Future

For the future of our project we plan to implement several leds rather than just one because we believe it would be pretty cool to see several leds responding to the light sensor at once. This would also give us a better idea of what it would look like as an actual lamp. Another improvement we would like to implement is the use of a website interface which would allow us to control the project from a mobile phone. This could not only be used to turn the light on and off but also perhaps also record light readings or set a timer for the light, but this would all depend on further investigation of course. we would also like to add an indicator to let the lamp tell the person how long they have been sat in their workstation and when it is time to take a break. There are already some websites and applications to do this for smart bulbs so we believe this could be added to our project. For future possibilities this could be used in office lighting where people are working long hours so they do not have to worry the lasting effects the lighting could have on their eyes. Another area it would work would be in schools and colleges where students are also studying for long hours and laptops are becoming a bigger part of education each day. An area it could also be implemented is in the use of car headlights so the lighting would not have a damaging effect on the eyes of not just drivers on long journeys but also professional drivers such as lorry drivers or delivery drivers. The scope for ideas is large where it could be use din such areas as shopping centres, flashlights, phone and laptop screen lighting all which could benefit peoples eye health and mental health which studies have proven. As a group an area we would also like to investigate for the current project would be energy efficiency, to make our project perform the same task while using less energy to perform the same task. This would also benefit some of the future possibilities mentioned earlier as it could assist us in getting as low an energy as possible to make it environmentally friendly. We would also look at the possibility of adding some more sensors and another screen to the project which would read temperature and humidity of the workspace area. As we would like to have mobile phones controlling the light, we could also investigate perhaps adding a usb port to the project so the user could connect other devices such as phones or other smart devices. It would also be interesting to see if the project could be connected to a dimmer switch in the home which would allow the user to adjust the light manually as some may be more sensitive to different levels of light compared to others. There are so many possibilities and different areas we could explore with this project which would be the reason we would be happy to continue with it for project two. It is exciting for us as a group to be able to explore these new areas but it also gives a lot of satisfaction to not only see the project working but allow us to work with a physical device and kit when the most of our first year was online. We have our first IoT group project now complete and enjoyed it, with the easter break now upon us this gives us a chance for a much-needed break, some chocolate and some free time. We are hoping that with some of this free time it will give us a chance to investigate and research the planned implementations. For project two and furthermore give us an opportunity to look for new ideas which we can add to the project. It also gives us something to look forward to which is another chance to work together and work with the Arduino Yun and grove kit which to our surprise is something so small yet so powerful. As we know with great power comes great responsibility.

Project two: Now that we had moved on to using a smart bulb for project two if there was any future work on the project, we would have liked to add in some machine learning. The idea we have for this would be that the light automatically comes on when you enter the room. In our case it would be that the lamp comes on when the user sits down at desk. The idea for this would be so that the light would have a better idea of human actions so it would not require set up on a mobile phone application or changing settings on the light itself. Something else we would add in is our own api which would make it more secure. By doing this we could also have api keys for the application and it would also let us add authentication. This would also give us the opportunity to encrypt any data coming in for further security. we would also like to add to any future project a bulb compatible with music this would allow us to add further attractive features to the lamp. If this was implemented, it would also help take up less space on the desk or indeed in the home of any user. This would make it more attractive and appealing to the user. If we had more time on this improving this project, we would have liked to also investigate the possibility of adding voice commands and the possibility of linking it to an Alexa or google assistant. Overall, we enjoyed the project as we feel the subject has given us food for thought on the possibilities not alone in this subject but also in other subjects going forward.