

## 1. Declaration

I, Nethara Athukorala, declare that this assignment, titled A3-Advanced Web App, is my own original work and has not been copied from any other source except where explicitly acknowledged. I have not engaged in plagiarism, collusion, or any other form of academic misconduct in the preparation and submission of this assignment. All sources of information and data used in this assignment have been properly cited and referenced in accordance with the prescribed guidelines. I have not used unauthorised assistance in the preparation of this assignment and have not allowed any other student to copy my work. I am aware that any breach of academic integrity may result in disciplinary action as per the [policies of Monash University](#), which may include failing this assignment or the course, and further academic penalties.

Signature: Nethara Athukorala

Date: 16/10/2024

## 2. Github Check

Enter your Github details here.

Github Username <i>Enter your username here</i>	nkat001
<b>A3 Shared?</b> <i>Have you started and shared your assignment repository with your tutor yet?</i>	<a href="https://github.com/nkat001/FIT5032-Assignment">https://github.com/nkat001/FIT5032-Assignment</a>

## 3. Self-Evaluation

Rate your performance for each criteria. Put a ☒ (tick) in the box where you think your work belongs.

Criteria	Exceeds Expectations	Meets Expectations	Needs Improvement	Fail to meet expectations
BR (D.1): External Authentication	<input checked="" type="checkbox"/>			
BR (D.2): Email	<input checked="" type="checkbox"/>			
BR (C.3): Interactive Table Data	<input checked="" type="checkbox"/>			
BR (D.4): Deployment to the Cloud	<input checked="" type="checkbox"/>			
BR (E.1): Cloud Functions			<input checked="" type="checkbox"/>	

BR (E.2): Geo Location	✓			
BR (E.3): Accessibility		✓		
BR (E.4): Export	✓			
BR (F.1): Innovation	✓			

## 4. Screen Recording of BRs

Create a 3-5 minute video showing your basic web application in action! Upload this video to your Google Drive and put the link here (ensuring that you have updated the access list so it's not private).

[https://drive.google.com/file/d/168FyVqk4dOg-HKP7xUjncTvrGn\\_Hockv/view?usp=sharing](https://drive.google.com/file/d/168FyVqk4dOg-HKP7xUjncTvrGn_Hockv/view?usp=sharing)

## 5. BR F.1 - Innovative Features

If you have implemented BR F.1, list your choices below and a brief description of how you implemented it.

0	Exact name of innovative feature (copy-paste from assignment specs). E.g. "Bulk Email: The new Web Application must be able to send bulk email to selected users."	A brief, <b>specific</b> description (10-20 words) about how you implemented this in your web application. E.g. "I implemented bulk email to enable staff in my health charity website to send emails to multiple patients."	<b>Recommendations for future upgrades (10-50 words)</b>
1	Bulk Email: The new Web Application must be able to send bulk email to selected users.	I implemented bulk email in my mental health website to enable admin send emails to all users	Implement scheduling functionality for bulk emails, allowing admin users to schedule emails for future dates and times.
2	Interactive Charts - The new Web Application must display an interactive chart or graph using data from Firestore.	I implemented a chart for the admin to see the number of users	Integrate more detailed user segmentation in the charts, such as filters by location, age group, or activity levels.
3	Incorporate GenAI such as Gemini API or OpenAI API	I implemented generating text for an email when the user types in the subject	Expand the AI feature to auto-generate email bodies and subject suggestions based on past correspondence.
4	Admin Dashboard - Create a dashboard view for the system	I implemented a new role 'admin' and created a dashboard to get all	Enhance the dashboard with real-time analytics and

admin of this health charity (you may want to create a separate role for 'admin'), where they can see an overview of the website including number of users and types of users.	the information from firestore and display in the dashboard	visualisations.
--	---	-----------------

## 6. Reflections: Challenges

What has been the most challenging part of this assignment for you? How has this stretched you as a programmer?

The most challenging part of this assignment has been integrating Cloud Functions with Firestore to handle backend processes efficiently. This stretched me as a programmer by deepening my understanding of serverless architecture and asynchronous tasks, pushing me to write scalable code and manage real-time database interactions in a dynamic environment.

## 7. Declaration: Additional Help

Any tools that you used (including Gen AI or existing code reuse) must be declared here.

**Note:** GenAI is not allowed for coding purposes in any assignment,

However, you may use GenAI for brainstorming and problem solving. You need to declare all such uses here. One row per help used.

Name	Description
Example: ChatGPT for brainstorming ideas	I used ChatGPT to brainstorm how to implement cloud functions while incorporating email functionality, as I was feeling stuck with related challenges in the process.
ChatGPT for feature ideation	I used ChatGPT to generate ideas for the bulk email feature, allowing me to refine my implementation strategy and ensure I addressed key user needs effectively.