Edge Hill University

CIS3301 – MOBILE APPLICATIONS AND GAMES DEVELOPMENT

BSc Web Design & Development

Test Documentation

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1 Step by step guide to deploying app to mobile or desktop

1. open terminal

2. cd into the web-app folder

3. run "npm install" in the terminal

4. run "ember serve" in the terminal

5. open an internet browser and go to localhost:4200, you will then be able to play the game on your computer.

6. open a new terminal

7. cd into the cdv-app folder in the terminal

8. run "npm install" in the terminal

9. run "cordova platform add android" in the terminal

10. make sure your android device is plugged in and developer options is on with USB debugging also on

11. return to terminal and run "cordova run –device"

12. shake phone to start game

2 Test carried out during development of the connect four game

The following test was carried out during the development stage, each of the tests was created before the start of development. The test was created by first looking at each of the requirements and make a list of what needs to be done within that section of the development.

Test number	Description of test	Outcome	Fix if failed
Creating the look			
1.	First test is to see if the horizontal line appear within the stage with the colour white	Test passed	NA
2.	Second test is to see if the Vertical line appear within the stage with the colour white	Test passed	NA
3.	Adding padding to place the board in the middle of page	Test passed	NA
4.	Creating player x counter with the visibility on as true to be able to see the counter.	Test passed, the counter appeared at the top with a white colour	Counter was placed back to invisible.
5.	Creating player o counter with the visibility on as true to be able to see the counter.	Test passed, the counter appeared at the top with a green colour	Counter was placed back to invisible.

	Click function		
6.	The first test carried out in the click function was to see if the click can be recognized within the given offset.	Test passed but the counter did not appear directly in the place selected	NA
7.	Test to see if the offset for the x counter work, in this test the number were changed until found the correct ones	Test final passed after a few tries at different numbers	NA
8.	Test to see if the new offset worked in all of the squares and the board can be completely field	Test passed, the offset worked for all squares	The only problem was it allowed the user to select all over so needed to add a while to drop the counter down the column
9.	Test to see if the while loop worked in all columns	Passed, all column would drop the counter to the bottom	The only problem was if the user clicks two many times it would place an extra one above the column
10.	Test which adds a break which if they coordinate goes below 0 will prevent the user from adding a counter	Passed	NA
11.	Test the link between click and check_winner, an alert was add in the check_winner to see if there was a link	Passed	NA
12.	Test to see if the computer can add the counter, this tested the computer_move and the code within the click function	Failed The test failed due to the computer add from the top of the board and down	Improvement changed around the for loop to look for y first
	Check_winner		
14.	Test to see if the user can win horizontally	Passed and was repeated for all possible horizontally wins using a pop-up	However no indication the game won as the this.set was not included
15.	Test to see if the this.set worked for X win	Passed	NA
16.	Test to see if the this.set worked for O win	Passed	NA

17.	Test to see if the user can win Vertical	Passed and was repeated for all possible horizontally wins using a pop-up	However no indication the game won as the this.set was not included
18.	Test to see if the this.set worked for X win	Passed	NA
19.	Test to see if the this.set worked for O win	Passed	NA
20.	Test to see if the user can win diagonal	Passed and was repeated for all possible horizontally wins using a pop-up	However no indication the game won as the this.set was not included
21.	Test to see if the this.set worked for X win	Passed	NA
22.	Test to see if the this.set worked for O win	Passed	NA
23.	Test to see if the user can draw	Passed and they were able to find a draw	NA
24.	est to see if the this.set for draw	Passed	NA
Deployment to mobile			
25.	The first test was to see if we can deploy the app to the mobile phone by running cordova	Passed	NA
26.	Test to see if the physical view of the game appear before animation was added to it	Passed but margin had to be changed to full fit onto the mobile	NA
27.	Test to see if click function works on then the mobile	Passed as no code was changed	NA
28.	Test if computer player works on computer	Passed	NA
29.	Test if all types of winning and draw worked on the phone	Passed	NA
30.	Test to see if recognise it as a mobile, not desktop this should cause it bring a black screen	Passed	NA
31.	Test to see if shake cause the game to start	Passed	NA
32.	Test to see if fade in works after shake has been recognized	Passed	NA
33.	Test click and falling sounds work	Passed	NA

3 Manual testing carried out after

The following test was carried out after the development to check styling and functionality of the development. In the manual testing their some test which was repeated more than one time which were the different ways to win, however because of the way the code has been written there is no chance that a win will not be picked up because it is not comparing it to patterns.

