**User Requirements Details and Data**

**Methods**

During the collection of our user requirements we used the following methods:

* Competitor Analysis
* User Personas
* Questionnaire

**Competitor Analysis**

The first method we used was the Competitor Analysis. We looked at several apps with similar functions to ours and looked for the best parts of each one as well as the issues that people most commonly had with them. We looked for this information by looking at user and professional reviews as well as using the app ourselves.

We looked at Phillips Hue, EcoBee4 and Hive and then based our research on the main usability criteria. These being Efficiency of Use, Ease of Remembering and Error Rate.

With Phillips Hue one the main issues that people complained about was overcrowding. Having too many things on a screen at a time was confusing.

For Hive the biggest problem was when people were setting up schedules it was easy to make mistakes as making adjustments was fiddly.

EcoBee4 had the almost no complaints and had a very well thought out scheduling system. So, we took this idea and tried to improve on it using the next requirements gathering method.

**User Personas**

We got more out of this method than we did any other. We thought of potential users of the app and created a schedule of their day to day activities. We used this to then come up with relevant features and UI designs based on their needs. The personas we did are a student, elderly person, single mother, commuter, disadvantaged person, and a non-English speaker. Based on these personas we gathered a lot of features and points to focus on when doing our design.

Some of the main requirements gathered from this method are:

* Details for the scheduling aspect of the app
* Having a confirmation of change whenever one is made (such as a buzz or flash from the notification light)
* Being able to make quick changes on the fly
* Having a tutorial in some form would help with those who have very little experience with technology
* Having mainly symbols instead of words to help make the app as universal as possible
* Having a first set up page to choose a language and disability

**Questionnaire**

We got the least from the questionnaire than either of the other methods we used. We asked a series of relevant questions based on what we couldn’t find from the other methods.

We gave our questionnaire to Computer Science students at Brunel. They mostly remained anonymous but we can at least assume that they are 18 and over and include both males and females.

Based on one of the questions about the current status of the user’s home security system we gathered that most people don’t have one and so we included one in our app.

Another question asked the user about colour schemes. We gathered that a dynamic colour scheme that changes throughout the app is preferred to a static one.

The most useful information gathered was on the tutorial. We presented a few options for a tutorial system and the most popular one was the ‘tooltips’. This would be an overlay that describes the function and use of each part of every screen of the app.

**Prototype design and description of interaction**

[Link to interactive prototype](https://mannjamin.github.io/LightR/lightR.html)

(Please note that for the ‘Light’ page, the sliders should all be just below the name and the light and switch.)