

Calico Jack Terminal Game Testing Schedule

Test Execution Report							
Test Case	Description	Step #	Step Description	Expected Result	Actual Result	Pass/Fail	Comments
TC001	Validate Python code using PEP8 Online checker						
		1	Open run.py in GitHub at <a href="https://github.com/MattBCoding/calico-jack">https://github.com/MattBCoding/calico-jack</a>	The run.py file displays all the python code			Whilst warnings were returned for multiple files, on investigation it appears that the warning is incorrect as in the pep8 guidelines it specifically states to have the line break before the binary operator with screenshots on how it should look.
		2	Highlight all the code and press 'Ctrl' + 'C' to copy	the code is copied to the clipboard			
		3	Navigate to the PEP8 online checker at <a href="http://pep8online.com/">http://pep8online.com/</a>	the validator			
		4	Paste the code into the validator box				
		5	Click on the check code button to submit the code	validator check returns no errors	validator check returns no errors or warnings	PASS	
		6	repeat steps for each python file in the battleships directory	validator check returns no errors	validator returned warnings for line breaks before binary operators	PASS	
TC002	Test Start Menu functionality						
		1	Navigate to <a href="https://calico-jack.herokuapp.com/">https://calico-jack.herokuapp.com/</a>	Game should start automatically The pirate flag should show in the terminal along with the welcome message	game loads automatically	PASS	
		2	click inside the terminal				
		3	press 'I' and then 'enter'	game should load the instructions screen	game loads the instructions screen	PASS	
		4	reload the game	the game should reload	game reloads	PASS	
		5	click inside the terminal				
		6	press 'Q' and then enter	game should say goodbye then quit the application. It should provide a message informing the user how to restart the game	game says goodbye and closes, it displays the message on how to restart	PASS	
		7	reload the game by clicking on the run program button	the game should reload	game reloads		
		8	click inside the terminal				
		9	press 'y' and then 'enter'	game should start loading process Next step message should appear asking the user 'How brave are ye? Shall we play a full game or a little one? Select a board size, enter '6' for a little one or '10' for normal:	game changes screen	PASS	
		10	Incorrect Entry Validation Repeat steps 1 + 2 input any value other than 'I' 'Y' or 'Q' press 'enter'	Game should provide an error message. Argh! You woke me up for nothin... I should make ye walk the plank... Wait, shall we try that again? and repeat the input message	correct message displays	PASS	
					game provides an error message correct message displays input message repeats	PASS PASS PASS	
TC003	Test functionality from Instructions Screen						
		1	Navigate to <a href="https://calico-jack.herokuapp.com/">https://calico-jack.herokuapp.com/</a>	Game should start automatically The pirate flag should show in the terminal along with the welcome message	game starts automatically pirate flag shows correctly	PASS PASS	
		2	click inside the terminal				
		3	press 'I' and then 'enter'				
			press 'Q' and then enter	game should load the instructions screen	instructions screen loads	PASS	
		4		game should say goodbye then quit the application. It should provide a message informing the user how to restart the game	game quits and displays correct message	PASS	
		5	reload the game by clicking on the run program button	the game should reload	game reloads		
		6	click inside the terminal				
		7	press 'I' and then 'enter'				
		8	press 'y' and then 'enter'	game should load the instructions screen game should start loading process Next step message should appear asking the user 'How brave are ye? Shall we play a full game or a little one? Select a board size, enter '6' for a little one or '10' for normal:	game loads the instructions screen game changes screen and displays correct	PASS	
		9	Incorrect Entry Validation Repeat steps 5 + 6 + 7 input any value other than 'I' 'Y' or 'Q' press 'enter'	Game should provide an error message. Argh! You woke me up for nothin... I should make ye walk the plank... Wait, shall we try that again?	correct error message displays	PASS	

				and repeat the input message				
TC004	Test Board size selection functionality							
		1	Navigate to https://calico-jack.herokuapp.com/	Game should start automatically The pirate flag should show in the terminal along with the welcome message	game loads automatically	PASS		
		2	click inside the terminal					
		3	press 'y' and then 'enter'	game should start loading process Next step message should appear asking the user 'How brave are ye? Shall we play a full game or a little one? Select a board size, enter '6' for a little one or '10' for normal:	game changes screen correctly	PASS		
		4	press '6' and then 'enter'	A message should appear related to the size of the board. 'A little one, suppose you want it easy as well?'	correct message displays	PASS		
				game should ask you to select difficulty level with options of either easy normal or hard	correct message displays	PASS		
		5	press 'e' for easy and then 'enter'	game should set difficulty level to easy and then print a playing board for the user confirm playing board is 6 tiles x 6 tiles board should be labelled 0 - 5 along the top, and A - F down the side	correct board displays	PASS		
		6	repeat steps for 'n' difficulty	confirm playing board appears correctly	no change in results	PASS		
		7	repeat steps for 'h' difficulty	confirm playing board appears correctly	no change in results	PASS		
		8	reload the game by clicking on the run program button	the game should reload	game reloads	PASS		
		9	click inside the terminal					
		10	press 'y' and then 'enter'	game should start loading process Next step message should appear asking the user 'How brave are ye? Shall we play a full game or a little one? Select a board size, enter '6' for a little one or '10' for normal:	correct message displays	PASS		
		11	press '10' and then 'enter'	A message should appear related to the size of the board. 'Hmm a full one, ye be a brave pirate tryin to impress me? If you really want to impress me, you should try it on hard.	correct message displays	PASS		
				game should ask you to select difficulty level with options of either easy normal or hard	correct message displays	PASS		
		12	press 'e' for easy and then 'enter'	game should set difficulty level to easy and then print a playing board for the user confirm playing board is 10 tiles x 10 tiles board should be labelled 0 - 9 along the top, and A - J down the side	correct board displays	PASS		
		13	repeat steps for 'n' difficulty	confirm playing board appears correctly	no change in results	PASS		
		14	repeat steps for 'h' difficulty	confirm playing board appears correctly	no change in results	PASS		
TC005	Test Board size selection - input validation							
		1	Navigate to https://calico-jack.herokuapp.com/	Game should start automatically The pirate flag should show in the terminal along with the welcome message	game correctly loads	PASS		
		2	click inside the terminal					
		3	press 'y' and then 'enter'	game should start loading process				
		4	input any value other than '6' or '10'	Next step message should appear asking the user 'How brave are ye? Shall we play a full game or a little one? Select a board size, enter '6' for a little one or '10' for normal: Game should display error message Don't be getting all artistic with the choices like some scurvy landlover. It's either '6' or '10' that be it. Just the number! Try again!	correct message shows the correct error message shows	PASS PASS		
		5	input correct value of '6'	Game should repeat the input message A message should appear related to the size of the board. 'A little one, suppose you want it easy as well?'	game shows input message again game shows the correct message	PASS PASS		
