Week 1:

* Arranged project with Gregory as the projects I wanted to undertake were taken.
* Met with Gregory, decided on a real time facial recognition applications.

Week 2:

* Researched the OpenCv library and how to implement it into Unity.
* Discovered compatibility issues with OpenCv and Unity.
* Met with Gregory, discussed issues, I proposed finding a C# wrapper for the OpenCv library.

Week 3:

* Researched possible wrappers for the OpenCv library. Resulted in two possible wrappers. Emgu or OpenCvSharp.
* Discovered further issues with the wrappers and integrating into Unity Engine. This was due to an incompatibility with System.Drawing and Unity Engine.

Week 4:

* Implemented OpenCvSharp into Unity Engine.
* Researched into the wrapper and its functions.
* Found a demo project (URL please - In documentation)
* Learned about Canny edge detection.

Week 5:

* Learned about cascade detection
* The version of the project is unable to utilise the cascade classifier classes.
* Research why it is would not work, was due to corrupted .dll
* could capture webcam feed and save a ‘frame’ which allows operation for it to happen.

Week 6:

* Fixed the dll errors.
* Optimised the webcam capture to improve the real-time performance of the application.

Week 7:

* Used cascade classifer to detect face and eyes.
* Prior to detecting faces the frame is gray scaled then equalise the lighting.
* Look at ways to improve accuracy of the detection. Involves machine learning.

Week 8.

* During meeting Gregory asked if I could make some more documentation on my research, for whoever takes the project over after me.
* Started looking at wordpress and how to create a good blog site.

Week 9.

* Started documenting research done.
* Concluded his research idea is not ideal with the scope given.
* Researched jaw movement, not a lot of material available.
* Worked on detection algorithm again, considered how to calibrate the face.
* Considering sharpening techniques to improve detection.
* Started calibration process.

Week 10.

* Learned how to train own cascade classifier.
* Updated documentation

Week 11.

* Researched contours and attempted to use them to outline the face
* Two different kinds, canny and threshold
* Got stuck on OpenCvSharp, decided to try emguCv again to see feasibility now that I had more knowledge.

Week 12

* Successfully managed to integrate emguCv with Unity, still build errors.
* Learned about memory streams which help performance of converting between png files and bitmap.
* Learned how to use some basic functions of emguCv and some potential issues with using it in Unity.

Week 13

* Solved the build issue with both OpenCvSharp and EmguCv projects.
* Updated the document with how to fix these issues.
* Started researching on using GPU to convert images.

Week 14

* Rewriting report.
* Tested another approach to identifying the face.
* Create small applications that draws contours in the regions where potential faces are.