# Background

With a working Estate Management application the development team now needs to be able to automate the build, testing and deployment of the service. This will allow the development team to continue updating the application and add features as necessary. In the long run, this setup will also allow for the front and back end to be deployed simultaneously in any environment.

# Objective

This outcome is to be achieved by setting up a CI/CD pipeline centred around the VCS used for the existing React application. This pipeline should trigger automatically when code is merged to the development branch of the React Frontend repository, should build the application using the latest version of the code and finally should deploy the application in the local environment.

# Proposed Tech Stack

* Jenkins should be utilised as the pipeline management tool.
* GIT should be used as the VCS.
* React. The application already exists; However, minor changes to the code may be required to test the pipeline configuration.

# Project Scope

* Create necessary environment; Jenkins installation on relevant host. Correct plugins installed. User configuration applied.
* Set up pipeline; Link correct repository. Use code from previous project. Decide between freestyle project for simplicity or pipeline project (stretch goal, will affect later projects)
* Configure pipeline; This should include building the application and running it using the relevant webserver. (**Stretch goal** – run a suite of unit tests before deploying the application)
* Test pipeline triggers; The pipeline should at least build successfully on a manual trigger. The goal is for the pipeline to trigger automatically when changes are detected on the development branch.

# Considerations

* This is the most basic version of your pipeline. Further projects will have you building this pipeline further with backend tasks.
* An ideal project will result in a repository that can be immediately cloned and built by any instance of Jenkins.