			press 'e' for easy and then 'enter'	game should ask you to select difficulty level with options of either easy normal or hard game should set difficulty level to easy and then print a playing board for the user confirm playing board is 6 tiles x 6 tiles board should be labelled 0 - 5 along the top, and A - F down the side	correct message shows  correct board shows	PASS  PASS		
		6	repeat steps 1 - 4					
		7	press '10' and then 'enter'	A message should appear related to the size of the board. 'Hmm a full one, ye be a brave pirate tryin to impress me? If you really want to impress me, you should try it on hard.	the correct message shows	PASS		
				game should ask you to select difficulty level with options of either easy normal or hard	correct input message shows	PASS		
		8	press 'e' for easy and then 'enter'	game should set difficulty level to easy and then print a playing board for the user confirm playing board is 10 tiles x 10 tiles board should be labelled 0 - 9 along the top, and A - J down the side	correct board shows	PASS		
TC006	Test ship creation and placement for 6x6 board							
		1	Navigate to https://calico-jack.herokuapp.com/	Game should start automatically The pirate flag should show in the terminal along with the welcome message	correct message shows	PASS		
		2	click inside the terminal					
		3	press 'y' and then 'enter'	game should start loading process				

		4	input correct value of '6'	Next step message should appear asking the user 'How brave are ye? Shall we play a full game or a little one? Select a board size, enter '6' for a little one or '10' for normal: A message should appear related to the size of the board. 'A little one, suppose you want it easy as well?'	correct message shows correct message shows correct message shows	PASS PASS PASS	
		5	press 'e' for easy and then 'enter'	game should ask you to select difficulty level with options of either easy normal or hard game should set difficulty level to easy and then print a playing board for the user confirm playing board is 6 tiles x 6 tiles game should display the message 'Now we need to position our ships ready for battle! Are ye ready? Press 'Enter' to start!'			
		6	press 'enter' to start ship placement	game should display a message informing the user which ship needs to be placed and how long the ship is. The first ship needed to be placed for a 6x6 board should be a Lugger which is 3 tiles long	correct message shows	PASS	
		7	Confirm correct ship placement message is displayed	Message should read 'Please select the starting location for your Lugger, it is 3 tiles long, in the format of row then column e.g. 'E4':	correct message shows	PASS	
		8	input 'F0' as the coordinate and press 'enter'	The board should refresh and appear with the ship placed in F0, F1 and F2 tile locations indicated by S. The message to place the next ship should appear. It should be a Schooner 3 tiles long	correct message shows ship displays in correct location correct message shows	PASS PASS PASS	
		9	input 'E0' as the coordinate and press 'enter'	The board should refresh and appear with the ship placed in E0, E1 and E2 tile locations indicated by S. The message to place the next ship should appear. It should be a Brigantine 2 tiles long	ship displays in correct location correct message shows	PASS PASS	
		10	input 'D0' as the coordinate and press 'enter'	The board should refresh with the ship placed in D0 and D1 tile locations indicated by S A message should appear to warn the user that the enemy has arrived! After three seconds the screen should refresh with the player board now on the right hand side and a new blank board appearing on the left hand side The game should display a message to the user asking them 'What are your orders? Where do you want to target? Select the location in the format of row then column e.g. 'E4':	ship displays in correct location correct message shows new screen displays correctly correct message shows	PASS PASS PASS PASS	
TC006b Test ship creation and placement for 6x6 board							
		11	repeat steps 1-7				
		12	input 'A0' as the coordinate and press 'enter'	As the ship can be placed from this location either horizontally or vertically, it should display a message asking the user which orientation they want. The message should read 'Would you like to place this ship horizontally, left to right, or vertically, downwards from starting location? Enter 'h' for horizontally, 'v' for vertically:	correct message shows ship displays in correct location correct message shows	PASS PASS PASS	
		13	input 'V' for vertically and press 'enter'	The board should refresh with the ship displayed in a vertical orientation from 'A0' The game should ask the user to position the second ship and provide the name and length of the ship			
		14	input 'D5' as the coordinate and press 'enter'	As the ship will not fit horizontally from this location, it should position the ship vertically automatically  The board should refresh with the ship displayed in a vertical orientation from 'D5' The game should ask the user to position the third ship and provide the name and length of the ship	game automatically determines orientation ship displays in correct location correct message shows	PASS PASS PASS	
		15	input 'F4' as the coordinate and press 'enter'	As the ship can not be placed vertically from this position, and horizontally it would collide with another ship an error message should be displayed informing the user that the ship can not be placed in this location The game board should refresh An error message should display 'Can not place ship, only option from this location is horizontal which would hit another ship. Try a different location	correct message shows	PASS	
		16	input 'C5' as the coordinate and press 'enter'	The game should repeat the input location message for the same ship As the ship can not be place horizontally from this location, and vertically it would collide with another ship an error message should be displayed informing the user that the ship can not be placed in this location The game board should refresh An error message should display 'Can not place ship, only option from this location is vertical which would hit another ship. Try a different location.	correct message shows input message is repeated	PASS PASS	
		17	input 'C2' as the coordinate and press 'enter'	The game should repeat the input location message for the same ship As the ship can be placed from this location either horizontally or vertically, it should display a message asking the user which orientation they want. The message should read 'Would you like to place this ship horizontally, left to right, or vertically, downwards from starting location? Enter 'h' for horizontally, 'v' for vertically:	correct message shows correct message shows	PASS PASS	
		18	input 'H' for horizontally and press 'enter'	The board should refresh with the ship displayed in a horizontal orientation from C2 The warning message about the enemy arriving should display	correct message shows ship displays in correct location	PASS	
TC006c Test ship creation and placement for 6x6 board							
		19	Repeat steps 1-7				
		20	input 'A0' as the coordinate and press 'enter'	As the ship can be placed from this location either horizontally or vertically, it should display a message asking the user which orientation they want. The message should read 'Would you like to place this ship horizontally, left to right, or vertically, downwards from starting location? Enter 'h' for horizontally, 'v' for vertically:	correct message shows	PASS	
		21	press 'enter'	As the user did not enter a correct orientation the game should display an error message informing the user that their input was incorrect.			

