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| Kanban Process |
| Major Project – CS39440 |
| Version 1.0 |
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Introduction

This document is to provide a process to follow while working on the major project. The process will use a method which is similar to the infamous Kanban approach but will be tailored to an individual rather than a team of engineers.

# What is Kanban

Kanban is an agile method to manage products and tasks within a team. The aim is to visualise work onto cards and allocated these cards to individuals or small teams. Each card is weighted to the amount of work it is estimated to require. It aims to reduce the work in process (WIP) by only allocating a certain number of tasks to teams, so the work flow is improved.

Kanban can be easily adapted to suit the teams needs. This means daily stand ups, review and test meetings and much more. The approach for the major project is limited as it is only one individual working with an overseer.

# The Major Project Approach

The approach will be to focus on software development as much as possible. Design will need to be taken into account but the main aim will be to develop a working project within the time scale.

Trello is an online project management application that will be used for the digital boards and cards it can visualise. This online application will be used to manage the project, this includes harnessing requirements and listing work to be completed. 3 boards will be created for the project:

1. Monitoring Requirements
2. Visualisation Requirements
3. Air Quality Mapping Work

## Monitoring and Visualisation Requirements

These two boards will contain four columns each:

1. Requirement
2. Implemented
3. Test Failed
4. Test Passed

All requirements will be listed in the requirements column until implemented. Once implemented the requirement will be tested and will either be placed in failed or passed.

## Air Quality Mapping Work

### Work

At the start of the project this will contain all cards that need to be completed until the card needs to be allocated to another column.

### Work in progress (WIP)

When a card is currently being worked on it should be moved to the WIP column. A maximum of 3 cards should be in the work in progress task at one time, if multiple cards are dependent on each other then the “depends on another task” should be used.

### On hold

If a card has been put on hold for any reason (e.g. other work needs doing) then it should be moved to this column. It will return to the WIP column when work is being continued on the card.

### Depends on another task

If a card has been worked on but relies on another task to be completed, then it should be moved to this column, once work resumes it should be moved back to the WIP column.

### Complete/Done

Once the work has been completed for a task it should be moved to this column.

# Gantt Chart

A gantt chart should be maintained alongside the Kanban process. The gantt chart will show the progress of each major task and will be a method of logging time management and workload.

A gantt chart should be made at the start of the project and two thirds the way through a second chart should be made to show the remaining tasks.