Miscellaneous Documentation

# Specifications & External Modules

External Modules:

* LIBNFC
* Python Libraries (All part of the Standard Libraries)
  + Commands
  + Time
  + Tkinter

Specifications:

* Raspberry Pi Model A+ (Model A, B and B+ may work but I have not tested them)
* Raspian Wheezy OS (Other OS’s would require other drivers that I have not tested)
* Libnfc V 1.7
* Python V 2.7 or Higher

# File & Record Definitions

|  |  |
| --- | --- |
| File or Record | Use |
| Frames.py | Main project file. Defines, initializes and builds the GUI as well as handling events and accessing databases |
| Local Database | Stores the authentication stack. Stores raw data for access later |
| Nfc-poll.cpp | Program accesses the nfc reader and gets the data from the card |

# Test Data

Drivers used in this test data:

|  |  |  |  |
| --- | --- | --- | --- |
| Driver Name | Input | Output | Use |
| Local\_Login.py | N/A | User\_ID (6 Digit Int) | Used to emulate an NFC reader and an algorithm which will change the data from the reader into the appropriate syntax to be returned |
| Edumate.py | Takes a 6 digit User\_ID as its input | Outputs a two dimensional array in syntax [[Teacher, Subject, Room]] | Used to emulate its names sake – Edumate - and an algorithm that will put data into the appropriate syntax to be returned |
| Local\_DB.py | Takes a request type as input | Output is dependent on request type | Emulates the local database used to store a full list of all valid User\_ID’s , the stack of User\_ID’s to be Authenticated with Edumate and the program to sync the local list of valid ID’s with Edumate’s |

|  |  |
| --- | --- |
| **Input** | **Output** |
| User 1 Taps on | Logged in Message Displayed (Storyboard 2 Success) |
| User 1 Accesses Calendar | Calendar Displayed (Storyboard 4) |
| Invalid User Taps on | Could Not Log in Message Displayed (Storyboard 2 Failure) |
| Admin User Taps on | Admin Screen Displayed (Storyboard 2 Admin) |
| Admin User Accesses Troubleshooting page | Troubleshooting list Displayed (Storyboard 5) |
| Admin User Accesses Raw Data page | Raw Data Page Displayed (Storyboard 6) |
| Admin User Accesses Calendar | Calendar Displayed (Storyboard 4) |
| Admin User Exits Application | N/A |
| Admin User Shuts down System | N/A |
| Admin User Closes Admin Page | Login Page Displayed (Storyboard 1) |
| User 2 Taps on | Logged in Message Displayed (Storyboard 2 Success) |

# Website Screenshots