		22	input a coordinate that does not follow the correct format	<p>It can only be 'H' for horizontally or 'V' for vertically There are no other options, try again!</p> <p>The game should then repeat the input message for the first ship</p> <p>The game should refresh the screen and repeat the error message regarding the format the input needs to be.</p>	<p>correct error message shows</p> <p>correct message shows</p>	<p>PASS</p> <p>PASS</p>	
		23	input 'A0' as the coordinate and press 'enter'	<p>The starting location needs to be entered in the format of row then column, e.g. 'F4' or 'A2' a letter followed by a number, no spaces, dashes, dots or bottles of rum before after or in the middle. Try again!</p> <p>As the ship can be placed from this location either horizontally or vertically, it should display a message asking the user which orientation they want.</p> <p>The message should read 'Would you like to place this ship horizontally, left to right, or vertically, downwards from starting location? Enter 'h' for horizontally, 'v' for vertically:</p>	<p>correct error message shows</p>	<p>PASS</p>	
		24	input 'b' instead of 'h' or 'v' and press 'enter'	<p>As the user input an incorrect value, the game should inform the user that the input can only be 'H' for horizontal or 'V' for vertical, there are no other options and ask them to try again.</p>	<p>correct message shows</p> <p>correct error message shows</p>	<p>PASS</p> <p>PASS</p>	
		25	input 'A0' as the coordinate and press 'enter'	<p>The game should then repeat the input message for the first ship</p> <p>As the ship can be placed from this location either horizontally or vertically, it should display a message asking the user which orientation they want.</p> <p>The message should read 'Would you like to place this ship horizontally, left to right, or vertically, downwards from starting location? Enter 'h' for horizontally, 'v' for vertically:</p>		<p>PASS</p>	
		26	input 'h' for horizontal and press 'enter'	<p>The game should reprint the board displaying the ship at the correct location and ask the user to input the location for the next ship.</p> <p>Confirm the ship is the correct ship, it should be a Schooner with length 3</p>	<p>correct message shows</p> <p>ship displays in correct location, correct next ship message is displayed</p>	<p>PASS</p>	
		27	input 'A0' as the coordinate and press 'enter'	<p>As the ship will not fit at this location due to another ship being in the way, the user should receive an error message informing them that it will not fit and asking them to try again</p> <p>The game should repeat the input message asking the user to select a location for the second ship.</p> <p>confirm the ship has the correct name</p> <p>confirm the ship has the correct length</p>	<p>correct error message shows</p> <p>correct input message shows</p> <p>correct ship is included</p> <p>correct length is included</p>	<p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p>	
		28	input 'b0' as the coordinate and press 'enter'	<p>As the ship can be placed either horizontally or vertically from this location, the game should ask the user for their choice.</p>	<p>correct orientation message displays</p>	<p>PASS</p>	
		29	input 'h' for horizontal and press 'enter'	<p>The game should reprint the board displaying the ship at the correct location and ask the user to input the location for the next ship.</p> <p>Confirm the ship is the correct ship, it should be a Brigantine with a length of 2 tiles</p>	<p>correct message shows</p>	<p>PASS</p>	
		30	input 'c0' as the coordinate and press 'enter'	<p>As the ship can be placed either horizontally or vertically from this location, the game should ask the user for their choice.</p>	<p>correct orientation message displays</p>	<p>PASS</p>	
		31	input 'h' for horizontal and press 'enter'	<p>The board should refresh with the ship displayed in a horizontal orientation from C0 The warning message about the enemy arriving should display</p> <p>Then the screen should refresh with both the targetting radar and the player board appearing along with instructions to the user to tell them to choose a target location.</p>	<p>correct message shows</p>	<p>PASS</p>	
		32	repeat steps but with 'n' normal difficulty selected	<p>There should be no difference in response</p>	<p>correct boards show</p> <p>no difference in results</p>	<p>PASS</p> <p>PASS</p>	
		33	repeat steps but with 'h' hard difficulty selected	<p>There should be no difference in response</p>	<p>no difference in results</p>	<p>PASS</p>	
TC007	Test ship creation and placement for 10x10 board						
		1	Navigate to <a href="https://calico-jack.herokuapp.com/">https://calico-jack.herokuapp.com/</a>	<p>Game should start automatically</p> <p>The pirate flag should show in the terminal along with the welcome message</p>	<p>correct message shows</p>	<p>PASS</p>	
		2	click inside the terminal				
		3	press 'y' and then 'enter'	<p>game should start loading process</p> <p>Next step message should appear asking the user 'How brave are ye? Shall we play a full game or a little one? Select a board size, enter '6' for a little one or '10' for normal:</p>	<p>screen changes correctly</p> <p>correct message shows</p>	<p>PASS</p> <p>PASS</p>	
		4	input correct value of '10'	<p>A message should appear related to the size of the board. 'Hmm a full one, ye be a brave pirate tryin to impress me? If you really want to impress me, you should try it on hard. Select your difficulty, enter 'E' for easy, 'N' for normal or 'H' for hard: '</p>			
		5	press 'e' for easy and then 'enter'	<p>game should ask you to select difficulty level with options of either easy normal or hard</p> <p>game should set difficulty level to easy and then print a playing board for the user</p> <p>confirm playing board is 10 tiles x 10 tiles</p> <p>board should be labelled 0 - 9 along the top, and A - J down the side</p> <p>game should display the message 'Now we need to position our ships ready for battle! Are ye ready? Press 'Enter' to start!</p>	<p>correct message shows</p> <p>correct message shows</p> <p>correct board displays</p>	<p>PASS</p> <p>PASS</p> <p>PASS</p>	
