Abstract

The goal of this project is to use a Keurig or basic coffee machine and integrate an ARM processor to brew coffee through voice commands or on a web application. Most people are in a rush while making coffee in the morning and having the ability to start making coffee while performing other tasks is extremely beneficial. This added functionality will also allow for brewing a desired quantity and creating a routine to drink coffee at a certain time every day. Using the Google Home's voice commands, the user can simply request to "brew a cup of coffee" and the voice command will trigger the Keurig machine to begin brewing. A live web application can then be used to monitor the coffee and either wait for the whole cup to brew or stop the process in the middle for a smaller cup size.

Project Goals

First Demonstration:

Brew coffee from a web application on a local server or wifi network. The ARM processor will communicate between the coffee machine and the server.

Second Demonstration:

Show voice command integration with Google Home Mini in order to begin or stop brewing.

Final Demonstration:

Add more granular control to the coffee system with a contactless water level controller in order to brew a certain amount of coffee. This will allow us to learn more about sensor integration with embedded HW/SW as well as work on the circuitry in this system.

Tentative Schedule

W: 3-5
F: 1-3
Sat OR Sun: 2-5

Final Report and Project Files

No files shared here yet.