Online Job Board for Computer Science students

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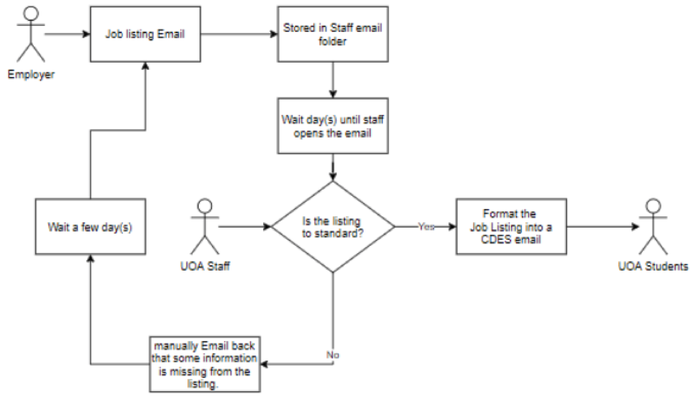
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND
School of Computer Science

Background

New Zealand is experiencing a skills shortage, due to the lack of international talent coming into the country because of the Covid-19 quarantine restrictions. Employers are swarming the University of Auckland (UOA) Staff with requests in the email of sending their most talented students to work under them.



Introduction

The aim of this project is to create a web application for hiring managers able to reach the University directly to hire UoA students and help students raise the success rate of employment.

Objectives

- Being able to complete the recruitment within **30 days**.
- Provide a controllable job vacancy management mechanism for admin managers, as well as **data collection** and **visualization** functions to increase management efficiency.
- Provide a **peer to peer channel** for hiring managers to directly contact the university
- Create a complete company information and **demand form**, Including four aspects: "Who needs? What is needed? What can be provided? What will be responsible for?".
- A **search function** that can be filtered and targeted to search for job vacancies in the desired direction.
- Set up **authentication** to ensure that Login is only open to CS students of the University of Auckland.

Technology

The technology we decided to use is the MERN stack.The set of incredible technologies it includes are
• **MongoDB** • **Express** • **React JS** • **Node.js.**

We also integrated other third-party libraries such as **Material-UI, SendGrid** or public APIs. Every stack is deployed using different **Paas platforms**, for example, **Vercel** for Frontend deployment, **Heroku** for Backend deployment and a cloud database provider **MongoDB atlas**. The level of security was enhanced by using **JSON Web Token**.

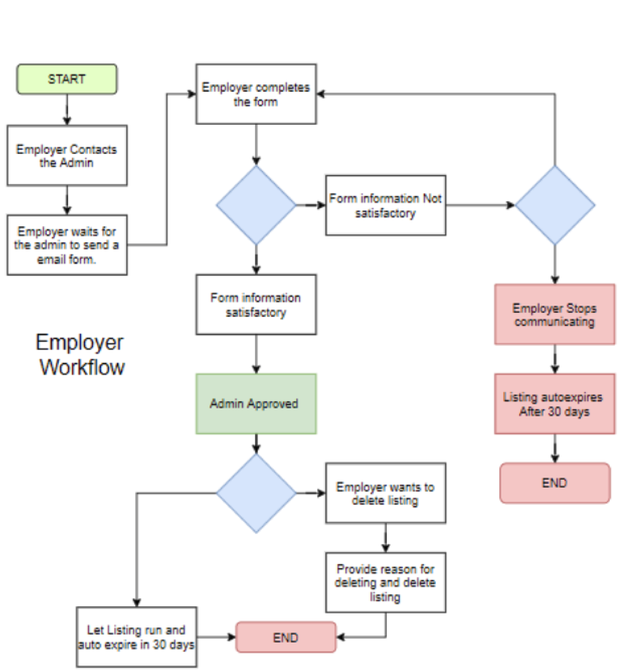
We used **Git** as our source control and collaborated on **Github**. **Postman** was used for backend API testing.

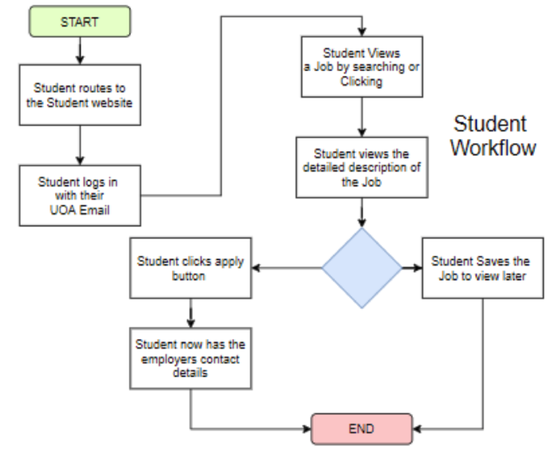
M E R N

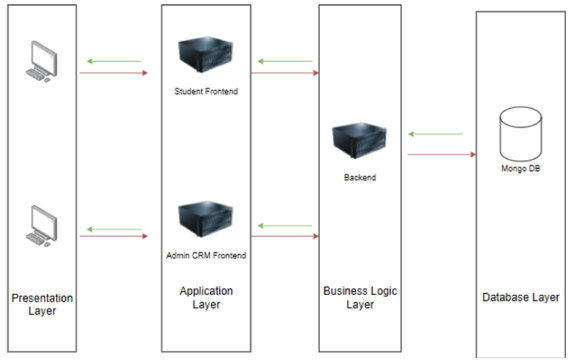
SendGrid Material-UI git Vercel POSTMAN HEROKU

System Architecture Diagram

By following **Monolithic Architectural Pattern** principles, we applied the **N-tier architecture** for our software project. Our software was separated into 3 parts: **Frontend(Admin-side, Student-side)** and **Backend** team.







Outcome & Result

The admins can use the admin page to send information forms to employers and decide whether or not they want to accept a job application. The admins can also edit the information forms and give the reason for declining the job. Students are able to view available jobs on the job board and find application information, save jobs in which they are interested.
Achieved all of the project goals and created a functional MVP with a clear UI design for our client, and received good comments from our client. All the key functionality works as intended.

Conclusion & Future Work

Developed a web-based application that built a bridge between employers and CompSci students in UOA. This will improve the process of Computer science students to view all contemporary vacancies and also help employers who want to hire students in Computer Science.
For future work, we plan to add more notification options such as daily digest, smart digest(customized hours) and enhance the analytic section for the admin page.

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