

## **Software Engineering Group Projects – Test Specification**

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# 1. INTRODUCTION

## 1.1 Purpose of This Document

To specify each section of the application that needs testing, in accordance to the Requirement Specification. This document should then be used to test in the future.

## 1.2 Scope

This document should be read by the Website Programming members, Android Application member, Team leader and Tester – everyone will know what they will have to entail

## 1.3 Objectives

These are the Objectives in which this document will involve:

- List tests required for all aspects of the project
- Use Boundary Testing to appreciate where errors may occur
- Enable tests to be written as a result of this document

## 2. TEST SPECIFICATION TABLE

<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	FR1 [1]	Check the user can successfully create a new walk.	Touch the create walk button.	Prompted for Title of Walk, short and Long description of the Walk.	Passes if when the start button is pressed, the screen for entering information about a walk appears.
SE-F-002	FR1 [1]	Check to see if the co-ordinates have been set, and begin recording.	The Name of the walk to “Aberystwyth” and Location = “Aberystwyth”	Prompt a message telling the user that the walk is being recorded.	If there's a message which notifies the user that the walk has started to record – then the location has been set.
SE-F-003	FR1 [1]	Check to see if the options to cancel the walk are displayed once the application starts recording.	Set the name of the walk = “town” and location = “Aberystwyth”	There should be an option to cancel the current walk.	If the information has been set successfully, there will be a button, which will be enabled showing an option to cancel the walk.
SE-F-004	FR1 [1]	Check to see if the options to save the walk to the server are displayed when the application starts recording	Set the name of the walk = “Hills” and location “Trefchan”	There should be an option to save a walk.	If the information has been set successfully, there will be a button which allows the user to save the walk.
SE-F-005	FR1 [1]	Check to see if the options to add text and photos about the location are displays when the application	Click set a point of interest button on the walk.	The window which allows you to set a short and long description with a title and image will appear.	If the information has been set successfully, the window will show and tell you that you can enter in information

		starts recording			into the short and long description.
SE-F-006	FR1 [1]	Check to make sure the walk is successfully saved	Click save a walk, when you have finished.	Produce a message telling the user they have correctly saved all information to the database	Correctly output a message to the user telling them that they have sent the information correctly to the database.
SE-F-007	FR1 [1]	Check to make sure the POI is successfully saved	Save a point of interest at a point during the walk	Adds to the list of POI of the walk	Passes if the point of interest has been successfully added to the list of POI
SE-F-008	FR2 [1]	Check to see if the information about the POI is successfully saved	1. Save a description, short description and a picture.	You are then taken back to the map page.	Passes if you can successfully add the information to the POI and then return back to the map screen.
SE-F-009	FR2 [1]	Only allow one word for the Tour name	Set the name of the walk to “Aberystwyth”	You should be allowed to continue with no errors.	Passes if you can set the name, and allows you to enter the rest of the data.
SE-F-010	FR2 [1]	Entering tour name as two words	Set the name of the walk to “Aberystwyth Town”	You should be prompted with a red box around the walk Title, with a label stating it's more than one word.	Passes the test is the red box is present and there's a label saying that the walk name is invalid.
SE-F-011	FR2 [1]	Check that the walk titles character length is greater than 1.	Leave the walk title blank	Prompted with a red box around the walk title explaining it's less than 1 character.	Passes the test if it produces the red box with text explaining that there needs be more than 1 character.

