

# Verification and Validation Report: Sayyara

Team 3, Tiny Coders

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# 1 Revision History

Table 1: Revision History

Date	Developer(s)	Change
February 22, 2023	Arkin Modi	Add Automated Testing Section
March 3, 2023	Joy Xiao	Add Tests Evaluations for Legal and Cultural Requirements

## 2 Symbols, Abbreviations and Acronyms

symbol	description
T	Test
CI	Continuous Integration
CD	Continuous Deployment

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### **3 Functional Requirements Evaluation**

### **4 Nonfunctional Requirements Evaluation**

#### **4.1 Usability**

#### **4.2 Performance**

#### **4.3 Cultural Requirements**

##### **1. NFRT-CR1-1**

How test will be performed: The testers will go through end to end tests for the entire program and will confirm that any texts or images are not offensive.

Results: Passed. Manually tested to verify that there are no offensive images or text.

##### **2. NFRT-CR2-1**

How test will be performed: The testers will go through end-to-end tests for the entire program and will confirm that the text displayed is in English.

Results: Passed. Checked that everything is written in English in the implementation, documentation, and anything visible to the user.

#### **4.4 Legal Requirements**

##### **1. NFRT-LR1-1**

How test will be performed: The testers will go through the source code of the project and project documents to determine if any open source resources were used and check that appropriate credits and/or copyright licenses are used.

Results: Passed. Checked the MIT License requirements and that the project adhered to all the requirements.

### **5 Unit Testing**

### **6 Changes Due to Testing**

[This section should highlight how feedback from the users and from the supervisor (when one exists) shaped the final product. In particular the feedback from the Rev 0 demo to the supervisor (or to potential users) should be highlighted. —SS]

## **7 Automated Testing**

All automated testing was carried out by Jest, a JavaScript testing framework. Each module has its own corresponding test file located within the “test” folder. The “test” folder has the same structure as the “src” folder, creating a one-to-one mapping of a module and its corresponding test. For example, the module “src/server/services/userService.ts” has its tests located in “test/server/services/userService.ts”. There are two Jest test runs, with the only difference being whether the testing environment is connected to a real database or not (i.e., whether the database needs to be seeded or mocked in each test case). As part of the CI/CD pipeline, the full test suite is run and information regarding pass/fail and code coverage is reported on every pull request to the main branch and to every push to the main branch.

## **8 Trace to Requirements**

## **9 Trace to Modules**

## **10 Code Coverage Metrics**

# 11 Appendix

## 11.1 Reflection

The information in this section will be used to evaluate the team members on the graduate attribute of Reflection. Please answer the following question:

1. In what ways was the Verification and Validation (VnV) Plan different from the activities that were actually conducted for VnV? If there were differences, what changes required the modification in the plan? Why did these changes occur? Would you be able to anticipate these changes in future projects? If there weren't any differences, how was your team able to clearly predict a feasible amount of effort and the right tasks needed to build the evidence that demonstrates the required quality? (It is expected that most teams will have had to deviate from their original VnV Plan.)