

Software Engineering Group Project Testing document

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1. Introduction

1.1 Purpose

The purpose of this document is to indicate the tests that will be carried out to ensure the software works as intended in the design document. This document will also list the input, output and pass criteria of each test.

1.2 Scope

The testing document assumes that the user is familiar with SE.QA.06 [1] as well as the Requirements Specification for Welsh Vocabulary Tutor [2] in order to understand the functions being tested.

1.3 Objectives

The objective of this document is to provide details about the testing carried out on the CS22120 group project, a Welsh vocabulary tutor and dictionary.

2. Test Specification

Test Ref	Req Being Tested	Test Content	Input	Output	Pass Criteria
SE-T-001	FR2	The dictionary can be ordered by the English words' order	Start the program.	A sorted dictionary is displayed to the user.	The user can see a list of words ordered alphabetically in English.
SE-T-002	FR1	The system orders dictionary using English words by default	A list of words as loaded from the JSON file.	The list is sorted by the English alphabet after starting the system up.	When starting the software, the dictionary appears in the English order.
SE-T-003	FR2	The list is able to be ordered by Welsh words	Switching the list order from English to Welsh.	A now sorted list of words.	The system is able to order the dictionary in the Welsh order
SE-T-004	FR2	The user is able to switch the list order from welsh to English.	Switching the list order from Welsh to English.	The list is now ordered by English.	The user is able to change the dictionary order from

					Welsh to English.
SE-T-005	FR2	Special characters do not throw off the ordering	An ordered list of all welsh words.	A now sorted list of words	Special characters like “ô” do not affect the ordering of the dictionary e.g. “tô” appearing after “tunell”.
SE-T-006	FR1	User is able to scroll through the dictionary / list of displayed words.	Scroll bar that can be selected with mouse input from the user	Different part of the list displayed, based on the scroller’s movement.	Words list displays words relevant to the scroll bar’s position.
SE-T-007	FR3	When the user searches for a word, the correct words and translations appear.	User inputs the word they want to search for. “Originally” in the test case.	The test term is displayed along with its Welsh translation.	Only words starting with inputted characters are displayed.
SE-T-008	FR3	The user is able to search for words in Welsh.	User inputs the word they want to search for. “tô” in	The test term is displayed along with	Words appear as characters are typed with the

			the test case.	its English translation.	correct word appearing when the user is finished inputting the test term.
SE-T-009	FR3	When the user changes the search language the words reorder	The User inputs the test term then changes the dictionary order from English to welsh. "Pen" being the test term.	The displayed terms change in order to the language order of the dictionary.	When the order language changes the words displayed will change to words containing the same test term in the other language.
SE-T-010	FR4	The system stores words the user wishes to practice on	A word that is not currently part of the practice list. "Ffrwyth" (fruit) as a test term.	The practice list should now contain the added word.	The practice list is modified correctly and stored.
SE-T-011	FR4	The user can add words to their	A word not currently in the practice list is	The list contains the word added. As	The user can add words to the practice

		practice list.	added, “Cyfforddus” (Comfortable) as a test term.	well as any other added words.	list without issue.
SE-T-012	FR4	The user can remove words from their practice list	The content of the practice list. “Ffrwyth”(Fruit) in this case.	The practice list with the chosen word removed.	The user is able to remove words from the practice list without issue.
SE-T-013	FR4	The user cannot add the same word to the practice list twice.	A word that is currently part of the practice list. “Comfortable” in this case.	The practice list remains unchanged and displays an error message.	The user is unable to add a word to the practice list if the is already part of it.
SE-T-014	FR5	The user can add their own word to the dictionary	A word that is not currently part of the dictionary. “Cyffug”(Fudge) in this case.	The added word now appears in the dictionary.	The user is able to add their own words, the words are also stored correctly.
SE-T-015	FR5	A blank word will not be added to	User tries to add a word leaving a blank input	The system displays an error saying blanks	Nothing is added to the dictionary and an

		the dictionary.	instead of using a word.	cannot be added.	appropriate message is displayed to the user.
SE-T-016	FR5	All words must have a type	User attempts to add a new word without specifying a type	An error saying all words need a type.	No changes are made to the dictionary and a suitable error is displayed.
SE-T-017	FR5	All words must have both an English and Welsh version	A word added with either an English or Welsh version missing. "oblivion" without listing its Welsh version (Ebgargofian t)	An error saying a word needs to be in both Welsh and English to be added.	All words in the dictionary have a Welsh and English version, system displays appropriate error otherwise.
SE-T-018	FR5	The user can not add a duplicate word into the dictionary.	The user cannot add the word "Illegal" into the dictionary.	An error saying the word already exists.	No changes are made to the dictionary and an error is displayed.
SE-T-019	FR5	User can add a word	Adding the word "lie"	The word is correctly	The user can add the

		with the same spelling as long as it is not identical to an already existing word.	(falsehood) to the dictionary.	added to the dictionary	word “lie” (falsehood) to the dictionary.
SE-T-020	FR5	Words with illegal characters cannot be added.	A word using an illegal character cannot be added. “\$al%”	An error saying the word is not valid.	Illegal characters that do not appear in either languages are not added into the dictionary, error message is displayed.
SE-T-021	FR5	Word types can only be masculine/feminine nouns, verbs or other.	The user selects a word type from the dropdown menu, so there can	An error telling the user the type is invalid.	The user is unable to add a word with an unsupported type.
SE-T-022	FR5	New words are added to the practice list.	A new word input by the user. “Amazing”	The word amazing and its welsh translation is now	Any new word is automatically added to the practice list.

