Initial Project Description
Team 9
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Project Name
RLED: REVOLUTIONIZED LEDs

Project Synopsis
Smartphone-controlled LED light strip allowing for intuitive user customization and interaction.

Project Description
This project is being undertaken to improve upon the standard LED light strips that you can purchase online. Most current LED light strips are rather boring as they only allow for a single color to be displayed across the strip at a time and do not offer much in terms of pattern customization or to be synced to a song. Beyond creating custom patterns to display on the LED light strip, allowing for patterns to be created, shared, and downloaded among users. The result of the project should be a LED light strip that can be intuitively customized by the user via their smartphone. The most important concept of this project will be the sharing functionality such that users can see what other people have created with their own LED light strips and then be able to 'like' and download them to their own device to be used. Also, increasing the number of LEDs that are on a single 16-foot light strip from 150 to 300 will allow for greater customization of patterns and more elaborate displays.

Project Milestones
- **1st Semester**
  - All products purchased and assembled **10/16**
  - Implementation of the foundation of the iOS app **11/6**
  - Basic user interaction documentation **11/27**
  - Light strip and base app functional with default customizations implemented **11/27**
- **2nd Semester**
  - Allow users to implement their own customizations **3/1**
  - Incorporate Apple HomeKit, Siri or Alexa compatibility **3/20**
  - Basic user customization documentation **4/23**
  - Allow users to share their customizations **4/23**
- **Who Will Do What?**
  - Due to the simplicity of this idea, it is currently believed that each member (Afnan, Cameron, Justin, Qui, Rob) will contribute in some capacity to each milestone.

Project Budget
- **LED Light Strips: ~$15**
  - Waterproof IP65 LED Flex Strip
    https://www.ledsupply.com/led-strips/waterproof-12v-led-strip?gclid=EAIaIQobChMIpIyF6qCc7AIVicDACh1y4ATNEAQYASABEgIVsfD_BwE

- **Micro-Controller(s): ~$50**
  - Arduino UNO Rev3 https://www.microcenter.com/product/618839/arduino-uno-rev3

- Arduino Mega 2560 REV3 https://www.microcenter.com/product/621387/arduino-mega-2560-rev3

- **Special Training**
  - Learning Swift/Objective-C

- **Rental Mac**
  - Might need to borrow/rent a Mac for iOS development w/ xCode