

Function Name	#	Test Description	Sample Input	Expected Result	Actual Result	Pass/Fail
mainMenu	1	main menu function, returns integer for switch case		<pre> Select Option: 1. Game Menu 2. Admin Menu 3. Exit Enter your choice : 1 Input width of board (Minimum = 3, Maximum = 10): </pre>	<pre> Select Option: 1. Game Menu 2. Admin Menu 3. Exit Enter your choice : 1 Input width of board (Minimum = 3, Maximum = 10): </pre>	P
	2			<pre> ENTER VALID VALUE Select Option: 1. Game Menu 2. Admin Menu 3. Exit Enter your choice : </pre>	<pre> ENTER VALID VALUE Select Option: 1. Game Menu 2. Admin Menu 3. Exit Enter your choice : </pre>	P
	3	no words are loaded in the array	1 (but no words loaded)	<pre> Select Option: 1. Game Menu 2. Admin Menu 3. Exit Enter your choice : 1 No words loaded in yet! </pre>	<pre> Select Option: 1. Game Menu 2. Admin Menu 3. Exit Enter your choice : 1 No words loaded in yet! </pre>	P
adminMenu	1	admin menu function, returns integer for switch case		<pre> Select Option: 1. Add Word 2. Add Trivia 3. Modify Entry 4. Delete Word 5. Delete Clue 6. View Words 7. View Clues 8. Export 9. Import 10. Back to Main Menu Enter your choice : 1 Enter **WORD** to add (ALL CAPS): </pre>	<pre> Select Option: 1. Add Word 2. Add Trivia 3. Modify Entry 4. Delete Word 5. Delete Clue 6. View Words 7. View Clues 8. Export 9. Import 10. Back to Main Menu Enter your choice : 1 Enter **WORD** to add (ALL CAPS): </pre>	P
	2			<pre> ENTER VALID VALUE Select Option: 1. Add Word 2. Add Trivia 3. Modify Entry 4. Delete Word 5. Delete Clue 6. View Words 7. View Clues 8. Export 9. Import 10. Back to Main Menu Enter your choice : </pre>	<pre> ENTER VALID VALUE Select Option: 1. Add Word 2. Add Trivia 3. Modify Entry 4. Delete Word 5. Delete Clue 6. View Words 7. View Clues 8. Export 9. Import 10. Back to Main Menu Enter your choice : </pre>	P
	3			<pre> Select Option: 1. Add Word 2. Add Trivia 3. Modify Entry 4. Delete Word 5. Delete Clue 6. View Words 7. View Clues 8. Export 9. Import 10. Back to Main Menu Enter your choice : 4 Enter **WORD** of hint to DELETE (ex. Table): </pre>	<pre> Select Option: 1. Add Word 2. Add Trivia 3. Modify Entry 4. Delete Word 5. Delete Clue 6. View Words 7. View Clues 8. Export 9. Import 10. Back to Main Menu Enter your choice : 4 Enter **WORD** of hint to DELETE (ex. Table): </pre>	P
toUpperString	1	input becomes upper case, uppercase stays the same	riko sakurauchi	RIKO SAKURAUCHI	RIKO SAKURAUCHI	P
	2		RIKO sakurauchi	RIKO SAKURAUCHI	RIKO SAKURAUCHI	P
	3		RIKO SAKURAUCHI	RIKO SAKURAUCHI	RIKO SAKURAUCHI	P

