**Project Engineering – Journal**

**Week 1 (7th Oct – 11th Oct)**

**Overall Task**

Using Docker, set up local instance of Apache Cassandra database with basic command line access.

* Learn about Docker, Cassandra set-up and basic DB interaction through command line
* Complete installation of Cassandra instance
* Capable of executing basic DB commands

**Work Done**

* Installed Docker on local machine
* Installed Kitematic (graphical user interface to run and manage containers in Docker) on local machine
* Used Kitematic to install container using image from Docker image library
* Used Homebrew on the Command Line Interface (CLI) to install Python (brew install python)
* Used Homebrew to install Apache Cassandra (and CQLSH, Cassandra Query Language Shell)
* On DB, set up Keyspace and first table
* Executed commands to insert and delete data from table

**Issues & Solutions**

Connection error when trying to access local Cassandra instance from CLI. This was because the Docker container ports were not exposed to an external connection.

*Solution:* The exposing or publishing of ports for a Docker container cannot be done on a running container. It must be done at container creation. Running the following command created a new container running Cassandra and having the port 9042 open for connection:

* docker run -p 9042:9042 --name cassandra -d project-local-cassandra



**Week 2 (14th Oct – 18th Oct)**

**Overall Task**

* Use IntelliJ to execute DB commands
* Design and setup initial tables for project data storage
* Display data from successful DB read command

**Work Done**

* Configured IntelliJ project to include local Cassandra data store
* Imported DataStax driver jar file into IntelliJ project

**Issues & Solutions**

* Multiple compile-time errors when trying to establish Cluster connection with Cassandra instance. Errors are primarily to do with logging configuration and missing JAR files.

*Solution*

At present issue remains unsolved after downloading and adding multiple JAR files to project structure in IntelliJ.