SE-F-012	FR2 [1]	Check that walk name contains only letters.	Enter “£4558” as a walk name	Red box around the walk name with a label saying invalid letters.	Passes if there's a box around the walk name saying that there's invalid characters in the text box.
SE-F-013	FR2 [1]	Check the short description is less than a 100 characters	Enter “This walk was quiet”	Allowed to continue to the long description, with no warning.	Passes if there are no error messages that appear.
SE-F-014	FR2 [1]	Check the short description is greater than 0	Enter “” - so you leave the box blank	Produce a red box around the short description saying they need to enter a short description.	Passes if the short description has a red board and a message prompting the user to enter a description.
SE-F-015	FR2 [1]	Enter the short description to be over 100 characters	Enter “The walk was too long and too stressful, it wasn't amazing I wouldn't do it again – it was a too dull”	“The walk was too long and too stressful, it wasn't amazing I wouldn't do it again – it was a too du” with a message saying that they have reached the 100 character limit	If it cuts the description at the given place and tells the user that it may have cut of some of the description because it's over the 100 character limit.
SE-F-016	FR2 [1]	Check the long description is less than a 1000 characters	Enter “The walk in general was very peaceful – the scenery was good. It would be nice to do this on a dry day, as it was too wet when we were walking, not that this put us off. My favourite place was the castle in	Allow the user to continue and take a picture, without any warnings appearing on the screen	This test passes if there are no error messages produced and it allows the data to be saved to the database.

			Aberystwyth, I would definitely recommend going there.”		
SE-F-017	FR2 [1]	Check the long description is greater than 0	Enter “” - leaving the long description blank.	There will be an error popped up saying that are you sure you want to leave the long description blank.	Passes if there's a notification which tells the user that they have left the information blank – and that they've not entered a detailed description for the walk.
SE-F-018	FR2 [1]	Enter the long description to be over 1000 characters	Enter “Today I started my first walk with this application..... I thought that it would be a good idea to test it locally on some smaller walks..... When I left the house it was sunny so I went for a walk along the coastal..... paths. When you looked down you could see the waves swash and..... backwash. Where we..... were walking was an ideal..... location for Red Kites –.... and luckily because today was a clear sky I managed	Tell the user that the length is too long and cut off at the 1000 character:	This will show a red box around the long description telling the user that they have entered the long description has exceeded the 1000 characters and they may want to cut it down.

			<p>to get a couple of photos of them. I then continued the walk along the beach – it was calm and I went into a rock pool and saw lots of..... crabs, but then it got a bit chilly so I left the beach..... this meant that I turned back. As I turned back..... the tide came in..... I ended up getting wet feet .....</p> <p>.....</p> <p>But then the sun came out. I would really recommend this walk.....</p> <p>.....</p> <p>.....And I will probably do this walk again.</p>		
SE-F-019	FR2 [1]	Check to make sure they can't enter a lot of spaces in the title or the name of the walk.	Enter just spaces in the title of the walk or the name of the walk	A red error box to show that there's just spaces in the text box.	Passes if there a red box showing an error warning around the text field with just spaces in.
SE-F-020	FR2 [1]	Check they can't enter a symbol for a new Walk name	Enter “!”£\$%^&*()- ?/?/#[;[]{}” as a name for the	There should be a red box around the text field telling the user that they	Passes if there was a red box around the text field, identifying an



			walk	can't enter those characters as a walk name	error.
SE-F-021	FR2 [1]	Check they can't enter a symbol for the description.	Enter “!”£\$%^&*()- ?/?#;[]{}” as a name for the short and long description	There should be a red box around the text field telling the user that they can't enter those characters as a description.	Passes if there was a red box around the text field, identifying an error.
SE-F-022	FR3 [1]	When removing the POI make sure all the data is removed with it.	Remove a POI in the application, during run time.	The POI is removed and outputs a pop-up telling you that the data has been removed.	Passes if there is a pop-up telling the user that the information has been successfully been removed from the POI.
SE-F-023	FR3 [1]	Make sure the POI counter is updated	Remove a POI from the walk.	This will then decrement the POI counter by minus 1.	Passes if it successfully decrements the counter by one.
SE-F-024	FR3 [1]	Make sure the map is updated with the removed POI.	Remove a POI from the walk and then view the map.	They should remove the POI from the POI list, which will update the map to show the resultant deletion.	It will pass if once you have deleted a POI, the map will no-longer show that POI but show all other POI
SE-F-025	FR3 [1]	Make sure there's a pop up that we have deleted the POI	Remove a POI from the application.	Pop-up a message telling the user that they just deleted a POI from their application.	Passes if once they have successfully deleted the POI from the walk, it will show a pop-up informing them they have deleted the POI from the application.
SE-F-026	FR1 [1]	Make sure that we can finish and walk and	Press stop the walk option on the	This should tell the user that they're about the stop	Passes if there's an error message telling

