OWASP Top 10 Report

**Name:** Tony Jiang

**Semester:** 6

**Class:** RB04

# Introduction

This document aims to determine if the application addresses the OWASP Top 10 security risks. It will provide insights on how these risks will be covered in the application and assess whether this coverage is necessary in application.

# Top 10 security risks

This outlines the overall security risks of the project. This documentation will include steps to mitigate each risk. Some risks are not yet scheduled and will be decided upon later.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Likelihood | Impact | Risk | Action possible | Planned |
| A01:2021-Broken Access Control | High | High | High | Add authentication and authorization to the authentication service to create roles that control access, allowing users to sign in and view specific information, such as their personal details. | Yes, for sprint 5 |
| A02:2021-Cryptographic Failures | Low | High | Low | Add salt and password hashing to securely store passwords in the user service and authentication service. | Done in sprint 4 |
| A03:2021-Injection | Low | High | Low |  | Done for sprint 4 |
| A04:2021-Insecure Design | High | High | High |  | N/A for sprint 5 |
| A05:2021-Security Misconfiguration | Moderate | High | Moderate | Implement Snyk to detect security misconfiguration. | Done for sprint 4 |
| A06:2021-Vulnerable and Outdated Components | Low | High | Low | Implement Snyk for automated security testing in the CI/CD pipeline to identify any outdated dependencies. | Done for sprint 4 |
| A07:2021-Identification and Authentication Failures | High | High | High |  | N/A for sprint 5 |
| A08:2021-Software and Data Integrity Failures | High | High | High |  | N/A for sprint 5 |
| A09:2021-Security Logging and Monitoring Failures | High | High | High |  | N/A for sprint 5 |
| A10:2021-Server-Side Request Forgery | High | High | High |  | N/A for sprint 5 |

## Sprint 4 Security Validation Report

**Sprint goal:** Enhance application security by addressing security misconfigurations, updating outdated components, and implementing secure password encryption.

Relevant top 10 items:

A03:2021-Injection

A05:2021-Security Misconfiguration

A06:2021-Vulnerable and Outdated Components

### Injection

**Objective**

* Prevent SQL injection in the application.

**Acceptance criteria**

* Prevent symbols from querying to the database.

**Validation method**

* Manually testing: Add symbols in the input field.