

Software Engineering Group Project 10 - Test Specification

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1. INTRODUCTION

1.1. Purpose of this Document

In this document we will be displaying the repeatable tests to be used by the team when programming the application, it will guide you through how each test should be conducted and the expected pass criteria?

1.2. Scope

This document covers the test specification, test procedures have been written and should be read by all project members who have any relation to QA.06 [1]. Readers should also familiarize themselves with QA.08 [2].

1.3. Objectives

The objectives of this particular document are:

- to specify in detail each of the system tests to be executed as part of a formal test process
- to describe what system tests need to be carried out to cover all the major functions of the application

2. TEST PROCEDURE

<i>Test Ref</i>	<i>Req Being Tested</i>	<i>Test Content</i>	<i>Input</i>	<i>Output</i>	<i>Pass Criteria</i>
SE-F-001	FR 1	Check if the right screen is displayed when the application opens.	Start up the application	Start up displays	Screen displays correctly
SE-F-002	FR 1	Check that pre-configured exercise descriptions are displayed correctly	Left click on “Choose pre-configured workout” and look at how the descriptions are formatted	Screen displays description as “X Exercises; X Sec work; X Sec rest; X Min Midway rest” for each entry	Descriptions are all displayed in the correct format
SE-F-003	FR 1	Check the system can start with a pre-configured set of exercises	Left click on the first beginner workout (“10 Exercises; 20 Sec work; 20 Sec rest; 2 Min Midway rest”)	Screen transitions to exercise overview and choosing whether to start or change selected workout	Confirmation screen (FR 3) appears within 1 second of input with selected beginner choice

SE-F-004	FR 3	Test functionality of return button	Left click on the button labeled “Select or create a different set of exercises”	Screen will transition back start-up	Workout selection screen (FR 1) appears again within 1 second of input
SE-F-005	FR 1	Check the system can start with a user-configured set of exercises	Left click on the button labeled “Configure your own workout”	Screen transitions to configuring a set of exercises	Configuration screen (FR 2) begins 1 second of input
SE-F-006	FR 2	Test default value of configuration setting, ‘Number of exercises’	Leave the slider “How many exercises?” in its default position	Configuration slider will display “15”	Number of exercises is set to 15

SE-F-007	FR 2	Test maximum boundary of configuration setting, 'Number of exercises'	Drag the slider "How many exercises?" as far right as possible	Configuration slider will move as far as the right boundary and display "30"	Number of Exercises is set to 30
SE-F-008	FR 2	Test minimum boundary of configuration setting, 'Number of exercises'	Drag the slider "How many exercises?" as far left as possible	Configuration slider will move as far as the left boundary and display "2"	Number of Exercises is set to 2
SE-F-009	FR 2	Test default value of configuration setting, 'Length of exercise time'	Leave the slider "Working time per exercise?" in its default position	Configuration slider will display "2:25"	Length of exercise time is set to "2:25"

SE-F-010	FR 2	Test maximum boundary of configuration setting, 'Length of exercise time'	Drag the slider "Working time per exercise?" as far right as possible	Configuration slider will move as far as the left boundary and display "5:00"	Length of exercise time is set to "5:00"
SE-F-011	FR 2	Test minimum boundary of configuration setting, 'Length of exercise time'	Drag the slider "Working time per exercise?" as far left as possible	Configuration slider will move as far as the left boundary and display "0:10"	Length of exercise time is set to "0:10"
SE-F-012	FR 2	Test default value of configuration setting, 'Time between exercises'	Leave the slider "Resting time per exercise?" in its default position	Configuration slider will display "2:25"	Length of time between exercises is set to "2:25"