		stop a walk.	application.	the walk, and that they will finish recording.	the user that they are about to stop the application.
SE-F-027	FR3 [1]	Adding a name to the walk	Enter “Town” as a walk for the name	Allows you to carry on with entering information	Passes if you can carry on using the information without an error warning
SE-F-028	FR3 [1]	Entering no name for the walk	Enter “” for the walk	Error pop up saying you need to enter some text	Passes if the app prevents you from entering any more information.
SE-F-029	FR3 [1]	Make sure there’s a time stamp	Input a location and set all associated information	Return on screen the time it was taken.	Passes if the screen displays the time they finished entering in the information.
SE-F-030	FR4 [1]	Add one photo from camera	Click and take one photo using the camera	Adds the image to the screen in a thumbnail view.	Passes if the image saves to the users’ library of images.
SE-F-031	FR4 [1]	Add Multiple photos from camera	Click and take more than one photo at the current location at the camera.	Adds the selection of images in a thumbnail view ready for viewing.	Passes if it allows to have more than one image per point of interest.
SE-F-032	FR4 [1]	Make sure it's in a jpg format	Try to add a non-jpg image from the photo library.	Message telling to user that only jpg files can be selected	User is unable to select a non-jpg file.
SE-F-033	FR6 [1]	Check if the user can log in with an incorrect password	1. Enter a correct username and leave the password box empty. 2. Enter a correct username and a list of	A pop-up error message.	Error message which clearly states that the password is incorrect.

			random characters as a password.		
SE-F-034	FR6 [1]	Check if the user can log in with an incorrect username	1. Leave an empty username and enter a correct password 2. Enter a list of random characters as a username and a correct password.	A pop-up error message.	Error message which clearly states that the username is incorrect.
SE-F-035	FR4 [1]	Warning message when no name is entered for the photo/location	No input in the name field	Output should be a pop-up error message	Error message which doesn't allow the new photo to be placed without a name
SE-F-036	FR5 [1]	Delete a Walk	Select Delete a walk from the options menu.	Asks the user if they are sure they want to remove the images from the file	Passes if the walk is deleted from local device.
SE-F-037	FR5 [1]	Cancel a Walk	Select that they want to cancel the walk from the options menu.	Asks user if they're sure they want to cancel the walk	Passes if they can cancel a walk they are currently on, and it deletes it from the server and the local copy.
SE-F-038	FR5 [1]	Delete a walk. But not specify the walk	Select delete a walk, but leave the box empty.	Pop-up telling them they need to enter in a title of the walk	Passes if they are warned they have not entered any information into the box for the title of the walk.
SE-F-039	FR8 [1]	Make sure an image, short description and long description are set.	Enter a short description, long description and an image for a POI.	Be able to move onto the next screen after finishing entering information into the POI.	Be able to navigate back to the map, after the POI has been added.