		6	press 'enter' to start ship placement	<p>game should display a message informing the user which ship needs to be placed and how long the ship is.</p> <p>The first ship needed to be placed for a 10x10 board should be a Pinnace which is 5 tiles long</p>	<p>correct message shows</p>	<p>PASS</p>	
		7	Confirm correct ship placement message is displayed	<p>Message should read 'Please select the starting location for your Pinnace, it is 5 tiles long, in the format of row then column e.g. 'E4':</p>	<p>correct message shows</p>	<p>PASS</p>	
		8	input 'J0' as the coordinate and press 'enter'	<p>The board should refresh and appear with the ship placed in J0, J1, J2, J3 and J4 tile locations indicated by S.</p> <p>The message to place the next ship should appear. It should be a Sloop 4 tiles long</p>	<p>correct message shows</p> <p>ship displays correctly</p> <p>correct ship message shows</p>	<p>PASS</p> <p>PASS</p> <p>PASS</p>	
		9	input 'I0' as the coordinate and press 'enter'	<p>The board should refresh and appear with the ship placed in I0, I1, I2 and I3 tile locations indicated by S.</p> <p>The message to place the next ship should appear. It should be a Lugger 3 tiles long</p>	<p>ship displays correctly</p> <p>correct ship message shows</p>	<p>PASS</p> <p>PASS</p>	

		10	input 'H0' as the coordinate and press 'enter'	The board should refresh with the ship placed in H0, H1 and H2 tile locations indicated by S The message to place the next ship should appear. It should be a Schooner 3 tiles long	ship displays correctly correct ship message shows	PASS PASS
		11	input 'G0' as the coordinate and press 'enter'	The board should refresh with the ship placed in G0, G1 and G2 tile locations indicated by S The message to place the next ship should appear. It should be a Brigantine 2 tiles long	ship displays correctly correct ship message shows	PASS PASS
		12	input 'F0' as the coordinate and press 'enter'	The board should refresh with the ship placed in the F0 and F1 tile locations. The message to place the next ship should appear. It should also be a Brigantine 2 tiles long	ship displays correctly correct message shows	PASS PASS
		13	input 'E0' as the coordinate and press 'enter'	The board should refresh with the ship placed in the E0 and E1 tile locations. A message should appear to warn the user that the enemy has arrived! After three seconds the screen should refresh with the player board now on the right hand side and a new blank board appearing on the left hand side The game should display a message to the user asking them 'What are your orders? Where do you want to target? Select the location in the format of row then column e.g. 'E4':	correct message shows correct message shows	PASS PASS
TC007b	Test ship creation and placement for 10x10 board					
		14	Repeat steps 1 -7	Game should start automatically		PASS
		15	input 'A0' as the coordinate and press 'enter'	As the ship can be placed from this location either horizontally or vertically, it should display a message asking the user which orientation they want. The message should read 'Would you like to place this ship horizontally, left to right, or vertically, downwards from starting location? Enter 'h' for horizontally, 'v' for vertically:	correct message shows ship displays correctly	PASS PASS
		16	input 'V' for vertically and press 'enter'	The board should refresh with the ship displayed in a vertical orientation from 'A0' The game should ask the user to position the second ship and provide the name and length of the ship	correct message shows ship positions automatically	PASS PASS
		17	input 'D9' as the coordinate and press 'enter'	As the ship will not fit horizontally from this location, it should position the ship vertically automatically The board should refresh with the ship displayed in a vertical orientation from 'D9' The game should ask the user to position the third ship and provide the name and length of the ship	ship displays correctly correct message shows	PASS PASS
		18	input 'G7' as the coordinate and press 'enter'	As the ship will not fit horizontally from this location, it should position the ship vertically automatically The board should refresh with the ship displayed in a vertical orientation from 'G7' The game should ask the user to position the fourth ship and provide the name and length of the ship	ship positions automatically ship displays correctly correct message shows	PASS PASS PASS
		19	input 'I5' as the coordinate and press 'enter'	As the ship can not be placed vertically from this position, and horizontally it would collide with another ship an error message should be displayed informing the user that the ship can not be placed in this location The game board should refresh An error message should display 'Can not place ship, only option from this location is horizontal which would hit another ship. Try a different location	correct message shows board refreshes	PASS PASS
		20	input 'B9' as the coordinate and press 'enter'	The game should repeat the input location message for the same ship As the ship can not be place horizontally from this location, and vertically it would collide with another ship an error message should be displayed informing the user that the ship can not be placed in this location The game board should refresh An error message should display 'Can not place ship, only option from this location is vertical which would hit another ship. Try a different location.	correct message shows correct message shows board refreshes	PASS PASS PASS
		21	input 'C2' as the coordinate and press 'enter'	The game should repeat the input location message for the same ship As the ship can be placed from this location either horizontally or vertically, it should display a message asking the user which orientation they want. The message should read 'Would you like to place this ship horizontally, left to right, or vertically, downwards from starting location? Enter 'h' for horizontally, 'v' for vertically:	correct message shows ship displays correctly	PASS PASS
		22	input 'H' for horizontally and press 'enter'	The board should refresh with the ship displayed in a horizontal orientation from C2 The game should ask the user to position the fifth ship and provide the name and length of the ship It should be a Brigantine with length 2 tiles	correct message shows game places ship automatically	PASS PASS
