

Team Three: Test Plan

Michele Cook, Chelsea Nieves, Valerie Rudich, Constance Sturm, and Hoi Lam Wong

University of Maryland Global Campus

CMSC 495-7382: Capstone in Computer Science

Professor David Castillo

December 5, 2023

Team Three: Test Plan

Table of Contents

1. Introduction
 - 1.1. Purpose
 - 1.2. Scope
 - 1.3. Objectives
 - 1.4. Approach
2. Test Items
 - 2.1. Features to be Tested
 - 2.2. Features not to be Tested
3. Test Deliverables
 - 3.1. Test Types
 - 3.2. Test Cases
 - 3.3. Test Data
 - 3.4. Test Reports
4. Test Responsibilities
 - 4.1. Testing Team
 - 4.2. Development Team
5. Defect Management
 - 5.1. Defect Logging
 - 5.1.1. Specify the process for logging and tracking defects.
 - 5.2. Defect Resolution
 - 5.2.1. Outline the process for resolving and retesting defects

6. Approval Criteria

6.1. Test Sign-off

Team Three: Test Plan

Introduction

1.1 Purpose

The purpose of the test plan is to make sure that each part of the application works correctly with user interaction. The test plan will test each menu option, including the rules of the fortune teller game, registering a user, the option to sign the user in and out, the option to choose a fortune from a desired category, and to exit the game. The fortune option will then be further tested with the different fortune categories and a loop for picking another fortune, saving a fortune, or to exit the application back to the main menu. The application will be tested for the ability to read .txt files to generate the display for the fortunes.

1.2 Scope

The features to be tested include:

- GUI interface for ease of use.
- The welcome menu with the options to register, login, or play as a guest.
- The menu bar will read the rules or to exit the application.
- The portion of the application where you can choose a fortune will be tested to make sure that the proper fortune will be shown for each choice.
- After the fortune is revealed the user will have the option to choose another fortune from the menu, save the fortune (if the user is signed in), or exit to the welcome screen. These three options will be tested to make sure that they work properly.
- The Random Generator will be tested multiple times to make sure that the fortunes are displayed randomly.

- The application will be tested to make sure that .txt files are being read

1.3 Objectives

The objective of testing the application is to make sure that the user's interaction with the application works properly. The user can make several decisions during the use of the application and each part needs to be tested for correctness and usability. The application will also be tested for ease of use, likability, the login and registration forms, the use of the database, and for the reading of .txt files that hold the different fortunes.

1.4 Approach

Testing will occur with each code deliverable prior to the end of deployment to ensure potential bugs/vulnerabilities are caught and mitigated as early as possible in the development cycle.

2. Test Items

2.1 Features to be Tested

The predominant features to be tested are the GUI interface which are used for the interactive portion of the application. A database function that will include user information and saved fortunes. A random number generator will also be created and tested for functionality and randomness. This number generator will be used to select the fortune category in instances where the user selects “Random” from the Fortune Menu. Each menu option will be tested for correctness based upon its category. For example, if the user selects to return to the main menu, the program should return them to the welcome screen. The exit function will be tested to ensure the program ceases to run. Input validation functions will be tested to ensure that no potentially

malicious user input is accepted. The ability to read .txt files will also be tested to make sure the proper fortunes are displayed.

2.2 Features not to be Tested

Error logging, welcome message.

3. Test Deliverables

3.1 Test Types

Test types: Manual

- Welcome Menu:
 - **Rules of the fortune teller:** Will be tested to make sure that the user is prompted with the rules of the fortune teller after selecting the option from the menu bar.
 - **Login/Register:** Will be tested for validation and connection to the database.
 - **Choose a fortune:** Will be tested to make sure that this option takes the user to the next menu to choose a fortune.
 - **Exit the program:** This will be tested to make sure that the close program function will work properly and close the program from the menu bar.
- Fortune Menu:
 - **Love:** Will be tested to make sure a fortune about love is displayed.
 - Tested to prompt the user to choose another fortune, save the fortune (if logged in), or exit back to the welcome menu.
 - **Career:** Will be tested to make sure a fortune about the user's career is displayed.
 - Tested to prompt the user to choose another fortune, save the fortune (if logged in), or exit back to the welcome menu.

- **Health:** Will be tested to make sure a fortune about the user's health is displayed.
 - Tested to prompt the user to choose another fortune, save the fortune (if logged in), or exit back to the welcome menu.
- **General:** Will be tested to make sure a fortune about general life is displayed to the user.
 - Tested to prompt the user to choose another fortune, save the fortune (if logged in), or exit back to the welcome menu.
- **Random:** Will be tested to make sure the random generator is working properly and displays a random fortune to the user.
 - Tested to prompt the user to choose another fortune, save the fortune (if logged in), or exit back to the welcome menu.
- User Menu
 - **View Saved Fortunes:** Will be tested to make sure previous saved fortunes are displayed to the user.

