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1   Introduction

1.1   Document overview

This document is the software test report of the first testing phase of the Earworm software development project. It contains the results of tests, which were executed during testing phase one.

1.2   Abbreviations and Glossary

1.2.1   Abbreviations

ML : Machine learning
UI : User interface

1.2.2   Glossary

User: someone who uses the web application.

1.2.3   *References*

SpotifyAPI Documentation
Firebase Documentation
Firebase - Full Course for Beginners (https://www.youtube.com/watch?v=fgdpvwEWJ9M)
https://developer.spotify.com/

1.2.4   Project References

#	Document Identifier	Document Title
[R1]	ID 001	Add your documents references. One line per document

1.2.5   Standard and regulatory References

#	Document Identifier	Document Title
[STD1]		Add your documents references. One line per document

1.3   Conventions
Add here conventions

???

2   Overview of Tests Results

2.1   Tests log

We had individuals outside of our group act as beta testers and create a user account. Accounts were created with no instructions and these tests were conducted from 5/11/23 - 5/12/23
Overseen by:
> Mitchell Mercer
> Charles Quebral

We tested our Music Matching by creating 10 dummy accounts populated with 10 various genres per user and fed them into the local user search. We then accessed accuracy of matches based on best judgments of human test proctors. Test conducted 5/13 - 5/14
Overseen by:
> Mitchell Mercer
> Natalie Claire-Tivar

Distance assessment was conducted by creating dummy users with locations hardcoded at various distances. We then logged in as a test user and set our search preference to various distances and recorded which user profiles popped up and where in the world those accounts were registered to be. Test conducted 5/12- 5/13
> Charles Quebral
> Rodolfo Rivera

The messaging feature was tested by using dummy users which the testers had full access to. Clients on separate machines at different locations were used to send messages to each other. Time from send to receive was recorded as well as formatting of received messages. Test conducted 5/12/23-5/13/23

Mobile compatibility testing was conducted to see how the web application would perform on mobile devices. The app's mobile functionality was determined by the examination of UI elements. Test Conducted 5/11/23 - 5/12/23

2.2   Rationale for decision
After executing a test, the decision is defined according to the following rules:
- **OK:** The test sheet is set to "OK" state when all steps are in "OK" state. The real result is compliant to the expected result.
- **NOK:** The test sheet is set to "NOK" state when all steps of the test are set to "NOK" state or when the result of a step differs from the expected result.
- **NOT RUN:** Default state of a test sheet not yet executed.
- **NOT COMPLETED:** The test sheet is set to "Not Completed" state when at least one step of the test is set "Not Run" state.

Test results are listed in §3.

2.3   Overall assessment of tests

- All Tests passed in minimum acceptable range but required further tuning
- Mobile Sizing and formatting needed to be addressed while the application worked as desired.
- Initially some users inputted locations were incompatible with distance calculation algorithms and input validation was instituted on zip codes and latitude-longitude values.

Statistics about tests:
- 40% of tests OK,
- 10% of tests NOK
- 20% of tests NR
- 30% of tests NC

Bug and enhancement stats:
- 1 Total Bugs
- 0 Critical
- 0 Major
- 1 Minor
- 2 Enhancements

2.4   Impact of test environment

All tests were conducted using development servers, or by using firebases build deployment emulation tool. This tool enabled the developers to test the environment seamlessly from local machines and produced the exact same results we saw upon production deployment with negligible inconsistencies.

3 Detailed Tests Results

For each executed test, this document contains:
- Test identification;
- Test title;
- Test decision;
- A comment containing additional information or problems encountered during execution and differences with the test procedure.

For the problems leading to a bug, the bug ID is reported in the result of the step where the problem was encountered.