		23	input 'J0' as the coordinate and press 'enter'	As the ship can only be placed horizontally from this location, the game should place the ship. The game board should refresh The new game board should display the ship starting in the location 'J0'	board refreshes ship displays correctly correct message shows	PASS PASS PASS
		24	input 'J0' as the coordinate and press 'enter'	The game should ask the user to position the sixth ship, it should also be a Brigatine with a length of 2 tiles. As there is already a ship at this location, the new ship can not be placed. The game should return an error message informing the user that the only option from this location is horizontal which would collide with another ship. The game board should refresh The game should repeat the input location message for the same ship	correct message shows board refreshes correct message shows	PASS PASS PASS
		25	input 'J2' as the coordinate and press 'enter'	As the ship can only be placed horizontally from this location, the game should place the ship. The game board should refresh The new game board should display the ship starting in the location 'J2' The warning message about the enemy arriving should display for three seconds Then the screen should refresh with both the targetting radar and the player board appearing along with instructions to the user to tell them to choose a target location.	game places ship automatically board refreshes ship displays correctly correct message shows screen refreshes correctly with new boards displayed	PASS PASS PASS PASS PASS
		26	repeat steps above with all inputs in lowercase	there should be no difference in the resulting action	no difference in results	PASS

		27	repeat steps above for difficulty of 'N'	there should be no difference in the resulting action	no difference in results	PASS
		28	repeat steps above for difficulty of 'H'	there should be no difference in the resulting action	no difference in results	PASS
TC008	Test shot recognition/ turn loop/ AI shot - easy difficulty 10x10 board					
		1	Navigate to https://calico-jack.herokuapp.com/	Game should start automatically The pirate flag should show in the terminal along with the welcome message	game displays correctly	PASS
		2	click inside the terminal			
		3	press 'y' and then 'enter'	game should start loading process Next step message should appear asking the user 'How brave are ye? Shall we play a full game or a little one? Select a board size, enter '6' for a little one or '10' for normal:	correct message shows	PASS
		4	input correct value of '10'	A message should appear related to the size of the board. 'Hmm a full one, ye be a brave pirate tryin to impress me? If you really want to impress me, you should try it on hard. Select your difficulty, enter 'E' for easy, 'N' for normal or 'H' for hard: '	correct message shows correct message shows	PASS PASS
		5	press 'e' for easy and then 'enter'	game should ask you to select difficulty level with options of either easy normal or hard game should set difficulty level to easy and then print a playing board for the user confirm playing board is 10 tiles x 10 tiles board should be labelled 0 - 9 along the top, and A - J down the side game should display the message 'Now we need to position our ships ready for battle! Are ye ready? Press 'Enter' to start!	board displays correctly	PASS
		6	press 'enter' to start ship placement	game should display a message informing the user which ship needs to be placed and how long the ship is. The first ship needed to be placed for a 10x10 board should be a Pinnacle which is 5 tiles long	correct message shows correct message shows correct message shows	PASS PASS PASS
		7	place all the ships on the board in valid locations and orientations	Once completed the game should display a message informing the user that the enemy has arrived and then display the game boards and instructions The game will ask the user 'What are your orders? Where do you want to target? Select the location in the format of row then column e.g. 'E4':	correct message shows	PASS
		8	enter 'A11' as the target location	A11 is not a valid location, therefore the game should respond with an error message informing the user 'We've been through this already, it needs to be in the format of 'E4' Letter then Number, this is not a time to act the fool, try again! The game should repeat the target location message asking for the input	correct message shows correct message shows	PASS PASS
		9	enter 'A0' as the target location	the game should respond with a message detailing the result of the shot. Either ' Nothing but water! What a waste of some perfectly good iron. Your turn is over! You missed!' or a Hit message ' Direct Hit, the sound of breaking wood and screams is unmistakable!	correct message shows boards refresh showing results of shots boards show AI shot correct message shows correct symbol shown	PASS PASS PASS PASS
		10	enter 'A0' as the target location	The game should refresh the boards with showing the result of the shot taken by the user on the targetting radar The game should also show the result of the AI shot on the players board The game should display below the boards a message detailing the result of the AI shot If the AI misses it should display a yellow M If the AI hits it should display a red # The game should display the message asking the user to input a target location for the next shot As you have already targetted this location the game should provide an error message to the user The game should reprint the game boards The game should inform the user 'You have already fired there, are you trying to waste our Cannonballs? You better get your head in the game pirate, lets try this again!'	correct message shows boards refresh correctly	PASS PASS
		11	enter a different valid location	The game should then repeat the message asking the user to input their target coords the game should respond with a message detailing the result of the shot. Either ' Nothing but water! What a waste of some perfectly good iron. Your turn is over! You missed!' or a Hit message ' Direct Hit, the sound of breaking wood and screams is unmistakable!	correct message shows correct message shows	PASS PASS
