## 1. Declaration

I, [Student Name], declare that this assignment, titled [Assignment Title], 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 unauthorized 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](https://www.monash.edu/learning-teaching/priorities-and-programs/assessment-and-academic-integrity/assessments-and-integrity-policy-and-procedure), which may include failing this assignment or the course, and further academic penalties.

Signature: \_\_\_\_\_\_\_Wei Yang\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_14/09/2025\_\_\_\_\_\_\_

## 2. Github Check

Enter your Github details here.

|  |  |
| --- | --- |
| Github Username  *Enter your username here* | <[Augenstern1998](https://github.com/Augenstern1998)> |
| **Repository Shared?**  *Have you started and shared your assignment repository with your tutor yet?* | Yes <https://github.com/Augenstern1998/FIT5032-Assessment.git> |

## 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 (C.1): Authentication | ✅ |  |  |  |
| BR (C.2): Role-based authentication | ✅ |  |  |  |
| BR (C.3): Rating | ✅ |  |  |  |
| BR (C.4): Security | ✅ |  |  |  |

## 4. Screen Recording of BRs

Create a 3 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 its not private).

|  |
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| https://drive.google.com/file/d/19CEiQ1O7BWEJinRO9iAvn5WxqDXjtgBz/view?usp=drive\_link |

## 5. Reflections: Implementation of C.4 Security

If you have implemented BR C.4, in less than 200 words describe the approach that you have taken to implementing Security in your application. What security flaws were you trying to prevent and what security measures have you implemented to fix those flaws? How do you know that these measures will help prevent those issues from happening? Optionally you can cite external sources to provide evidence for your claim.

|  |
| --- |
| Our product exerts full client-side security to combat against XSS and similar threats. We added sanitizeText() and sanitizeHtml() functions that escape HTML entities and strip out dangerous tags in a manner that all inputs are cleaned before being stored and displayed. Email format, password length, name range, and age constraints are guarded by tough validation rules that prevent contacting valid data. Browsers with a restrictive content security policy (CSP) may not allow this site to load JavaScript. HTML protects against unapproved scripts, and session security logs inactive users out after 30 minutes. Security headers like X-Content-Type-Options, X-Frame-Options, and X-XSS-Protection also help reduce the risks. These layers combined, effectively block malicious script execution, enforce safe data entry, and reduce the exposure window. |

## 6. Reflections: Challenges

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

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| The hardest part was the implementation of role-based authentication via route guards. Ensuring efficient state management between components and a good user experience required attention to detail. I also developed a custom event (AUTH\_CHANGED\_EVENT) to keep the authentication state in sync and understood scalable authorization patterns for role-based access. Additionally, I doubled down on my security-first principle and used all the defense-in-depth on unsafe inputs. These encouraged me to think and debug on a more architectural level—especially when resolving merge conflicts and integrating security without compromising usability. All in all, this task has broadened my knowledge on web security, reactive design, as well as system architecture. |

## 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 |
| ChatGPT for troubleshooting approach | *I used ChatGPT to assist me in analysing certain error messages because I was feeling stuck with Git commit version conflicts and some subtle syntax issues. This proved invaluable in enabling me to resolve the problems more efficiently.* |
|  |  |