Luke Murray Individual Reflective Statement

Group Consisting of:

1. Jacob Williams – 15008632
2. Luke Murray – 19041865

Project Gitlab: https://gitlab.uwe.ac.uk/jj6-williams/iots_task3

Group Review

Working in this group was relatively straight forward, as soon as we formed the group and read through the specification for Task 3 we both immediately knew what the division of work would look like. This might be due to us already knowing each others strengths and weaknesses in programming due to us essentially peer reviewing each other not only in the other Internet of Things Security tasks but also other modules coursework.

Whilst still at University the coordination was fairly simplistic, we saw each other twice a week for lectures and this allowed us to have group meetings at these points too. Despite the fact that all members of the group living far away from each other, the Christmas period did not affect work cohesion, this was due to coordination taking place through messaging via WhatsApp instead.

With this group the work was formulated and adapted quickly and painlessly, a method of salt generation was conceived by myself nearly as soon as we'd finished reading the specification, and other members had formulated two methods of pin entry by the time the salt generation development had begun it's improvement.

A major part of development, the external peripherals of the micro:bit because this would be the part that would display whether or not the encryption and decryption was successful, thus making it it a major part of the task. With personal factors along with a lack of documentation being key factors of the peripherals not being to the standard that I wanted it to be, however the other members of the group were happy with the quality of this section as it worked.

There is only one minor gripe among the group, but it is more common than not in most projects. The issue is programming standards which is something I am notoriously slack on, which is something that is common within some programmers, this was the case in this group. It wasn't the cause of any internal disputes however, instead the group was either happy to allow other members to refactor most of the code.

Personal Review

The extra layer of abstraction of the salt was something that I came up with due to the fact I knew the other areas of the tasks I had chosen to take on were much harder due to the scarce number of resources that support the micro:bit and external hardware.

Improving the security of the salt was something that I had discussed with Jacob due to it being the first part of the task to be completed, I also had fears of my level of coding not being up to the level required due to a lack of experience in c programming. So using the basis of normal salt creation using a random number generation of 0 – 9, I altered it to select a number between 0 – 62 to allow for the inclusion of letters, this should improve the security because there is a greater randomness of numbers.

The lack of peripherals on the mirco:bit was due to myself not preparing more before the Christmas holidays, this led to me not taking enough of the kit home to create the required circuits, this also meant when I returned back after the holidays I had to also focus on other exams and coursework. This meant that most of the peripherals were based upon the LED screen of the Mirco:bit. Another reason for this decision was that all information online was either drag or drop based in javascript and python, due to my experience in python programming it allowed me to understand how to convert from python to C.

One major issue I had was in my programming standards which was much slacker than others, but to overcome this I allowed any standards that needed to be altered to be altered. However, coding on the micro:bit was a very enjoyable experience as it was something I had never used before and allowed me to expand on my knowledge of C programming but after finding the lack of resources for the micro:bit, I would use the Raspberry Pi if I was to redo this module.