				listed in the practice list.	
SE-T-023	FR6	When a noun is displayed, the system shows what the words gender is welsh is.	“Abbey” is listed as basing a masculine noun. “Actress” is listed as being a feminine noun.	The welsh form’s gender is shown.	All nouns in the dictionary show their gender when displayed.
SE-T-024	FR6	When a verb is displayed the English form is prefaced by “to”.	The words “add” and “admire” are prefaced by “to”.	The English form has “to” before it.	All verbs in the dictionary are prefaced with “to”
SE-T-025	FR7	The user can view their practice list.	A button is pressed to bring the user’s practice list up.	The practice list is displayed, including words added earlier “Cyffug”, “Amazing” and “Comfortable” as well as their	The user is able to access their practice list.

				translations .	
SE-T-026	FR7	The user's practice list will not be displayed if it is empty. (Note, that this test will be run before any words are added to the practice list)	A button is pressed to access the practice list.	An error is displayed saying the list is empty.	The user cannot access the practice list if there is nothing in it.
SE-T-027	FR8	User is able to generate English flashcards based on words in the practice list.	The contents of the practice list.	A flashcard containing a word from the practice list.	The user is able to see an English flashcard with a word from their practice list.
SE-T-028	FR8	User is able to generate Welsh flashcards based off the words in the practice list.	The contents of the practice list.	A flashcard containing a welsh word from the list	The user is able to see a Welsh word on a flashcard.

SE-T-029	FR8	User is able to see the flashcards translation after seeing the flashcard.	The word on the flashcard.	The translated version of the word on the flashcard.	The user is able to view the flashcards translation.
SE-T-030	FR8	The user is able to generate multiple flashcards based off the practice list.	A queue of all words in the practice list.	Words are taken out of the queue until the user is done.	User is able to go through flashcards one by one.
SE-T-031	FR9	A word is displayed, and the user is given 6 words to choose from for the correct translation. This is to test a correct answer.	A random word from the practice list.	The user is congratulated on getting a correct answer.	The user is given 6 options to choose as a translation for the displayed word, 5 are random 1 is correct. System behaves appropriately congratulating the user when a correct answer is chosen.

SE-T-032	FR9	A word is displayed, and the user is given 6 words to chose from for the correct translation. This is to test an incorrect answer.	A random word from the practice list.	The user is given positive feedback and told the correct answer.	If the user picks the wrong answer, they are given positive reinforcement and told the correct answer before moving on.
SE-T-033	FR9	User is given a word in one language and asked to translate it.	Translation to displayed word typed by the user.	A message is displayed if the user is incorrect, otherwise the user is told their answer was correct.	System is able to see if the user typed the correct translation.
SE-T-034	FR9	Jumble practice method is only available if there are at least 4 words in the practice list.	The contents of the practice list.	An error is thrown if there are not at least 4 words in the practice list.	The practice method will not start unless there are 4 or more words in the practice list.
SE-T-035	FR9	User is given 4 words and	Pairs of words from the practice	User is told if they are	System checks if the user

		their translations all jumbled up, must match them.	list sorted by the user.	right or wrong.	matched all words correctly and behaves appropriately.
SE-T-036	FR10	User is able to run tests from their practice list.	User presses a button to sort practicing.	System queues several practice methods for the user.	Several practices are queued up for the user to go through. (Selected randomly)
SE-T-037	FR10	User has a tally of how many tests they got right	A tally is increased every time the user gets a test right.	The tally is output once all tests are over.	With every test the user passes they are given a point, the tally of these points is kept and displayed once all tests are done.
SE-T-038	FR10	User is given positive feedback on getting a test right.	The test output saying the user passed it.	Some kind of congratulatory message to	The system displays positive feedback to the user when they

				encourage the user.	pass tests and do well.
SE-T-039	FR10	User is given the correct answer to a test after getting it wrong.	The test output saying the user has failed.	The correct answer is displayed.	The user is shown the correct answer to the previously completed test after failing it.
SE-T-40	PR1	Any user input is reflected onscreen within 1 second.	Any input provided by the user	The user's input displayed on screen	Any input is reflected on the users' screen within a second.
SE-T-41	PR2	The software runs on a standard PC within the Department of Computer Science	The software is run.	The software displays and runs correctly.	The system runs correctly on a standard pc.

3. References

SE.QA.06 - Test Procedure standards [1]

Requirements Specification for Welsh Vocabulary Tutor [2]

SE.QA.04 - User Interface Specification Standards [3]

SE.QA.02 General Documentation Standards [4]

4.Changes

Version	CCF NO#	Date	Changes made to document	Changed By
1.0 2.0	N/A #4	22/2/20 27/4/20	Acted on feedback for the draft document. Added introduction and table of contents. Made changes to tests: Adding new tests, making inputs clear and the tests repeatable.	Ryb11 Ryb11