

Software Unit and System Test Documentation
Heavid
1.01
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MCS Department, Biola University

Revisions

Target Audience: Those interested in finding and creating workouts tailored to each muscle group, especially those with hindered gym access during the pandemic

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Version Control History:

Version	Primary Author(s)	Description of Version	Date Completed
1.0	Luke Ebbinghaus, Misheel Bayarsaikhan, Keziah Bulseco, Vanessa Garcia	Started and Completed Document	4/16/21
1.01	Luke Ebbinghaus	Updated System Overview	4/22/21

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1 INTRODUCTION

1.1 System Overview

A health app with built-in workout management features. The primary function will be to create an interface where the user can find workouts relevant to specific body parts through an intuitive diagram. Additionally, the user will be able to create their own workout plans or let the computer choose for them with an input of difficulty and targeted muscle groups. The user can then modify this plan as desired using the same diagram interface.

1.2 Test Approach

Dynamic analysis through the integrated qt debugger and pre-compiled binaries

2 TEST PLAN

2.1 Features to be Tested

Integration Testing:

- Application makes a successful connection to the database
- Application shows a relevant error message if it cannot connect to the database
- Application displays all 35 exercises

Unit Testing:

- Application adds exercises to the workout plan when double clicked
- Application changes displays when a different muscle group is clicked

System Testing:

Performance Testing:

- Application loads to main screen within 3 seconds

Usability Testing:

- User can navigate without assistance
- User can add 5 workouts within 10 seconds of having the app fully loaded, when instructed

2.2 Features not to be Tested

- Security
 - Application does not require users to input personal information
 - Application connects only to a local database

2.3 Testing Tools and Environment

- Qt
- GDB Debugger integrated with Qt
- Linux

3 TEST CASES

Test No.	Test Type	Target Component	Test Name	Purpose of Test	Test Data or Situation	Expected Result	Actual Result	Actions Required
3.1.1	Integration	Database main	Database connection	Test that application makes a successful connection to the database or shows a relevant error	4/15/21 Manjaro Linux	Data is queried and displayed	As expected, error message displayed in terminal	Display error in UI without crashing
3.1.2	Integration	All	Exercise display	Test that application displays all 35 exercises	4/15/21 Manjaro Linux	All data are displayed on relevant click	As expected	None
3.1.3	Unit	UI main	Add to workout plan	Test that application adds exercises to the workout plan when double clicked	4/15/21 Manjaro Linux	Exercises are added when double clicked	As expected	None
3.1.4	Unit	UI	Muscle group display	Test that application changes displays when a different muscle group is clicked	4/15/21 Manjaro Linux	Muscle group is highlighted on the diagram and list of exercises relating to muscle group is displayed in a clickable list	As expected. Should add muscle group label for list	Add muscle group label for exercise list
3.1.5	System Performance	main	Application load time	Test that application loads to main screen within 3 seconds	4/15/21	Application loads in less than 3 seconds	As expected	None
3.1.6	Usability	All	User Learnability	Test that user	4/15/21	User is able to navigate	User is able to navigate,	Have more consistency

				can navigate without assistance		without any tutorials	but more guidance would be helpful	with the difficulty tabs (have them all start at beginner or the same difficulty) Add more guidance on minimizing list functionality and adding exercises to list functionality Make clear that upper body buttons are grouped together
3.1.7	Usability	UI	User Learning and Comfort	Test that user can add 5 workouts within 10 seconds of having the app fully loaded, when instructed	4/15/21 Manjaro Linux	User can learn to add workouts within 10 seconds of application load	Took 55 seconds but completed without guidance	Add delete functionality on workout list
3.1.8	Unit Integration	UI and Database	Exercise Filter	Test that user can filter exercises based on difficulty level	4/15/21 Manjaro Linux	User is able to see different exercises based on the difficulty that they want	As expected	None

4 TEST LOGS

Completed By:	Keziah Bulseco Luke Ebbinghaus	Report Date:	4/15/21
Project ID/ Name	Heavid	Testing Name/ Event:	Database Connection
Total Number of Test Cases	1	Testing Sub-Type:	Integration

Completed By:	Keziah Bulseco Luke Ebbinghaus	Report Date:	4/15/21
Project ID/ Name	Heavid	Testing Name/ Event:	Exercise display
Total Number of Test Cases	1	Testing Sub-Type:	Integration

Completed By:	Keziah Bulseco Luke Ebbinghaus	Report Date:	4/15/21
Project ID/ Name	Heavid	Testing Name/ Event:	Add to workout plan
Total Number of Test Cases	1	Testing Sub-Type:	Unit

Completed By:	Keziah Bulseco Luke Ebbinghaus	Report Date:	4/15/21
Project ID/ Name	Heavid	Testing Name/ Event:	Muscle group display
Total Number of Test Cases	1	Testing Sub-Type:	Unit

Completed By:	Keziah Bulseco Luke Ebbinghaus	Report Date:	4/15/21
Project ID/ Name	Heavid	Testing Name/ Event:	Application load time
Total Number of Test Cases	1	Testing Sub-Type:	System Performance

Completed By:	Keziah Bulseco Luke Ebbinghaus	Report Date:	4/15/21
Project ID/ Name	Heavid	Testing Name/ Event:	User Learnability

Total Number of Test Cases	1	Testing Sub-Type:	Usability
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Completed By:	Keziah Bulseco Luke Ebbinghaus	Report Date:	4/15/21
Project ID/ Name	Heavid	Testing Name/ Event:	User Learning and Comfort
Total Number of Test Cases	1	Testing Sub-Type:	Usability

Completed By:	Keziah Bulseco Luke Ebbinghaus	Report Date:	4/15/21
Project ID/ Name	Heavid	Testing Name/ Event:	Exercise Filter
Total Number of Test Cases	1	Testing Sub-Type:	Unit Integration

Day	Current Period	Project to Date	% Started	% Completed
1	8	8	100%	100%