**Weekly Project 300 Blog**

Week 1 – Entry 1 10th October

We were assigned our groups for the Project 300 by our lecturer. This group included myself, Lee Brennan, Valentas Vaitkus, Sean Kelly, and Adiel Imran. After we found out our group, we scheduled our first meeting in a private library room in the college. The first meeting was basically a brainstorm of what we would like to do together for the project. The first suggestion was that we could create a VLAN on a network and work from there, but it was too basic and I wanted something more challenging. I did my own research and was looking at ideas such as an Alexa-powered dash cam or smart AI gloves but these were too costly and we did not have the experience nor equipment necessary.

It was decided between us that we would create a network-based home security system using Raspberry Pi’s. We will have two Raspberry Pi’s, two camera modules, a router, a switch, and a laptop/PC for the operating system. Our idea is to set up the Raspberry Pi’s, connecting them to camera modules. These cameras will record video footage and stream it live to a webpage. The plan is to host this website publicly using a cloud. There will be administrative rights to who can view what camera, based on who is logged in with a username and password. For example, one person signed in can view both cameras at the same time while another sign in can only view one. Expanding on this idea, we can modify the Pi cameras to use facial-recognition or number-plate recognition. A scenario of a use for this project is so that in a business place, there will be a camera at the front door of an office, and then another camera at the back door of the office. The Boss can see both cameras where as the employees can only see the front camera.

Our group arranged a second meeting to discuss which roles each team member would partake. The role I decided to take is with the active directory. I will be installing active directory, creating and configuring users, and assigning permissions to the users. Once all of our roles were decided, we met with our project supervisor, Veronica. She portrayed to us that we have an idea of what we’re doing but we need to know exactly how to do it regarding hardware and software. Veronica got in contact with another one of our lecturers to request permission that we can use two of the college’s routers and a switch for the duration of the project. The permission was granted.

The research I did for this week was figuring out which camera modules to buy suitable for this project, and deciding the suitable software on the Raspberry Pi to set up our video surveillance. They can be found on my Research Report Week 1.