

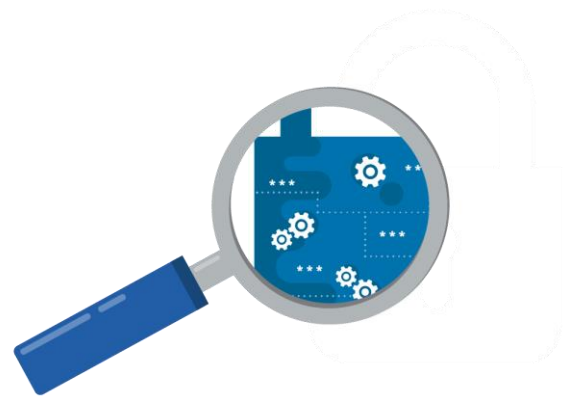
GoBabyGo

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Overview

- Introduction.
- Client.
- Hardware, Research and Testing
- Testing (Subsystems).
- Gantt Chart.
- Results.
- Issues that cause delays.
- Conclusion.



Introduction

Goals:

- A car that allows kids with mobility issues to socialize, improve posture and reduce depression.
- Using the function of a pinball flipper applying it on the wild thing.

Problems:

- Different motors: stepper motor, a linear Actuator motor and linear servos.
- Linear Actuator and linear servos need a controller.
- The parts that allow the connection between the motor to the car.

Client

Dr. James "Cole" Galloway"

- Professor, Dept. of Physical Therapy.
- University of Delaware.
- Founder of the project.

Dr. Kyle Winfree

- Assistant Professor
- PhD, Biomechanics and Movement Science, University of Delaware.
- MSE, Robotics, University of Pennsylvania.
- BS, Physics, Northern Arizona University.

Ali Mohammad



Hardware, Research and Testing



ARDUINO
OPEN - SOURCE
COMMUNITY

- Hardware.
 - Arduino, motors and wild thing.
- Research.
 - Brainstorming
 - Getting ideas from the internet.
 - Getting ideas from video games.
- Testing.
 - Check if the materials working according to plan.

Abdulla Almutairi

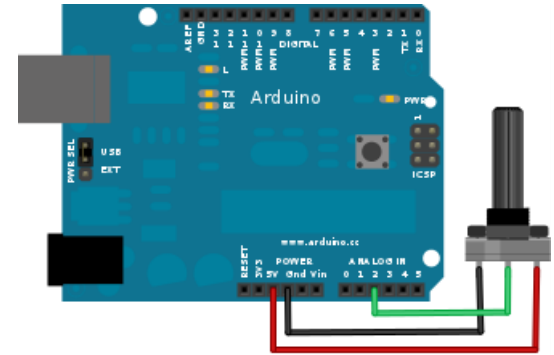


Testing: Subsystem 1:

- **Potentiometer:**

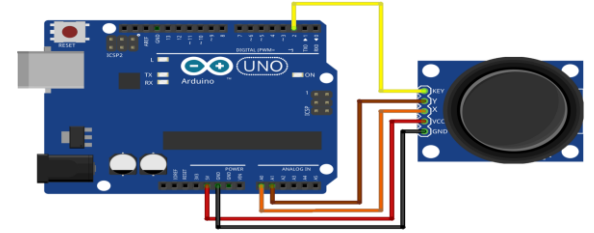
- It has a **rotating contact**, that helps adjust the voltage divider as a result it **will change the frequency thus changing the speed of the flipper.**

Abdulla Almutairi



Made with  Fritzing.org

Testing : Subsystem 2:



fritzing

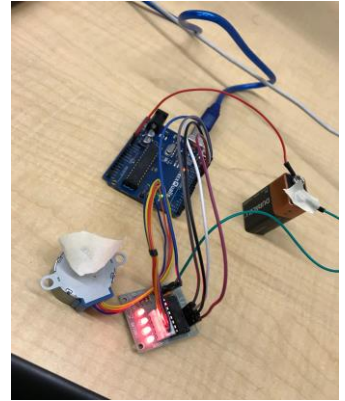
- **Analog Joystick:**

- It has **two-dimensional inputs that control the movement of the flipper.**
- It works with the potentiometer by running electric activity into it to **measure the range of motion for the stick.**