3.1 Test Details

OK

Test ID	Same ID as in test desc.	Comment	Decision
Test description	Assessment of user ability to access site quickly and reliably		OK
Verified Requirement	SRS-SA-001		OK
Initial conditions	Earworm shall use a web browser	Tested for multiple browsers (e.g. chrome, edge, safari, firefox, etc)	OK
Tests inputs	Does it run on a browser?		OK
Data collection actions	Inspection		OK
Tests outputs	Non Null		OK
Assumptions and constraints	User knows how to operate PC or Phone		OK
Expected results and criteria	Same as in test desc.		
Test procedure			
Step number	**Operator actions**	**Expected result and evaluation criteria**	**Result**
1	Attempted Access from Firefox	Site is accessible	OK
2	Attempted Access from Chrome	Site is accessible	OK
3	Attempted Access from Safari	Site is accessible	OK
4	Attempted Access from Edge	Site is accessible	OK
5	Attempted Access from Mobile Safari	Site is accessible	OK

OK

Test ID	**Same ID as in test desc.**	**Comment**	**Decision**
Test description	Assessment of application's ability to assign users a music taste based on users most listened to music genres		OK
Verified Requirement	SRS-FR-001		
Initial conditions	User is assigned a music taste using machine learning	Not tested for machine learning as in original software requirement	
Tests inputs	User's spotify account		
Data collection actions	Test		
Tests outputs	User's Top 20 songs and genres		
Assumptions and constraints	User has a spotify account		
Expected results and criteria	User can see their music stats		
Test procedure			
Step number	**Operator actions**	**Expected result and evaluation criteria**	**Result**
1	User logs in	Login successful	OK
2	User links spotify	Spotify link successful	OK
3	User fetches genres/songs	Commencement of genre fetching without errors	OK
4	User's music stats are displayed and compared with expected result	User's music stats match that of the expected result	OK

NOK

Test ID	**Same ID as in test desc.**		**Decision**
Test description	Filter users displayed by user preference		NOK
Verified Requirement	SRS-FR-002		
Initial conditions	User is signed in and assigned preferences for testing		
Tests inputs	Preferences: Distance, Gender, Age		
Data collection actions	Observed and recorded by tester		
Tests outputs	Returned Users in search		

Assumptions and constraints	All users inputs are in valid formats		
Expected results and criteria	When searching for women, only women will be returned etc.		
Test procedure			
Step number	**Operator actions**	**Expected result and evaluation criteria**	**Result**
1	Login		OK
2	Set Preferences	Parameters are adjusted	OK
3	Begin Searching for Matches	Other users should appear meeting user preferences	OK
4	Verify returned user match preferences	Returned distance < Max Distance, Age <= Max >= Min, Gender === Preferred[]	NOK Bug #001 Distance > Acceptable

OK

Test ID	Same ID as in test desc.	Comment	Decision
Test description	Time to make user account is shorter than 10 minutes		OK
Verified Requirement	SRS-FR-003		
Initial conditions	Web app launched, user selects to sign up		
Tests inputs	User's info		
Data collection actions	Observed and recorded by tester		
Tests outputs	User profile created	Extra user info (profile picture, bio, music tastes) not created during this step	
Assumptions and constraints	User has successfully launched web app		
Expected results and criteria	User's profile created in under 10 minutes		
Test procedure			
Step number	**Operator actions**	**Expected result and evaluation criteria**	**Result**
1	Start web app	Web app loaded at launch page	OK
2	User selects to sign up	Sign up form is displayed	OK
3	User enters info and selects to create new user with info	Web app continues to homepage and displays user info on right	OK, successfully created in less than 5 minutes

OK

Test ID	Same ID as in test desc.	Comment	Decision
Test description	Certify that upon sign up users are registered in database, and unique		OK
Verified Requirement	SRS-FR-004 SRS-SSA-001		
Initial conditions	Site available to sign up		OK
Tests inputs	New dummy credentials		
Data collection actions	Observe DataBase		OK
Tests outputs	New users in DataBase.		
Assumptions and constraints	Solid Internet Connection		OK
Expected results and criteria	New Unique User Signed Up with Unique Credentials		
Test procedure			
Step number	**Operator actions**	**Expected result and evaluation criteria**	**Result**
1	Open Earworm	Connection Established	OK
2	Enter Unique Dummy Credentials for signup	User is created in Database	OK
3	Attempt to create a new user with same dummy credentials from step 2	Rejected upon POST	OK
4	Observe Database through Firebase	All users are unique	OK

3.2 Bug Log

BUG ID	Requirement ID	Cause	Action Taken // Plan of Attack
001	SRS-FR-002	Returned Users Outside of acceptable distance	Distance Algorithm addressed and fixed
002	SRS-FR-002	Certain user distances displayed as "NaN miles"	Calculate distance instead from next nearest zip code