# **Applied Web Development – Assignment 2**

For our second Applied Web Development assignment, we had to create a complex web application using node.js and express. I decided to do an equipment manager application. This application is designed utilizing express.js and the handlebars templating engine. The application will allow a user to create, view, update and delete a piece of equipment from the database. The application uses mongodb as the NoSQL database program. Node.js was an ideal JavaScript environment for this assignment as it is very modular. There are modules that are pre-made by other people and can assist the developer in creating an app. In this assignment, I utilized several modules to help get my application to a higher standard.

The features of the application are as follows:

* User can login
* Non-registered users have no access
* New users can create an account
* Registered users can view, add, edit and delete equipment
* QR codes are generated for each item
* If an items inspection date is within 2 weeks of the current date the user is notified
* If an item needs inspection the user can send an email notification to the system admin

Main Node Modules Utilized

* Passport – For assistance with the login
* SendGrid – Useful Email server that handles the reminder emails
* Mongoose – An object handler for MongoDB
* QR-Image – Generates a QR code for a specified URL
* Handlebars – Templating Engine that allows for partial use in the views

This assignment helped me to expand my knowledge of Node.js and express, neither of which I had ever used before. It also gave me a better understanding of how MVC works and can be applied to web applications to make things easier.

For styling, this application uses a standard bootstrap theme that has been slightly modified. The background image is of a warehouse to tie in with the equipment manager theme. This application is ideal for a group that has a lot of equipment that must be inspected regularly, such as a group of divers or even factory that operates multiple machines. It makes the tasks easier as equipment due for inspection is highlighted and there is an instant ability to make contact with the admin who can then organise an inspection.

If I had more time with this application I would have implemented a few more features. The QR code could be sent to a window to get printed onto a label for the equipment. Also there could have been some modification options for the user profile however I felt I had already successfully demonstrated the ability to have a functioning CRUD using the equipment. With some more time I also would have implemented some tests using the mocha testing framework.