Test case 1	
Test case: Title	Background colour
Description	Test the correct background colour appears
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	Black background should appear
Result of test	A black background appeared

Test case 2	
Test case: Title	Border colour
Description	Test the correct border colour appears
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	Pink border around the app
Result of test	A pink border appeared

Test case 3	
Test case: Title	Shake to start game
Description	Test to see if shake start to the game
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	Shake phone or device and a white grid should appear
Result of test	White grid appeared

Test case 4	
Test case: Title	Test shake produce a sound animation
Description	Shake starts the game and has a sound animation to help people to recognise this
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	Shake phone or device and a sound effect should occur
Result of test	sound effect was played

Test case 5	
Test case: Title	Click sound test
Description	When clicking any where in the grid a click sound should occur
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	shake phone
4.	Click on a square and sound should occur
Result of test	sound was played

Test case 6	
Test case: Title	White counter appears first when clicking on the grid
Description	test to make sure player one is represented as a white counter
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	shake phone
4.	Click on a square and a white counter should appear
Result of test	white counter appeared

Test case 7	
Test case: Title	Green counter appears second
Description	test to make sure computer player represented by green counter
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	shake phone
4.	Click on a square and a white counter should appear
5.	Straight after the white counter appears and green one should follow
Result of test	Green counter appeared

Test case 8- was repeated for each vertical win	
Test case: Title	Vertical win
Description	Check to see if the game picks up a vertical win for the user
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	shake phone
4.	Add four white counters in to one column next to each other
5.	well done you win should appear
Result of test	Win statement appeared

Test case 9- This test was repeated for each vertical win	
Test case: Title	Vertical win 2
Description	Check to see if the game picks up a vertical win for the computer
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	shake phone
4.	Allow the computer to add four green counters in to one column next to each other
5.	computer player won should appear
Result of test	Win statement appeared

Test case 10- This test was repeated for each horizontal win	
Test case: Title	Horizontal win
Description	Check to see if the game picks up a Horizontal win for the user
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	shake phone
4.	Add four white counters in to one row next to each other
5.	well done you win should appear
Result of test	Win statement appeared

Test case 11- This test was repeated for each horizontal win	
Test case: Title	Horizontal win 2
Description	Check to see if the game picks up a horizontal win for the computer
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	shake phone
4.	Allow the computer to add four green counters in to one row next to each other
5.	computer player won should appear
Result of test	Win statement appeared

Test case 12- This test was repeated for each diagonal win	
Test case: Title	Diagonal win
Description	Check to see if the game picks up a diagonal win for the user
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	shake phone
4.	Add four white counters in a diagonal
5.	well done you win should appear
Result of test	Win statement appeared

Test case 13- This test was repeated for each diagonal win	
Test case: Title	Diagonal win 2
Description	Check to see if the game picks up a diagonal win for the computer
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	shake phone
4.	Allow the computer to add four green counters in a diagonal
5.	computer player won should appear
Result of test	Win statement appeared

Test case 14	
Test case: Title	Draw
Description	Test to see if the app can recognise a draw
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	shake phone
4.	Add the counters to the game in a way that it will produce a draw
5.	A draw statement should appear
Result of test	Draw statement appeared

Test case 15	
Test case: Title	Shake to destroy
Description	Test to see if shake removes all the counter during a game
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	shake phone
4.	Add the counters to the game in a way that it will produce a draw
5.	Shake phone and a new grid should appear
Result of test	New grid appeared

Test case 16- This test was repeated for each column	
Test case: Title	Test number of counter in one column
Description	Test to see if only 6 counter can be placed in one column
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	shake phone
4.	Fill one column full of counters
5.	Try to add another counter to a full column one should not appear
Result of test	Counter did not appear

Test case 17- This test was repeated for each row	
Test case: Title	Test number of counter in one row
Description	Test to see if only 7 counter can be placed in one row
Precondition	App must be displayed on a mobile phone
Assumption	Android phone in operation
Test Steps:	**Expected Results:**
1.	Deploy app to the mobile phone
2.	Open app on the mobile
3.	shake phone
4.	Fill one column full of counters
5.	Try to add another counter to a full row one should not appear
Result of test	Counter did not appear