Testing:Subsystem 3

- **Step-motor:**

- It's a DC electric motor, that makes full rotations divided into equal steps.
- speed can be controlled each step by using Arduino code.
- **Will allow the flipper to rotate to a certain degree**



Ali Albaloushi

Testing: Subsystem 4

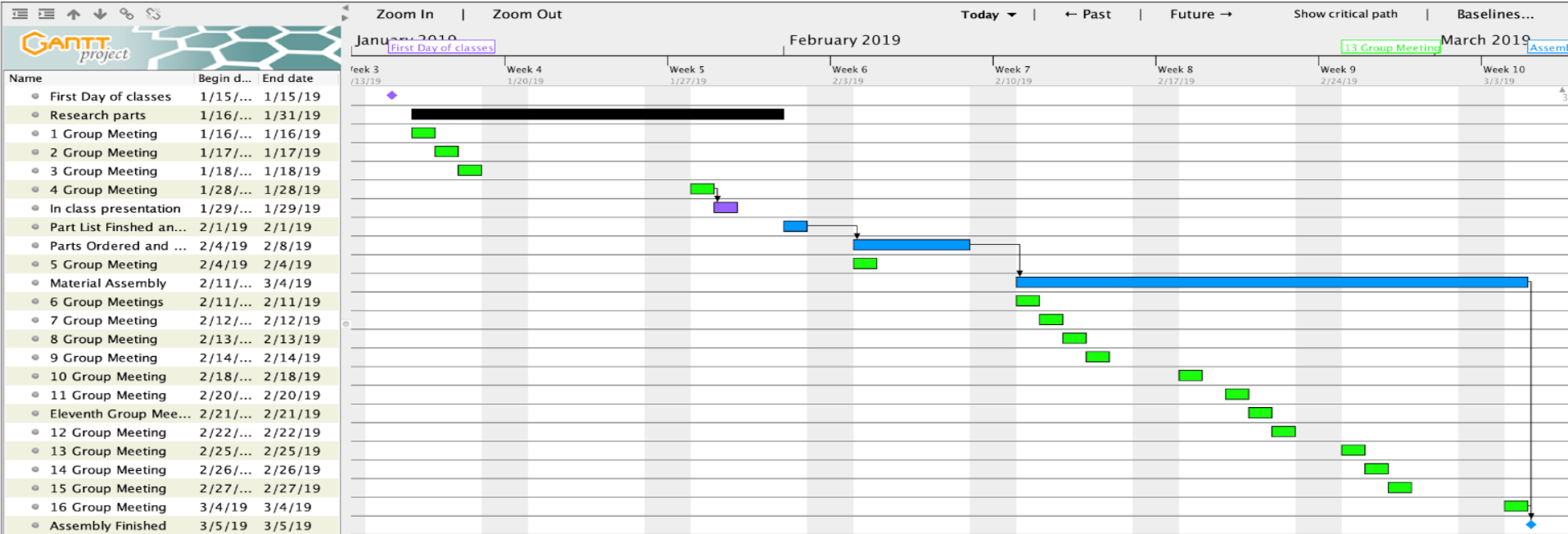


- **L12-R Micro Linear Servos for RC & Arduino**
 - stroke lengths of **30mm, 50mm or 100mm.**
 - maximum forces between **22N (5lbs) and 80N (18lbs)** and maximum speeds between **6.5mm/s and 25mm/s.**
 - Available in **6V** only to ensure compatibility with RC receivers
 - Orbit Power Jack (Power Bank) to bring the signal level up to **5vdc** for the L12-R to operate.

Ali Mohammad



Gantt Chart



Gantt Chart is subject to change if delays occurred!

Possible Issues that delay the project

- Materials not arriving on time.
- damaged materials.
- A team mate getting sick.
- Not showing up for a meeting.
- Code language error.
- Conflict.
- Weather changes.



DELAY

FLAMINGTEXT.COM

Conclusion

- The purpose of our group is to help children with movement disability.
- Socializing aspect is important.
- Hardware, research, testing.
- The last subsystem will be beneficial for our project.
- Gantt Chart is subject to change if delays occurred!

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Thank You

Questions