SE-F-013	FR 2	Test maximum boundary of configuration setting, 'Time between exercises'	Drag the slider "Resting time per exercise?" as far right as possible	Configuration slider will move as far as the right boundary and display "5:00"	Length of time between exercises is set to "5:00"
SE-F-014	FR 2	Test minimum boundary of configuration setting, 'Time between exercises'	Drag the slider "Resting time per exercise?" as far left as possible	Configuration slider will move as far as the left boundary and display "0:10"	Length of time between exercises is set to "0:10"
SE-F-015	FR 2	Test default value of configuration setting, 'Duration of pause in the middle'	Leave the slider "Rest time halfway through exercises?" in its default position	Configuration slider will display "5:00"	Length of middle pause is set to "5:00"
SE-F-016	FR 2	Test maximum boundary of configuration setting, 'Duration of pause in the middle'	Drag the slider "Rest time halfway through exercises?" as far left as possible	Configuration slider will move as far as the right boundary and display "10:00"	Length of middle pause is set to "10:00"

SE-F-017	FR 2	Test minimum boundary of configuration setting, 'Duration of pause in the middle'	Drag the slider "Rest time halfway through exercises?" as far left as possible	Configuration slider will move as far as the left boundary and display "0:00"	Length of middle pause is set to "0:00"
SE-F-018	FR 3	Test functionality of the start workout button with the configured workout	Left click button labeled "Start Workout"	Screen will transition to warm up	Warm-Up (FR 4) begins within 1 second of input
SE-F-019	FR 9	Check the functionality of the pause button during warm-up	When the warm up begins, press the pause button and ensure the timer stops by waiting 5 seconds. Then press it again to resume	Warm up instructions freeze at "3:00 left" and not carry on until resume is pressed	Warm-up instructions pause completely, and the program does not advance until the user resumes it. Response to button click occurs within 1 second both times
SE-F-020	FR 4	Checks that the warm-up will begin after FR3 and will run for 3 minutes	Wait for 3 minutes (No user input needed)	Warm up instructions display and run for allotted time	Appendix # 01 & # 02

SE-F-021	FR 9	Check the functionality of the pause button mid exercise	When the exercise starts press the pause button and ensure the timer stops by waiting 5 seconds. Then press it again to resume	On screen exercise timer will pause on-screen at “0:10” and not carry on until resume is pressed	The timer pauses completely, and the program does not advance until the user resumes it Response to button click occurs within 1 second both times
SE-F-022	FR 5	Check that exercise will begin after FR4 and will run for 10 seconds	Wait for 10 seconds (No user input needed)	Exercise instructions display and run for allotted time	FR 5 begins within 1 second of FR 4 finishing.
SE-F-023	FR 9	Check the functionality of the pause button during normal rest	When the between exercises rest starts press the pause button and ensure the timer stops by waiting 5 seconds. Then press it again to resume	On screen exercise timer will pause on-screen at “0:10” and not carry on until resume is pressed	The timer pauses completely, and the program does not advance until the user resumes it Response to button click occurs within 1 second both times
SE-F-024	FR 5	Check that between exercises there is a normal rest period.	Wait for 10 seconds (No user input needed)	Rest will display for allotted time	Appendix # 02

SE-F-025	FR 9	Check the functionality of the pause button during cooldown phase	When the cooldown starts press the pause button and ensure the timer stops by waiting 5 seconds. Then press it again to resume	On screen exercise timer will pause on-screen at “3:00” and not carry on until resume is pressed	The timer pauses completely, and the program does not advance until the user resumes it Response to button click occurs within 1 second both times
SE-F-026	FR 6	Checks that the cooldown sequence of 3 minutes completes	Wait for 3 minutes (No user input needed)	Cooldown sequence begins	Cooldown sequence lasts 3 minutes then ends.
SE-F-027	FR 7	Checks that a guide for each exercise is displayed during warm-up.	Warm-up begins. (No user input needed).	A screen displaying a diagram on how to carry out the exercise appears.	Diagram guide displayed with an image instructing the exercise.
SE-F-028	FR 7	Checks that a guide for each exercise is displayed during cool-down.	Cool-down begins. (No user input needed).	A screen displaying a diagram on how to carry out the exercise appears.	Diagram guide displayed with an image instructing the exercise.
SE-F-029	FR 7	Checks that a video guide for each exercise is displayed during pausing.	Users select the pause function (button - mouse click or keyboard shortcut).	A screen displaying a Video on how to carry out the exercise appears.	Video guide displayed with an image instructing the exercise.