3.2 Test Cases

The following table shows what one overall test may look like to cover all aspects of the application:

<i>Test Case</i>	<i>Description of Test</i>	<i>Input</i>	<i>Expected Output</i>	<i>Actual Output</i>	<i>Pass/Fail</i>
1: Main Menu					
1.1: - Rules	User wishes to view "Rules" of Zoltar game	User Input: Selects rules from the menu bar.	The user is displayed the rules of the fortune teller game.		
1.2: -		User Input:	The register/login		

Login/Register		Selects the register button	form is displayed for user input.		
1.3: - Exit program	User chooses to exit the application	User input: Selects "Exit" from the menu bar.	Application exits		
1.4: - Play as Guest		User Input: Selects play as guest button	The Fortune menu is displayed. Users are prompted to click another button from the selection		
2: Fortune Menu					
2.1	Option 1 - Love	User Input: Clicks button	The user is displayed a fortune about love and prompted to choose another fortune or exit.		
2.1.1	User chooses another fortune	User selects button to choose another Fortune and select another fortune category	The Fortune menu is displayed. Users are prompted to click another button from the selection.		
2.1.2	User chooses to exit	User selects "close" to return to Main Menu	The main menu is displayed. Users are prompted to click another button for selection.		
2.2	Option 2 - Career	User Input: clicks button	The user is displayed the fortune for career. Users are prompted		

			to choose another fortune or exit.		
2.2.1	User chooses another fortune	User clicks another button for a fortune and selects another fortune category	The user is displayed the fortune menu. Users are prompted to click another button for a new fortune.		
2.2.2	User chooses to exit	User selects “close” to return to Main Menu	The user is displayed the main menu and prompted to click another button for selection.		
2.3	Option 3 - Health	User Input: clicks button	The user is displayed a fortune for health. The user is prompted to choose another fortune or exit.		
2.3.1	User chooses another fortune	User clicks “close” to return to Fortune Menu and select another fortune category	User is displayed the fortune menu and prompted to click another button for selection.		
2.3.2	User chooses to exit	User selects “close” to return to Main Menu	The main menu is displayed and the user is prompted to make another selection.		
2.4	Option 4: General Life	User Input: clicks button	The user is displayed a general life fortune. The user is prompted to choose another fortune or exit		

2.4.1	User chooses another fortune	User clicks another button to return to Fortune Menu and select another fortune category	User is displayed the fortune menu and prompted to click another button for selection		
2.4.2	User chooses to exit	User clicks “close” to return to Main Menu	User is displayed the main menu and prompted for selection.		
2.5	Option 5: Random	User Input: clicks button	The user is shown a fortune from a random category. The user is prompted to choose another fortune or exit.		
2.5.1	User chooses another fortune	User clicks “close” to return to Fortune Menu and select another fortune category	User is displayed the fortune menu and prompted to click another button for selection.		
2.5.3	User chooses to exit	User clicks “close” to return to Main Menu	User is displayed the main menu and prompted to click another button for selection.		
3: User Menu					
3.1		User clicks “Get Fortune”	User is displayed the Fortune menu and prompted to click another button for selection		

3.3 Test Data

Data required for testing will include a list of fortunes to be displayed to the user. Additionally, user input will be required for login and registration forms.. A test will be considered a “pass” if the output is as expected. For example, if the user selects the menu option to view the rules, the rules should be displayed. A test will be considered a failure if the output is not as expected, such as, if the menu were to allow a command or string outside of the expected range as input and crash the program. Additionally, another example of a failure would be if the user were to select the “Love” category for a fortune but a “Career” fortune was output instead.

3.4 Test Reports

Testing and the scope of the test report will be conducted based on different scenarios that will be described and then conducted to see if the results match the expected results. The

frequency of testing and reporting will be dependent on the different stages of development.

When a new menu option is developed it should be thoroughly tested before further development happens.

4.0 Test Responsibilities

4.1 Testing Team

Chelsea Nieves, Constance Sturm, Valerie Rudich, Michele Cook

4.2 Development Team

Constance Sturm, Chelsea Nieves, Hoi Lam Wong, Valerie Rudich

5.0 Defect Management

5.1 Defect Logging

Defects will be well documented on what part of the application has the defects, what scenario causes the defect to occur, and what part of the code is causing the defect.

5.2 Defect Resolution

Once a bug or defect has been identified, the code in question will be revised or reformatted to achieve the desired results. Testing of the new code will be conducted to ensure that the mitigated program runs without error.

6.0 Approval Criteria

6.1 Test Sign-off

The test completion and sign-off is dependent on the success of the application without bugs or errors present. The test will have to prove that each portion of the application is working as expected and displays the corresponding fortune for each category.