		12	keep entering valid location until you obtain a hit	The game should refresh the boards with showing the result of the shot taken by the user on the targetting radar The game should also show the result of the AI shot on the players board The game should display below the boards a message detailing the result of the AI shot The game should display the message asking the user to input a target location for the next shot If the AI misses it should display a yellow M If the AI hits it should display a red # The game should display the message asking the user to input a target location for the next shot the game should respond with a message detailing the result of the shot. Either ' Nothing but water! What a waste of some perfectly good iron. Your turn is over! You missed!' or a Hit message ' Direct Hit, the sound of breaking wood and screams is unmistakable!	correct message shows boards refresh showing results of shots correct message shows correct message shows correct message shows correct symbol shown	PASS PASS PASS PASS PASS
				The game should refresh the boards with showing the result of the shot taken by the user on the targetting radar  The game should also show the result of the AI shot on the players board The game should display below the boards a message detailing the result of the AI shot The game should display the message asking the user to input a target location for the next shot If the AI misses it should display a yellow M	correct message shows boards refresh correctly showing results of shots boards show AI shot correct message shows correct message shows correct symbol shown	PASS PASS PASS PASS PASS

				<p>If the AI hits it should display a red #</p> <p>The game should display the message asking the user to input a target location for the next shot</p> <p>confirm AI is randomly selecting locations - by process of elimination. If AI is selecting locations based on a pattern, or based on previous hits it would select locations around previous hits.</p> <p>Repeatedly play the game to ensure that the AI will fire at each row and each column. Ensuring that it will select the corners, and edge tile locations</p> <p>confirm that when you or the AI hit every tile location for a ship, it displays the message that the ship has been sunk!</p> <p>confirm that for each turn loop the AI selects a new location by counting the number of shots displayed on the player board. Each turn should increase the number by one</p> <p>Once either all the AI ships have been destroyed or all the Player ships have been destroyed, the game should present the end game screen.</p>	<p>correct symbol shown</p> <p>correct message shows</p> <p>correct targetting method evident</p> <p>AI will target each cell</p> <p>correct message shows</p> <p>AI does not select previous cells</p> <p>win/lose condition triggered correctly</p>	<p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p>	<p>took too long to test. Investigate quicker methods to confirm</p>
TC009	Test shot recognition/ turn loop/ AI shot - normal difficulty 10x10 board						
		1	Navigate to <a href="https://calico-jack.herokuapp.com/">https://calico-jack.herokuapp.com/</a>	<p>Game should start automatically</p> <p>The pirate flag should show in the terminal along with the welcome message</p>	correct message shows	PASS	
		2	click inside the terminal				
		3	press 'y' and then 'enter'	<p>game should start loading process</p> <p>Next step message should appear asking the user 'How brave are ye? Shall we play a full game or a little one? Select a board size, enter '6' for a little one or '10' for normal:</p>	correct message shows	PASS	
		4	input correct value of '10'	<p>A message should appear related to the size of the board. 'Hmm a full one, ye be a brave pirate tryin to impress me? If you really want to impress me, you should try it on hard. Select your difficulty, enter 'E' for easy, 'N' for normal or 'H' for hard: '</p>	correct message shows	PASS	
		5	press 'n' for normal and then 'enter'	<p>game should ask you to select difficulty level with options of either easy normal or hard</p> <p>game should set difficulty level to normal and then print a playing board for the user</p> <p>confirm playing board is 10 tiles x 10 tiles</p> <p>board should be labelled 0 - 9 along the top, and A - J down the side</p> <p>game should display the message 'Now we need to position our ships ready for battle! Are ye ready? Press 'Enter' to start!</p>	<p>correct message shows</p> <p>correct message shows</p> <p>board displays correctly</p>	<p>PASS</p> <p>PASS</p> <p>PASS</p>	
		6	press 'enter' to start ship placement	<p>game should display a message informing the user which ship needs to be placed and how long the ship is.</p> <p>The first ship needed to be placed for a 10x10 board should be a Pinnacle which is 5 tiles long</p>	correct message shows	PASS	
		7	place all the ships on the board in valid locations and orientations	<p>Once completed the game should display a message informing the user that the enemy has arrived and then display the game boards and instructions</p> <p>The game will ask the user 'What are your orders? Where do you want to target? Select the location in the format of row then column e.g. 'E4':</p>	correct message shows	PASS	
		8	enter 'A11' as the target location	<p>A11 is not a valid location, therefore the game should respond with an error message informing the user 'We've been through this already, it needs to be in the format of 'E4' Letter then Number, this is not a time to act the fool, try again!</p> <p>The game should repeat the target location message asking for the input</p>	correct message shows	PASS	
		9	enter 'A0' as the target location	<p>the game should respond with a message detailing the result of the shot. Either ' Nothing but water! What a waste of some perfectly good iron. Your turn is over! You missed!' or a Hit message ' Direct Hit, the sound of breaking wood and screams is unmistakable!'</p>			