SE-F-030	FR 8	Check that times are present on warm-up and cool-down screens.	Timer starts and finishes. (No user input needed).	Time should be displayed visibly with a sound notifying the starting and finishing of the warm-up and cool-down.	Timer should be visible to the user and sounds should work when warm-up and/or cool-down finishes.
SE-F-031	FR 8	Check that times are present during exercises and when exercises are paused.	Timer starts and finishes. (No user input needed).	Time should be displayed visibly with a sound notifying the user of the starting and how long is left until finishing an exercise.	Timer should be clearly visible to the user. Following with a 5 Countdown sound for when an exercise will begin and end.
SE-F-032	FR 8	Check that times are present when exercises are paused.	User selects the pause function. (button - mouse click or keyboard shortcut).	Time should be displayed visibly with a sound notifying the user of the starting and how long is left until finishing an exercise.	Timer should be clearly visible to the user, showing them how long left of the exercise and of the pause break.

SE-F-033	FR 8	Checks that the progress of the workout is shown.	Workout starts (No user input needed).	A progress counter should be visibly shown under the guide of each exercise.	Counter of the exercises clearly visible to the user, stating what number exercise they're on. Appendix # 06.
SE-F-034	FR 5	Check the system can run 30 exercises	After the cooldown has finished, choose "Configure your own workout" and set all the sliders to their minimum value again, except "Number of exercises", which you set to 30 (max)	30 different exercises running sequentially with a counter to indicate the number of exercises and how many have been completed.	Appendix # 03 & # 06
SE-F-035	FR 10	Check that workouts are saved and displayed properly	After cooldown has finished, click the text "Previous Workouts" then view past workouts and confirm whether the displayed workouts match the exercises that were run while testing the program	The program should display the exercises run during testing	The workout data is accurate and displayed in the reverse-chronological order

3. CRITERIA APPENDIX

Appendix #.	Pass criteria reference.
# 01	Warm up must be 3 minutes long, with an appropriate countdown timer.
# 02	Clock must count down from the max time length of each activity without skipping any time, and stop the timer when it reaches 0.
# 03	Exercise counters must display the correct number of different exercises in the whole workout.
# 04	Rest times between exercises must run for 10 seconds, with an appropriate countdown timer.
# 05	Timer pauses upon button press & displayed time does not go down.
# 06	All exercises should run sequentially from the warm-up until the cool-down with no stoppage unless the user pauses.

4. REFERENCES

- [1] QA Document SE.QA.06 - Test Procedure Standards.
- [2] QA Document SE.QA.08 - Operating Procedures and Configuration Management Standards.
- [3] QA Document SE.QA.02 - General Documentation Standards.

5. DOCUMENT HISTORY

Version	CCF No.	Date	Changes made to document	Changed by
0.1	N/A	28/01/21	N/A - original draft	Bas22/Ahz1
0.2	N/A	23/02/21	Tweaked FR1, 2, 3 & 10 entries to match UI Spec.	Bas22
1.0	N/A	02/03/21	Released 1 st Test procedure Specification.	Ahz1/Bas22
1.1	N/A	04/03/21	Issue #3 – Correct documentation errors.	Bas22/Ahz1
1.2	N/A	11/03/21	Issue #9 - Add a test to check the right screen at the start. Issue #11 - Reorder tests to be sequential. Issue #17 - Added appendix table.	Ahz1/Bas22
1.3	N/A	04/05/21	Rewording tests to suit criteria.	Ahz1/Bas22