SE-F-040	FR8 [1]	Check that all POI have co-ordinates associated with them.	Click on a POI on the website.	It will show the X co-ordinates and the Y co-ordinates.	Passes if when viewed the user can see the x and y co-ordinates related to the POI.
SE-F-041	FR8 [1]	Search for a search that wasn't there.	Enter a search for a walk that may not exist.	Output that there are not any of those walks available at that time.	Passes if they search for a walk that's not included and that it will tell the user that there isn't an associated walk.
SE-F-042	FR8 [1]	Enter in a series of spaces to the search menu.	Enter “ “	This will then output to the user that they need to enter characters into the walk search.	Passes if there's a red box on the search with an error message telling the user they need to enter some characters into the search box.
SE-F-043	FR8 [1]	Enter a page that's not there, so we can check the 404 pages	Enter “foo.php” into the URI	This should produce a 404 page which follows the design of the other pages, informing the user the page doesn't exist.	Passes if they once they have selected the wrong page they will be re-directed to a 404 page, which will inform the user they have a wrong URI...
SE-F-044	FR8 [1]	Check that the user can use the website successfully and easily.	Navigate the website and check all the links.	This should be easy to navigate and all links work correctly.	Passes if the user can use the website with ease, and they will not struggle – and if all the links work correctly.
SE-F-045	FR8 [1]	Check that the website is standard compliant with CSS and HTML5	Check all source code is valid with the W3C validator.	There should be no errors, or warnings and it should pass the test successfully.	Passes the test if there is no warnings or errors in the validator and it passes for HTML5 and CSS2/3 standards.

SE-F-046	FR9 [1]	Check if you user can create a new account	Click on the register new user button. Fill in the details that are required	Once the user has filled out the required boxes, the account is created for the user	Passes if the users account is created and can be accessible via the log in screen, if not then cover the boxes with incorrect information red so the user understands where they went wrong
SE-F-047	FR9 [1]	Check if the users account has been added to the database	Users information have been added to the database	After the information has been added to the database. The server can access it when the user signs into the website.	It passes when the users information is sorted on the database and can be accessible when the user tries to sign into the website
SE-F-048	FR8 [1]	User can navigate the website between the home page and the walks page	User clicks the Navigation button and the Home button	After clicking each button the website directs the user to the page they clicked	It passes when the pages link correctly and it allows the user to navigate between the homepage and the walks page.
SSE-F-049	FR9 [1]	Make sure users can't have symbols in their usernames	Enter “£\$^%!” into the username section on the register form on the website	Error pop up saying that you can only have letters and numbers as a username	If the website prevents the users from having any symbol such as: “!”£\$%^&*()_+ -=<>./?;: '@# ~[] {} `~” in their usernames when creating an account

SE-F-050	FR2 [1]	Make sure the user can't have symbols or numbers in their first or last name section	Enter “2£4%7*” into the first and last name section on the register form on the website	Error pop up saying that you can only have letters in the first and last name section	If the website prevents the users from having any symbol or number such as: “!”£\$%^&*()_+ =<>./?;:’@\\ #~[]{}`-01 23456789” in their usernames when creating an account.
SE-F-051	FR9 [1]	Check the database receives a title	Title of a walk received from the application	Title is written to the database	Pass if the title is inserted into a new record in the database
SE-F-052	FR9 [1]	Check the database receives a description	Description for a walk received from the application	Description added to the record of the new walk	Record has a description
SE-F-053	FR9 [1]	Check the database receives a list of co-ordinates	Co-ordinates received from the application	Add them to the database	Co-ordinates are added to the record
SE-F-054	FR9 [1]	Check that the database receives a time stamp	Time-stamp from the application	Save it to the database	Time-stamp is placed in the correct record
SE-F-055	FR9 [1]	Check each location has information is associated with it	Information from the application	Write information to database	Information is placed in the correct record
SE-F-056	FR9 [1]	Check the Database has photos	Photos from the application	Save the photos to the server and write the file path to the database	Photo file paths are added to the corresponding point of interest for the currently selected walk.
SE-F-057	FR9 [1]	Correct form for sending data to the	Information about a walk – name,	Data send as MIME message via HTTP	Data is dispatched to the server