		10	enter 'A0' as the target location	<p>The game should refresh the boards with showing the result of the shot taken by the user on the targetting radar</p> <p>The game should also show the result of the AI shot on the players board</p> <p>The game should display below the boards a message detailing the result of the AI shot</p> <p>If the AI misses it should display a yellow M</p> <p>If the AI hits it should display a red #</p> <p>The game should display the message asking the user to input a target location for the next shot</p> <p>As you have already targetted this location the game should provide an error message to the user</p> <p>The game should reprint the game boards</p> <p>The game should inform the user 'You have already fired there, are you trying to waste our Cannonballs? You better get your head in the game pirate, lets try this again!'</p>	<p>boards refresh correctly</p> <p>correct symbol shown</p>	<p>PASS</p> <p>PASS</p>	
		11	enter a different valid location	<p>The game should then repeat the message asking the user to input their target coords</p> <p>the game should respond with a message detailing the result of the shot. Either ' Nothing but water! What a waste of some perfectly good iron. Your turn is over! You missed!' or a Hit message ' Direct Hit, the sound of breaking wood and screams is unmistakable!'</p> <p>The game should refresh the boards with showing the result of the shot taken by the user on the targetting radar</p> <p>The game should also show the result of the AI shot on the players board</p> <p>The game should display below the boards a message detailing the result of the AI shot</p> <p>The game should display the message asking the user to input a target location for the next shot</p> <p>If the AI misses it should display a yellow M</p> <p>If the AI hits it should display a red #</p>	<p>correct message shows</p> <p>correct message shows</p> <p>boards refresh correctly</p> <p>correct message shows</p> <p>correct message shows</p> <p>correct message shows</p> <p>correct message shows</p> <p>correct message shows</p>	<p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p>	

		12	keep entering valid location until you obtain a hit	<p>The game should display the message asking the user to input a target location for the next shot the game should respond with a message detailing the result of the shot. Either ' Nothing but water! What a waste of some perfectly good iron. Your turn is over! You missed!' or a Hit message ' Direct Hit, the sound of breaking wood and screams is unmistakable!'</p> <p>The game should refresh the boards with showing the result of the shot taken by the user on the targetting radar The game should also show the result of the AI shot on the players board The game should display below the boards a message detailing the result of the AI shot The game should display the message asking the user to input a target location for the next shot If the AI misses it should display a yellow M If the AI hits it should display a red #</p>	<p>correct message shows</p> <p>correct message shows boards refresh correctly board shows shot correctly correct message shows correct message shows</p> <p>correct symbol shown correct message shows</p>	<p>PASS</p> <p>PASS PASS PASS PASS PASS</p> <p>PASS PASS</p>	
		13	If the computer gets a hit on normal mode, it should select a neighbouring tile for the next location	<p>The game should display the message asking the user to input a target location for the next shot confirm AI is selecting neighbouring locations. When the AI gets a hit, for the next shot it should target a neighbouring location. It should continue to select neighbouring locations until it has exhausted the valid shot locations. If it gets another hit, it will add the neighbouring locations to the list and continue until it has hit all the tiles around those generating hits.</p>	<p>AI correctly targetting neighbouring tiles in a cross formation - this repeats until all valid targets are hit</p>	<p>PASS</p>	
		14	confirm AI will select all rows and columns	Repeatedly play the game to ensure that the AI will fire at each row and each column. Ensuring that it will select the corners, and edge tile locations	AI targets every cell	PASS	
		15	confirm when a ship has each tile location hit, it sinks	Confirm that when you or the AI hit every tile location for a ship, it displays the message that the ship has been sunk!	ship sunk message displays and scoreboard updates	PASS	
		16	confirm computer is not selecting a previous location	confirm that for each turn loop the AI selects a new location by counting the number of shots displayed on the player board. Each turn should increase the number by one	shots increase by one each round	PASS	
		17	confirm win/lose condition	Once either all the AI ships have been destroyed or all the Player ships have been destroyed, the game should present the end game screen.	win/lose condition triggered correctly	PASS	
TC010	Test shot recognition/ turn loop/ AI shot - hard difficulty 10x10 board						
		1	Navigate to <a href="https://calico-jack.herokuapp.com/">https://calico-jack.herokuapp.com/</a>	Game should start automatically	correct message shows	PASS	
		2	click inside the terminal	The pirate flag should show in the terminal along with the welcome message			
		3	press 'y' and then 'enter'	game should start loading process			
		4	input correct value of '10'	<p>Next step message should appear asking the user 'How brave are ye? Shall we play a full game or a little one? Select a board size, enter '6' for a little one or '10' for normal:</p> <p>A message should appear related to the size of the board. 'Hmm a full one, ye be a brave pirate tryin to impress me? If you really want to impress me, you should try it on hard. Select your difficulty, enter 'E' for easy, 'N' for normal or 'H' for hard: '</p>	correct message shows	PASS	
		5	press 'h' for hard and then 'enter'	<p>game should ask you to select difficulty level with options of either easy normal or hard</p> <p>game should set difficulty level to hard and then print a playing board for the user</p> <p>confirm playing board is 10 tiles x 10 tiles</p> <p>board should be labelled 0 - 9 along the top, and A - J down the side</p> <p>game should display the message 'Now we need to position our ships ready for battle! Are ye ready? Press 'Enter' to start!</p>	<p>correct message shows</p> <p>correct message shows</p> <p>correct message shows</p> <p>board is correct</p>	<p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p>	
		6	press 'enter' to start ship placement	game should display a message informing the user which ship needs to be placed and how long the ship is.			
