Brief:

The objective of this project was to achieve the following:

• To create a web application that integrates with a database and demonstrates CRUD functionality.

• To utilise containers to host and deploy the application.

• To create a continuous integration CI/CD (continuous integration/ continuous deployment) pipeline that will automatically build, test and deploy the application.

The application consists of the app and database in a single docker container. The app inside the container is then pasted through a CI/CD pipeline (via Jenkins) which will build the image and container which will host the web app (via github) and then deploy that app. Unfortunately, there is a lack of testing in the CI/CD pipeline due to gaps in knowledge on the subject. Testing has not been covered in the course and due to lack of support or extensions for our projects I have not been able to integrate this.

**Architecture**

The ERD of my web app consists as follows:

Diagram

Description automatically generated

**Pipeline**

I developed an automated continuous integration/deployment pipeline: code is pushed to Github which triggers a webhook (a SCM build trigger) on to Jenkins to automatically build a docker container which automatically deploys my app.

The stages of my Jenkins pipeline are set up as follows:

Graphical user interface, application

Description automatically generated with medium confidence

**MoSCoW prioritisation**

Must have:

* An ‘add recipes’ function
* A ‘delete recipes’ function
* A home page where the user’s notes are displayed

Should have

* The ability to sign users up then that data will be store so that the user that is ‘signed up’ can log in with that set of credentials
* The ability to log that user out and log in/ sign up another user without ending the session
* An ‘update recipe’ function

Could have

* A separate page for the title of the recipe and then the data relating that specific recipe is returned upon clicking that title
* A lookup function that you could type list of ingredients in and that would return all the recipes in that user’s database that includes that set of ingredients

Wont have right now:

* The ability to upload pictures to the database
* Able to send notification to a phone number that alerts the user when their meal time is and a suggested recipe