

SE101 – Lab Project Proposal

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Project Features:

- The project will allow you to control a Keurig coffee machine through your phone
- We also plan on building a mobile alarm clock app which will start your Keurig brewing coffee as soon as you wake up

Major Software Components:

- A server built in C to run on the Raspberry Pi, with the purpose of listening for requests to run the Keurig machine
- C code to simulate the pressing of buttons on the Keurig
- An Android or iOS alarm clock app that can communicate with the Keurig machine when the alarm is shut off

Prototype:

- We will construct an evolutionary prototype, as the Keurig machine isn't disposable
- Once we figure out how to wire the machine to control the buttons remotely, we can use the exact same wiring and machine for the final product

Hardware:

- Raspberry Pi
- Laptop and relevant connections to interface with the Raspberry Pi
- Keurig machine
- Wires to hook up the Raspberry Pi to the Keurig
- iOS or Android phone to run the application on

Anticipated Challenges:

- Wiring is probably the biggest concern, as we will need to break into the Keurig and figure out how the wiring within it works to connect the Raspberry Pi
- Figuring out how to interface with the Raspberry Pi through mobile application may be difficult as well
- Coordinating to work on this project while having classes going on will be a challenge as well