		7	place all the ships on the board in valid locations and orientations	<p>The first ship needed to be placed for a 10x10 board should be a Pinnace which is 5 tiles long</p> <p>Once completed the game should display a message informing the user that the enemy has arrived and then display the game boards and instructions</p> <p>The game will ask the user 'What are your orders? Where do you want to target? Select the location in the format of row then column e.g. 'E4':</p>	board and instructions display correctly	PASS	
		8	enter 'A11' as the target location	A11 is not a valid location, therefore the game should respond with an error message informing the user 'We've been through this already, it needs to be in the format of 'E4' Letter then Number, this is not a time to act the fool, try again!	correct message shows	PASS	
		9	enter 'A0' as the target location	<p>The game should repeat the target location message asking for the input</p> <p>the game should respond with a message detailing the result of the shot. Either ' Nothing but water! What a waste of some perfectly good iron. Your turn is over! You missed!' or a Hit message ' Direct Hit, the sound of breaking wood and screams is unmistakable!'</p> <p>The game should refresh the boards with showing the result of the shot taken by the user on the targetting radar</p> <p>The game should also show the result of the AI shot on the players board</p> <p>The AI will target the top left of the middle four tiles with its first shot</p> <p>The game should display below the boards a message detailing the result of the AI shot</p> <p>If the AI misses it should display a yellow M</p> <p>If the AI hits it should display a red #</p>	<p>correct message shows</p> <p>correct message shows</p> <p>boards refresh correctly</p> <p>board shows shot correctly</p> <p>AI targets correct cell</p> <p>correct message shows</p> <p>correct symbol shown</p>	<p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p>	
		10	enter 'A0' as the target location	<p>The game should display the message asking the user to input a target location for the next shot</p> <p>As you have already targetted this location the game should provide an error message to the user</p> <p>The game should reprint the game boards</p>	<p>correct message shows</p> <p>boards refresh correctly</p>	<p>PASS</p> <p>PASS</p>	



		11	enter a different valid location	<p>The game should inform the user 'You have already fired there, are you trying to waste our Cannonballs? You better get your head in the game pirate, lets try this again!'</p> <p>The game should then repeat the message asking the user to input their target coords</p> <p>the game should respond with a message detailing the result of the shot. Either ' Nothing but water! What a waste of some perfectly good iron. Your turn is over! You missed!' or a Hit message ' Direct Hit, the sound of breaking wood and screams is unmistakable!'</p>	<p>correct message shows</p> <p>correct message shows</p>	<p>PASS</p> <p>PASS</p>	
		12	keep entering valid location until you obtain a hit	<p>The game should refresh the boards with showing the result of the shot taken by the user on the targetting radar</p> <p>The game should also show the result of the AI shot on the players board</p> <p>The game should display below the boards a message detailing the result of the AI shot</p> <p>The game should display the message asking the user to input a target location for the next shot</p> <p>If the AI misses it should display a yellow M</p> <p>If the AI hits it should display a red #</p> <p>The game should display the message asking the user to input a target location for the next shot</p> <p>the game should respond with a message detailing the result of the shot. Either ' Nothing but water! What a waste of some perfectly good iron. Your turn is over! You missed!' or a Hit message ' Direct Hit, the sound of breaking wood and screams is unmistakable!'</p>	<p>correct message shows</p> <p>boards refresh correctly</p> <p>board shows shot correctly</p> <p>correct message shows</p> <p>correct message shows</p> <p>correct symbol shown</p>	<p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p>	
		13	When the computer gets a hit on hard mode, it should select a neighbouring tile for the next location	<p>The game should refresh the boards with showing the result of the shot taken by the user on the targetting radar</p> <p>The game should also show the result of the AI shot on the players board</p> <p>The game should display below the boards a message detailing the result of the AI shot</p> <p>The game should display the message asking the user to input a target location for the next shot</p> <p>If the AI misses it should display a yellow M</p> <p>If the AI hits it should display a red #</p> <p>The game should display the message asking the user to input a target location for the next shot</p> <p>confirm AI is selecting neighbouring locations. When the AI gets a hit, for the next shot it should target a neighbouring location. Unlike the normal difficulty, it will target neighbouring tiles in order of probability that there is a ship there. So when it finds another hit location it should carry on in the same orientation.</p>	<p>correct message shows</p> <p>boards refresh correctly</p> <p>board shows shot correctly</p> <p>correct message shows</p> <p>correct message shows</p> <p>correct symbol shown</p>	<p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p> <p>PASS</p>	
		14	confirm AI will select all rows and columns	<p>Repeatedly play the game to ensure that the AI will fire at each row and each column. Ensuring that it will select the corners, and edge tile locations</p>	<p>correct message shows</p>	<p>PASS</p>	
		15	confirm when a ship has each tile location hit, it sinks	<p>Confirm that when you or the AI hit every tile location for a ship, it displays the message that the ship has been sunk!</p>	<p>AI targets neighbouring tiles correctly</p>	<p>PASS</p>	
		16	confirm computer is not selecting a previous location	<p>confirm that for each turn loop the AI selects a new location by counting the number of shots displayed on the player board. Each turn should increase the number by one</p>	<p>AI will target each cell</p> <p>ship sunk message displays and scoreboard updates</p>	<p>PASS</p> <p>PASS</p>	
		17	confirm win/lose condition	<p>confirm that for each turn loop the AI selects a new location by counting the number of shots displayed on the player board. Each turn should increase the number by one</p> <p>Once either all the AI ships have been destroyed or all the Player ships have been destroyed, the game should present the end game screen.</p>	<p>AI selects a different tile location each time</p> <p>win/lose condition triggered correctly</p>	<p>PASS</p> <p>PASS</p>	
TC011	Test shot recognition/ turn loop/ AI shot - 6x6 board						
		1	Repeat TC008 steps for a 6x6 board	Confirm no difference in response	no difference in results	PASS	
			Repeat TC009 steps for a 6x6 board	Confirm no difference in response	no difference in results	PASS	
			Repeat TC010 steps for a 6x6 board	Confirm no difference in response	no difference in results	PASS	