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| NFRs | Notion | Description |
| Portability | Phone application | User can access the system by using smart phone app. This app could work on both Android and IOS system (just like the BOA app). |
| Web application | The system can be accessible by its own website. User can login the web using a smart phone, laptop, computer or any devices that can be attached to the internet. |
| Installability | Plug and play (Wi-Fi) | When a device is plugged into the plug seat, it sends a standby status message to the system to notify that it is available to receive remote control. And this availability information is reserved in the device DB. |
| Performance | Real time status | Once the system receives commands from the user to change the devices status or the power supply, the system should execute the commands in 10ms, also it should read the successful change in 10ms and send the change notification to the user in 10ms.  (Note: The exact time should be calculated based on the speed of the system and hardware.) |
| Support | Feedback for switching | 1. Once the device is turned on/off, its status is sent to the system, and then the system sends a notification to the user, no matter the turn-on/turn-off command is executed manually or remotely by a smart phone. 2. When the power supply changes, the system sends a notification to user. 3. All these notifications would be reserved in the device DB, battery DB, so the user could check the device status by login the system account through app or website at any time. |
| Scalability | Easy to add/remove devices | 1. The user can specify the devices that he wants to control remotely by app or web, just making selections through the list of the devices that could be linked to the system on the smart phone. 2. The devices whether link to the system or not can be determined by press the switch on/off Wi-Fi button on them manually. |
| Reliability | Manual control in case of failure | 1. When the system fails for any reason, such as no Wi-Fi, app unavailable, website crash, then the user could turn on/off the devices manually. 2. The user can switch the power supply manually by press the power-supply-button on the wall. |
| Priority | Manual operation  vs  remote control | If the remote-control command conflicts with the manual operation, then the system executes the manual operation. |
| Security | Password protected | Each house has only one account. The accounts are defined by the address. The users can set the account using email verification.  When the user attempts to access the system, he must log in his account first. In case the user forgets the password or the username, he could find it by the linked email.  Each time when the account is logged in, the exact login time would be sent to the user by email. |
| Limited Wi-Fi range | The system and its link to the devices can only be available by the support of Wi-Fi. If the user disconnects Wi-Fi or the appliances’ location is over the Wi-Fi range of the house, then the system and the link would fail. |
| Maintenance | Battery life status |  |