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

Between Team 5

And CS499

## application development

This project agreement describes the understanding Team 5 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: Create a system that a home user will be able to use for the purposes of maintaining an energy efficient home. The system shall be able to regulate the temperature of the home as well as show any doorways or windows that may be opened. The system shall give predictions on upcoming months utilities as well as previous months histories. The system shall also control the electrical components of the home.

To include:

* Temperature gauge
* Sensor manipulation
* Historical and predicted graphs
* Easy-to-use graphical interface

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

* A multi-page web application that controls the functions of an energy efficient home. The application should be able to manipulate the homes thermostats as well as manipulate the sensors of the home. The application should also give the user the ability to see previous months history for bills as well as a prediction for upcoming months bills. These predictions should be displayed in a graphical format.

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

* Screen 1: Left of screen: Home floor plan with sensor manipulation
* Screen 1: Right of screen: Temperature information for external and internal & current in-home temp (**shall not include an on and off function**)
* Screen 2: Top of screen: Multi-line graph that includes power usage, water usage and total cost without units (**graph will be able to display 6 months, 3 months, 1 month, and a week**)
* Screen 2: Bottom of screen: Running totals for power and water usage for the last six months
* Screen 3: Administrative functions: Ability to change the state of the sensors

### **Reports:**

* None

## Project Timeline

|  |  |  |
| --- | --- | --- |
| **Project Timeline Milestones (Proposed)** | **Estimated Start Date** | **Estimated Completion Date** |
| Create database |  |  |
| Create website |  |  |
| Create math equations |  |  |
| Create sensors |  |  |
| Create GUI |  |  |
| Create icons for GUI |  |  |
| Create display for user |  |  |
| Create floorplan |  |  |
|  |  |  |
|  |  |  |

**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

* + Status email, in person meetings

# 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 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Title\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## 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: