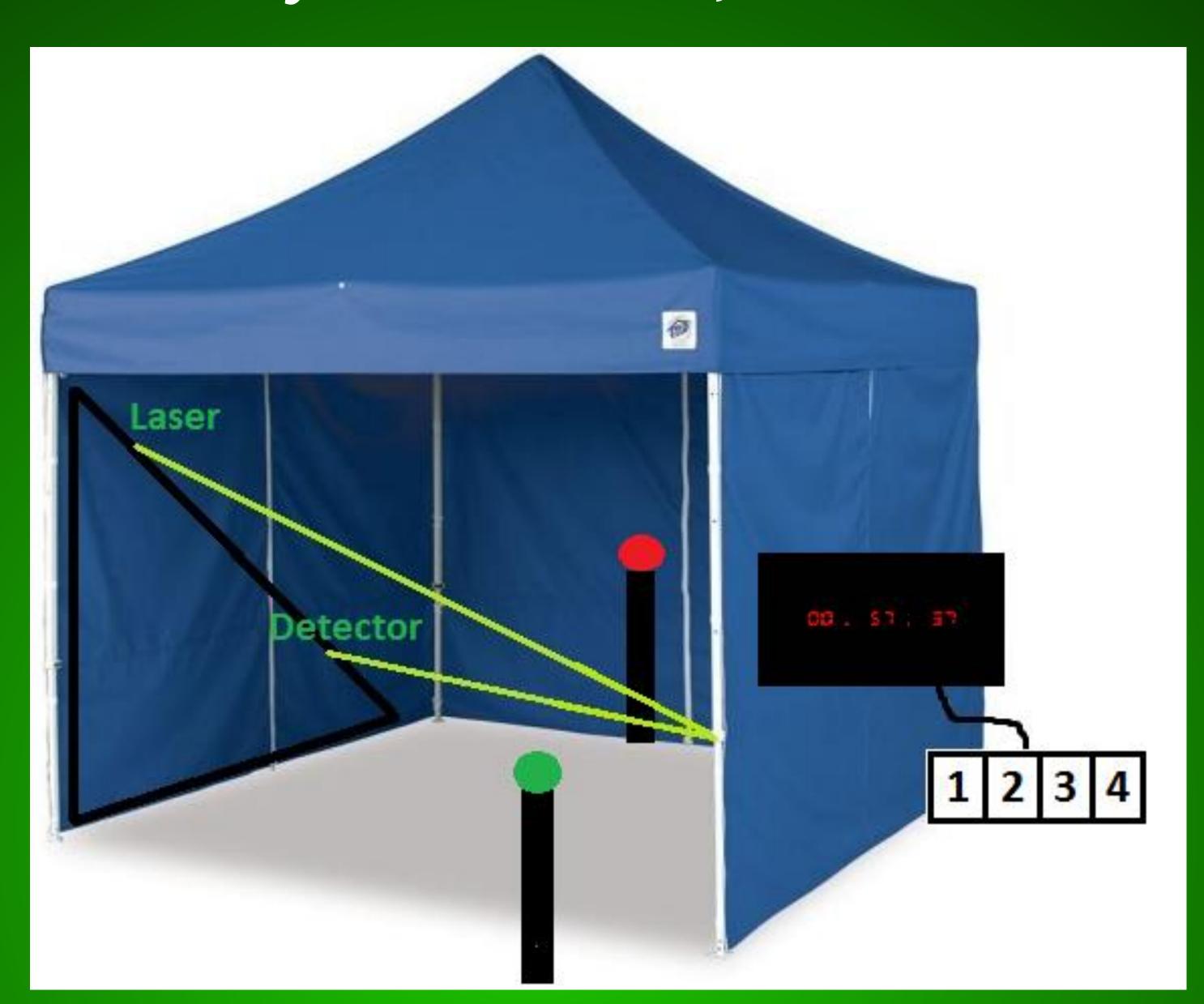
D1 Out

Laser Diode

8X

How to Play

- 1. Choose difficulty level
 - a) Smoke machine turns on
- 2. Press green start button
 - Raspberry tells arduino1 to turn on lasers
 - b) Raspberry tells arduino2 to begin reading detectors
 - c) Start timer, display on
- 3. Enter the maze, don't touch the beams!
 - a) If beam is interrupted, raspberry adds to counter
 - Speakers play a buzzer alarm
- 4. Press the red button at the end
 - Raspberry tell arduino1 to turn off lasers
 - Raspberry tells arduino2 to stop reading from detectors
 - Speaker plays congratulations theme
 - d) Stop time, add on penalty from counter, Display final time
- Compare scores with your friends



D1 In D2 In

End

Start