		server	descriptions, coordinates (start and end point, localizations), photos	POST	
SE-F-058	FR7 [1]	Close the app successfully	Application is switched	Data should be stored in a temp file that is used to restore later	Application creates a temp file with all data
SE-F-059	FR7 [1]	Close the app and load back up showing any current data/walks	Close the app and tap the app to re-load it	It should close the app, go to the main screen and then when loaded it should show all the information on a current walk.	Passes if when closed it will show all the information from the walk they're currently on.
SE-F-060	FR8 [1]	Select a walk on the web application	Select a walk from a list of walk.	Show all corresponding information on a walk.	Passes if when a walk is selected it shows the short description, long description, title and any images associated with it.
SE-F-061	FR4 [1]	See all images associated with the walk in jpg form	Enter an image with a .jpg extension.	That it allows the information to be added to the POI.	Passes if it allows the user to add a jpg image to the POI.
SE-F-062	FR9 [1]	Reject data for a walk if it is corrupt	Information about the route, start and end points	Error message for corrupt data if it is corrupt (i.e. missing start or end point for a walk)	Error message displayed.
SE-F-063	FR9 [1]	Save all the data correctly to the SQL relational database	Add all fields to the database.	The information will be stored in the appropriate fields.	It stores all the information into the appropriate fields, associated with the

					walk.
SE-F-064	FR9 [1]	Confirmation message that it has sent to the server correctly	Save and send a walk that they're on.	A pop-up message telling the user that they have send the information correctly.	Passes if when a walk is sent there will be a pop-up message which lets the user know they have sent the information to the server.
SE-F-065	FR9 [1]	Show a list of walks	Click the “Show a list of walks” button.	Should display the list of walks saved by the user	Passes if all the previously saved walks are listed.
SE-F-066	EIR1 [1]	Ask someone to use the application to see if it's easy to use	Allow an outside user to use the application	They will give feedback on the application.	Passes if they think the application is easy to navigate and use.
SE-F-067	PR1 [1]	Make sure the response time is less than a second	Click an item on the screen.	The corresponding information should be displayed within one second of pressing.	Passes if the response time for clicking an item on the application is less than 1 second.
SE-F-068	PR2 [1]	Check the application works on at least 2 devices	Check on a phone and a tablet.	Should display the same information and act the same too.	Passes if the application can be used successfully by both devices – With only minor layout changes in the UI
SE-F-069	PR2 [1]	Check the website works, and validates	Click all links and run under the validator checker.	There should be no errors and everything passes.	Passes if the website validates correctly and all links and scripts work accordingly to how they're supposed to.
SE-F-070	PR2 [1]	Check the website	Load the website on	The pages should load	Passes if the website



		works on the most popular internet browsers	Firefox, Chrome, Safari, Opera and Internet Explorer	correctly.	loads quickly and correctly on every browser.
SE-F-071	PR 2 [1]	Check to see if text can be resized	Check on each browser if the text can be resized by the user.	The text should be able to be resized in every browser	Only passes if the text can be resized.
SE-F-072	FR2 [1]	Make sure the users email as a “@” sign in it so it can be a valid email section	Try and create an email without a “@” I.e. “qwerty” in the email section	Error pop up saying that you have to have a “@” sign in the section for it to be a valid email	Only passes if the user has a “@” symbol in their email.
SE-F-073	FR2 [1]	Make sure the user can't have symbols in the password section	Try and make your password “\$%^&” when creating an account.	Error pop up saying that you can't have symbols in your password.	If the website prevents the users from having any symbol or number such as: “!”£\$%^&*()_+ =<>.,/?:;'@ #~[]{}`~01 23456789” in their password when creating an account.
SE-F-074	FR2 [1]	Make sure the users passwords match	Type in two different passwords when they ask the users for their password and to retype it again to confirm the password Type in “Password” and “Password” in the password section of the registration.	Error pop up saying that the passwords do not match.	Passes if the website prevents users from having different passwords
SE-F-075	FR2 [1]	Make sure the user	Enter “Pass word”	Error message pop up	Passes if the website

