

# **Smartlife**

## **The Application For The Pragmatic Homeowner**

Alexander Collins (ac845)

Igor Drobnica (id95)

Waleed Iqbal (wi26)

Jung-Moo Lee (jl749)

Supervised by: Daniel Soria

### **Project description**

The project we decided to embark on creating was an “Android Controlled Home Assistant”. This system is similar in concept to the Alexa series of virtual assistant created by amazon and other competing brands, ours however differs in the respect that instead of voice controlled activation being the only way to use the system, our system is controlled by our android application and voice control making It more flexible to the user. The hardware we have used is the Arduino, provided to us alongside other parts we ourselves have procured, using this combination of software and hardware our system can perform a variety of functions in the home such as temperature control, locking and unlocking doors and a variety of many other useful functions. Our device is also not limited to one house per person and a user can have a variety of these device installed in many different locations all selectable from our application via our database which stores all the data necessary to allow the user flexibility in what they which to do with the device.

### **Results**

The android application can be downloaded to any device that supports android software but is most compatible on android smartphones. Our application links to the Arduino hardware via the dragon server provided by the university, the hardware itself can either be powered by mains or a battery for added flexibility. Once set up the user can open the android application and will be asked to create an account by inputting a username and password which will be stored on our database. The system will then auto create a pin number for the user that can be changed later on the settings page, the user can then select what functions they wish to perform via our menu. The response times are lightning fast and reliable as results show from our extensive debugging.