Intro to Robotics Final Project

Time required: 3 hours

Final Project

The Intro to Robotics Final Project is a combination and celebration of everything we have learned this semester. Much of the project has already been created by previous assignments.

NOTE: Using your own judgement, you may work with anyone nearby to do a combined project. Be safe.

Submission

- Download these instructions during finals week. This project can change based on what we do in class.
- Start working on it now: practicing and planning.
- The entire project should be filmed in one non-stop video.
- The video does not have to be long, keep it short and interesting. You could pause in between different sections, then un pause to start recording again.
- Describe each part of the project as you are recording.
- Go through each part of the project in sequence.
- Attach your code and a YouTube link to the assignment.

Please use your imagination to come up with creative movements and ideas!

Project Outline

Preparation

1. Charge your batteries
2. Calibrate your mBot

Requirements

- Use the **Arduino** Default program to build this project.

- Build everything into your default program.

The final project should include, but is not limited to, the following:

1. Comment your code in the same manner as shown in the Arduino assignment examples. This shows your understanding of your code.
2. Main Default Program moves (The list also provides the appropriate remote control buttons.)
    a. Remote Control
    b. Look Left Look Right Obstacle Avoidance (Obstacle Course)
    c. Line Following
    d. Maze Solving
    e. Shake that Bot!
    f. mBot Soccer (In Class Flash Mob only)
3. Shake that Bot! (minimum 15 seconds)
    a. Use E for this setting.
    b. Do something different than you have before.
    c. Please make this interesting, combine movement, short song and lights.
    d. Ideas: LED's, sound, waddle, etc.
    e. Comment your code with the song title.

Assignment Submission

Attach the following to your assignment submission.

1. In Class students who participate in the mBot Flash Mob have already completed this assignment.
2. A youTube link to the video.
3. Zip up your Arduino program code folder in a single file.