		cannot enter spaces into the password section	into the password section.	saying that the user can't have spaces in their password	throws an error telling the user they can't have a space in their password.
SE-F-076	FR2 [1]	The user cannot leave the email address section empty	Leave the email section empty when filling out the registration form	Error message pop up saying that the user has not got an email address	Passes if the website displayed
SE-F-077	FR1 [1]	Check start walk button	Clicking the “Start walk” button	The walk screen is brought up which then asks for walk details and starts recording	Button brings up the map screen
SE-F-078	FR1 [1]	View walks button	Clicking the “View walks” button	Screen with all the recorded walks and details about them	Brings up the “view walks” screen
SE-F-079	FR1 [1]	Options button	Clicking the “Options” button	Gives a screen with all the options for the application	Options screen
SE-F-080	FR2 [1]	Test if the map screen is locked to current position	Swipe the map to the sides of the screen	Restricted view of the map	The map screen should be focused only on the current position of the user
SE-F-081	FR1 [1]	Frequency for receiving location data should change	User is taking many turns	Increase location data gathering frequency	More location points added to the route so that the line represents the correct path taken
SE-F-082	FR1 [1]	Frequency for receiving location data should change	User walks in a straight line for a long time	Decrease location data gathering frequency	Less location points added to the route

SE-F-083	FR8 [1]	SQL injection protection	Insert into an input field " or 1=1	The SQL query should be rejected by the server	Page refreshes with no error messages
SE-F-084	FR8 [1]	SQL injection protection	Insert " DROP TABLE Users	The SQL query should be rejected by the server	Page refreshes with no error messages

### 3. REFERENCES

[1] Software Engineering Group Projects. Requirements Specification. C. J. Price and B.P.Tiddeman. 1.2 (Release). 7 November 2013

### 4. DOCUMENT HISTORY

<i>Version</i>	<i>CCF No.</i>	<i>Date</i>	<i>Sections Changed From Previous Versions</i>	<i>Changed by</i>
1.0	N/A	02/11/2013	Set the Original Document Layout	RYG1
1.1	N/A	03/11/2013	Added Objective, scope and added SE-F-001 to SE-F-015	RYG1
1.2	N/A	03/11/2013	Renamed the file to standard accordance	RYG1
1.3	N/A	04/11/2013	Added SE-F-016 to SE-F-021	ZAL
1.4	N/A	06/11/2013	Added SE-F-022 to SE-F-048	RYG1
1.5	N/A	07/11/2013	Added SE-F-049 to SE-F-051 and removed the term GPS from SE-F-002 because location data is not entirely GPS	MVZ
1.5	N/A	07/11/2013	Added description for the FR6 database tests	MVZ
1.6	N/A	09/11/2013	Corrected some spelling mistakes, changed date format to be consistent, added page break before contents, added description to SE-F-027, some clarification of pass criteria.	HFB1

1.7	N/A	12/11/2013	Added in Referencing to the requirements documents. Organised the document. Edited some errors and issues raised.	RYG1
1.8	N/A	14.11.2013	Added a few descriptions. Changed the SE-F-028 test from checking coordinates to checking the username and password.	MWD5
1.9	N/A	14/11/2013	Re-organised the documents table. Added tests to make sure it matches the use-case, made amendments to the current document, updated reference numbers and updates empty rows	RYG1
2.0	N/A	15/11/2013	Spell checked and added SE-F-70 to SE-F-76.	ZAL
2.1	N/A	15/11/2013	Changed the version number, changed the status	RYG1
2.2	N/A	15/11/2013	Added SE-F077 to SE-F-084	MVZ
2.3	N/A	15/11/2013	Removed duplicated tests, updated the version number for release	RYG1
2.4	N/A	15/11/2013	Added SQL injection tests SE-F-083 and SE-F-084	MVZ
2.5	N/A	15/11/2013	Changed status and version number. Spell checked. Updated document objectives	MDA