# WORK AGREEMENT – University of Alabama at Birmingham (UAB)

Between Team 6

And CS499

## application development

This project agreement describes the understanding Team 6 and CS499 have concerning infrastructure development and installation, initial data setup and migration, customization, deployment, and support of application, or add-on features for a Smart Home System.

This signed agreement hereby authorizes work to begin on the project based on the negotiated start date, and will remain in effect until the product is presented.

# Technical Specifications

# Primary Deliverable

## Application Deliverables

Overall application purpose:

The overall end goal of this web application is to act as a home management system for some end user. This app will act as a visual representation for past cost and usage for water and electricity used throughout the house, as well as act as a predictor for both cost and usage for future months. The end user should also be able to manually control the functioning of all lights throughout the house, and be able to see if there are lights currently on or doors/windows open. The app should also be able to display the current outside temperature as well as the current inside temperature. Additional features for this project include a dimming light feature and localization with at least one other language.

### **Deliverable Overview: (Appendix A)**

This project will be implemented as a web application that uses some form of formulaic calculations to manage all home utilities. A relational database on a SQL server will be used to store all information regarding the various utilities throughout the home, and the project will be stored and developed using a GitLab repository.

### **Roles/Security: N/A**

### **Application Screens: (Appendix B)**

* **Main Landing Screen**
  + **displays current outdoor temperature**
  + **displays current indoor temperature**
  + **displays current HVAC settings**
  + **notifies user of running lights**
  + **notifies user of dimmed lights**
  + **notifies user of open windows/doors**
* **Graphical Representation Screen**
  + **displays graph of past cost/usage for water/electricity**
  + **displays predicted future cost for water/electricity**
* **Control/Admin Screen**
  + **enables manual control of all lights throughout house**
  + **enables manual dimming of all lights throughout the house**
  + **enables switching between different languages provided**
  + **enables the additional and removal of devices in house**
  + **provides testing environment for web application**

### **Reports:**

* The client will be informed biweekly on the progress of the project, or immediately if any concerns or problems arise. If there are any changes to the specifications of the project, the client will also be consulted prior to the change.

## Project Timeline

|  |  |  |
| --- | --- | --- |
| **Project Timeline Milestones (Proposed)** | **Estimated Start Date** | **Estimated Completion Date** |
| Database Design | 02/15 | 02/22 |
| Define GUI | 02/15 | 02/16 |
| Front-End Implementation | 02/15 | 02/29 |
| Back-End Implementation | 02/15 | 02/29 |
| Linking Front and Back-Ends | 02/01 | 02/08 |
|  |  |  |
|  |  |  |
|  |  |  |
| Submit Final Project |  |  |
| Present Final Project | 04/12 | 04/12 |

**Note:** Any change in scope including additional deliverable components, and/or other requirements will be re-scoped and submitted as an addendum or new agreement.

# STRUCTURE AND OVERSIGHT

## Status Reporting

# TERMINATION OR REVISIONS

1. Modifications will be reflected by signed addenda to this document.
2. This document may be modified only in writing signed by all parties.

This project agreement becomes effective on date of Business Owner signature.

## business owner

By\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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## Team [x]

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# Appendix A

## Application Design

Application design details are found in the following documents:

# Appendix B

## Application Screens

Application screen wireframes are found in the following documents: