**Who:** Ankhbayar Jansan, Mitchell Klein, and Ryan Talley

**Title:** Smart House

**Vision Statement:** To design a house that functions electronically and autonomously based on the homeowner's personal preferences.

**Automated Tests:**

We used CUnit, a unit testing framework for C found at http://cunit.sourceforge.net/index.html.

**CUnit - A Unit testing framework for C**
**http://cunit.sourceforge.net/**

| | |
|---|---|
| Total Number of Suites | 1 |
| Total Number of Test Cases | 3 |

## Listing of Registered Suites & Tests

| | | Initialize Function? | Cleanup Function? | Test Count | Active? |
|---|---|---|---|---|---|
| Suite | **Suite 1** | Yes | Yes | 3 | Yes |
| Test | Push Data Test | | | | Yes |
| Test | Pull Data Test | | | | Yes |
| Test | Push Lock Test | | | | Yes |

**File Generated By CUnit v2.1-3 - Wed Nov 11 2015**

**CUnit - A Unit testing framework for C.**
**http://cunit.sourceforge.net/**

## Automated Test Run Results

Running Suite Suite 1

| | |
|---|---|
| Running test Push Data Test ... | Passed |
| Running test Pull Data Test ... | Passed |
| Running test Push Lock Test ... | Passed |

**Cumulative Summary for Run**

| Type | Total | Run | Succeeded | Failed | Inactive |
|---|---|---|---|---|---|
| Suites | 1 | 1 | - NA - | 0 | 0 |
| Test Cases | 3 | 3 | 3 | 0 | 0 |
| Assertions | 6 | 6 | 6 | 0 | n/a |

**File Generated By CUnit v2.1-3 - Wed Nov 11 2015**

## User Acceptance Tests:

| **Smart House User Acceptance Test #1** |
|---|

| | |
|---|---|
| **Test Case ID:** Connectivity_T1 | **Test Designed By:** Ryan Talley |
| **Test Priority (Low/Medium/High):** High | **Test Designed Date:** 11/05/2015 |
| **Module Name:** Bluetooth Connection | **Test Executed By:** <NAME> |
| **Test Title:** Test Bluetooth Connectivity | **Test Execution Date:** <NAME> |

| |
|---|
| **Description:** Tests the bluetooth connection between the smartphone application and the Smart Home. User pairs their smartphone with the Smart Home and then sets up a new account on the smart home. |
| **Preconditions:** The user has downloaded the smart home application, has bluetooth communication enabled, has Smart Homes device ID and password for pairing. |
| **Dependencies:** The smart home needs to be running. |

| Step | Test Steps | Test Data | Expected Result | Actual Result | Status (Pass/ Fail) | Notes |
|---|---|---|---|---|---|---|
| **1** | User finds smart home under list of bluetooth devices | ID: 1234 | The device ID 1234 should be found | | | |
| **2** | User uses password to pair with smart home | Password: 123456789 | The smart home should pair with the phone | | | |
| **3** | User opens smart home application | | Application should open | | | |
| **4** | User selects ‘Add New Account” | | Blank username and password fields should appear | | | |
| **5** | User enters desired username and password selects ‘Finish’ | | Account should be created with desired username and password | | | |
| **6** | User logs out then logs back into their account | | Their username and password should log them into their account | | | |

| |
|---|
| **Postconditions:** The new account should be generated with the correct username and password that was entered by the user during this test. |

| |
|---|
| **Smart House User Acceptance Test #2** |

| | |
|---|---|
| **Test Case ID:** Data_Entry_T1 | **Test Designed By:** Ryan Talley |
| **Test Priority (Low/Medium/High):** High | **Test Designed Date:** 11/05/2015 |
| **Module Name:** Data Table Entries | **Test Executed By:** <NAME> |
| **Test Title:** Test Data Table Entries | **Test Execution Date:** <DATE> |

| |
|---|
| **Description:** Tests the data bases ability to store and retrieve data entered by the user. This data represents the user's personal preferences for the home environment. |
| **Preconditions:** User has the bluetooth application running and has bluetooth enabled. |
| **Dependencies:** An account already exists on the smart home and the smart home is running. |

| Step | Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/ Fail) | Notes |
|---|---|---|---|---|---|---|
| **1** | User opens the smart home application | | The application should open | | | |
| **2** | User logs in to the specified account | Username: user Password: pass | The user should now be logged in to the account | | | |
| **3** | User selects 'Preferences' | | A blank table of preferences should now open | | | |
| **4** | User enters their desired preferences and selects 'Apply' | | The user's preferences should be saved to the database | | | |
| **5** | User logs out then logs back in and selects 'View Preferences' | | The previously entered preferences should appear | | | |

| |
|---|
| **Postconditions:** The correct user preferences should be displayed on the 'View Preferences' page. These preferences should be the same preferences that the user entered during this test. |

| **Smart House User Acceptance Test #3** |
|---|

| | |
|---|---|
| **Test Case ID:** Smart_Lock_T1 | **Test Designed By:** Ryan Talley |
| **Test Priority (Low/Medium/High):** Medium | **Test Designed Date:** 11/05/2015 |
| **Module Name:** Smart Lock | **Test Executed By:** <NAME> |
| **Test Title:** Test Smart Lock Unlock and Lock | **Test Execution Date:** <DATE> |

| |
|---|
| **Description:** Tests the smart lock feature on the smart home by having the user both lock and unlock the phone from the smart home application. |
| **Preconditions:** User has the smart home application downloaded, has bluetooth enabled, and the smart lock is initially locked. |
| **Dependencies:** An account already exists on the smart home that has the smart lock password specified. |

| Step | Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/ Fail) | Notes |
|---|---|---|---|---|---|---|
| **1** | User opens the smart home application | | The application should open | | | |
| **2** | User selects ‘Unlock’ | | User should be prompted for a password | | | |
| **3** | User enters the specified password | Password: unlock | The smart lock should unlock | | | |
| **4** | User selects ‘Lock’ | | The smart lock should lock | | | |

| |
|---|
| **Postconditions:** User is validated on the current lock status by looking at the lock status symbol. |

**VCS Link:** https://github.com/mikl1844/CSCI_3308_Project