Project Notes

**05/06/20 – 7 Hours**

* Refreshed on LabView basics
* Learnt basic ThorLabs motor control using LabView
* Encountered many problems trying to communicate with the motors and them having homing problems

**06/07/20 – 6 Hours**

* Successfully homed the X translation motor without finding out the proper procedure and solutions to our problems.
* Once homed, the program was created to move the angle motor for every x translation
* More bugs surrounding the communication between the controllers and PC were discovered. The computer goes into a “not responding” state when homing as the homing process can take a while. The PC cannot also have the APT User/Server applications running whilst the LabView program is and vice versa as the controllers can only talk to one application at a time.
* Application was setup to take input from the user for the steps and range of the translations.

**07/07/20 – 7 Hours**

* Controllers experienced homing issues again. It was found that the direction and homing limit switch were incorrect which was causing the issues. It was also concluded that a fix was undone when the controllers were turned off and on again. The fix was then hard coded into the program so the scanner will automatically home to the correct position on reboot.
* The last and external stepper motor controlling the Y translation was then introduced to the system. Liam gave me a run down on how the motor itself works and how it can be communicated using the serial comms. Liam also gave me a direction on how to implement the motors control into the main program. This implementation was found to be complex as many issues were encountered (i.e incorrect Baud rate and command structure). However, after approximately 4 hours I got the motor to drive from LabView. Proper motor control code was not written or integrated with the main program.