Introduction

Objective: Design a product so that everyone can control their power outlets no matter where they might be. We propose to design an outlet which can be turned on or off using a mobile device over wifi. This general outlet would be in use for wide variety of devices as it would include the neutral pin. An app would be used to interface with the outlets.

Background: Sometimes we leave lights or appliances on when we are not at home because we forgot or simply because we were lazy. Not only is it environmentally unfriendly, it also reduces the life of electronics. Other times, when we are out on vacation, we want to be able to periodically turn on some lights to create a sense of activity so to deter thieves from breaking in. Remotely-controlled outlets can very easily tackle these problems.

High-level requirements list:

- Use SHA256 and SSL to ensure secure data transfer between mobile device and the outlets.
- Design a plug which can be toggled using a mobile device.
- Design the plug for universal use for a wide variety of devices (with neutral pin). (Provide 110V/230V AC depending on the region being used in).