addTrivia	1	adds trivia to program's array for words + hints	riko sakurauchi (word not yet in array)	<pre> Enter your choice : 1 Enter **WORD** to add (ALL CAPS): riko sakurauchi Enter hint to add (ex.Kind of, Part, Height): </pre>	<pre> Enter your choice : 1 Enter **WORD** to add (ALL CAPS): riko sakurauchi Enter hint to add (ex.Kind of, Part, Height): </pre>	P
	2		riko sakurauchi (word in array)	<pre> Select Option: 1. Add Word 2. Add Trivia 3. Modify Entry 4. Delete Word 5. Delete Clue 6. View Words 7. View Clues 8. Export 9. Import 10. Back to Main Menu Enter your choice : 1 Enter **WORD** to add (ALL CAPS): sakurauchi riko DUPLICATE WORD INPUTTED (current input and entry # 26 are the same) Try inputting a different word! Enter **WORD** to add (ALL CAPS): </pre>	<pre> Select Option: 1. Add Word 2. Add Trivia 3. Modify Entry 4. Delete Word 5. Delete Clue 6. View Words 7. View Clues 8. Export 9. Import 10. Back to Main Menu Enter your choice : 1 Enter **WORD** to add (ALL CAPS): sakurauchi riko DUPLICATE WORD INPUTTED (current input and entry # 26 are the same) Try inputting a different word! Enter **WORD** to add (ALL CAPS): </pre>	P
initGameArr	1	initializes game's array to null	(no input, runs at program start)	All contents of sGameStruct are null	All contents of sGameStruct are null	P
exportArray	1	exports array into a txt file	file exists	file gets overwritten	file gets overwritten	P
	2		file doesn't exist	file gets made	file gets made	P
colonRemover	1	removes colon for the Object: (Item)	Object: TABLE	TABLE	TABLE	P
	2		Object: FOOT	FOOT	FOOT	P
	3		Object: MOUSE	MOUSE	MOUSE	P
splitterFunc	1	removes colon and splits relation and relation value	Kind of: Furniture	strOut1 = Kind of strOut2 = Furniture	strOut1 = Kind of strOut2 = Furniture	P
	2		Part of: Living Room	strOut1 = Part of strOut2 = Living Room	strOut1 = Part of strOut2 = Living Room	P
	3		Height: Tall	strOut1 = Height strOut2 = Tall	strOut1 = Height strOut2 = Tall	P
importArray	1	imports text file into program's struct array	lovelive.txt	contents of the file are moved into sGameStruct	contents of the file are moved into sGameStruct	P
	2	file doesn't exist	lovelive.txt	File DOES NOT EXIST, please try again! Duplicate found(TAKAMI CHIKA)!	File DOES NOT EXIST, please try again! Duplicate found(TAKAMI CHIKA)!	P
	3	file exists with duplicates	lovelive.txt	Do you want to overwrite duplicate (1 - Yes, 0 - No)?	Do you want to overwrite duplicate (1 - Yes, 0 - No)?	P
viewWords	1	views words and their hints one by one in alphabetical order	previous on the 1st word	<pre> press 'N' for next, 'P' for previous, 'X' to end the display and go back to the menu: p REACHED END OF LIST 1. ARASHI CHISATO Eyes: Pink Hair: Double Buns Hair: White Part of: Syncrise! Likes: Takoyaki Friend: Shibuya Kanon School Year: 3rd Year Catchphrase: Misaki Seiyuu: Misaki Nako </pre>	<pre> press 'N' for next, 'P' for previous, 'X' to end the display and go back to the menu: p REACHED END OF LIST 1. ARASHI CHISATO Eyes: Pink Hair: Double Buns Hair: White Part of: Syncrise! Likes: Takoyaki Friend: Shibuya Kanon School Year: 3rd Year Catchphrase: Misaki Seiyuu: Misaki Nako </pre>	P
	2		N	<pre> press 'N' for next, 'P' for previous, 'X' to end the display and go back to the menu: n 4. KONOE KANATA Part of: QUARTZ Hair: Light-Brown Hair: Long Eyes: Purple Seiyuu: Kitou Akari School Year: 3rd Year press 'N' for next, 'P' for previous, 'X' to end the display and go back to the menu: n 5. KUNIKIDA HANABARU Part of: AZALEA Hair: Medium-Length Hair: Brown Eyes: Yellow Likes: Books Seiyuu: Takatsuki Kinako School Year: 1st Year press 'N' for next, 'P' for previous, 'X' to end the display and go back to the menu: </pre>	<pre> press 'N' for next, 'P' for previous, 'X' to end the display and go back to the menu: n 4. KONOE KANATA Part of: QUARTZ Hair: Light-Brown Hair: Long Eyes: Purple Seiyuu: Kitou Akari School Year: 3rd Year press 'N' for next, 'P' for previous, 'X' to end the display and go back to the menu: n 5. KUNIKIDA HANABARU Part of: AZALEA Hair: Medium-Length Hair: Brown Eyes: Yellow Likes: Books Seiyuu: Takatsuki Kinako School Year: 1st Year press 'N' for next, 'P' for previous, 'X' to end the display and go back to the menu: </pre>	P

		3 Next on the last word	N	press 'N' for next, 'P' for previous, 'X' to end the display and go back to the menu: n REACHED END OF LIST 25. YUUKI SETSUNA Part of: A ZU NA Hair: Black Eyes: Gray Seiyuu: Hayashi Coco School Year: 2nd Year Hair: Long	press 'N' for next, 'P' for previous, 'X' to end the display and go back to the menu: n REACHED END OF LIST 25. YUUKI SETSUNA Part of: A ZU NA Hair: Black Eyes: Gray Seiyuu: Hayashi Coco School Year: 2nd Year Hair: Long	P
		4	X	REACHED END OF LIST 25. YUUKI SETSUNA Part of: A ZU NA Hair: Black Eyes: Gray Seiyuu: Hayashi Coco School Year: 2nd Year Hair: Long press 'N' for next, 'P' for previous, 'X' to end the display and go back to the menu: x Select Option: 1. Add Word 2. Add Trivia 3. Modify Entry 4. Delete Word 5. Delete Clue 6. View Words 7. View Clues 8. Export 9. Import 10. Back to Main Menu Enter your choice :	REACHED END OF LIST 25. YUUKI SETSUNA Part of: A ZU NA Hair: Black Eyes: Gray Seiyuu: Hayashi Coco School Year: 2nd Year Hair: Long press 'N' for next, 'P' for previous, 'X' to end the display and go back to the menu: x Select Option: 1. Add Word 2. Add Trivia 3. Modify Entry 4. Delete Word 5. Delete Clue 6. View Words 7. View Clues 8. Export 9. Import 10. Back to Main Menu Enter your choice :	P
addTriviaComp		1 adds trivia to a pre-existing word	riko sakurauchi	Enter hint to add (ex.Kind of, Part, Height):	Enter hint to add (ex.Kind of, Part, Height):	P
		2 word does not exist	riko sakurauchi	Word not found	Word not found	P
		3 word already has 10 trivia under it	riko sakurauchi	Hint data already full! Delete to add more	Hint data already full! Delete to add more	P
searchWord		1 searches for a word the program's struct array	riko sakurauchi	returns index of the word	returns index of the word	P
		2	riko SAKURAUCHI	still returns the index of the word	still returns the index of the word	P
		3 word is not in array	riko sAKURAUchi (not in array)	returns -1	returns -1	P
displayAlpha		1 displayAlpha displays all the words in the memory alphabetically	7 (View Clues)	Displays all of the words in the struct array in alphabetical order Enter word of hints to view:	Displays all of the words in the struct array in alphabetical order Enter word of hints to view:	P
		2 no clues in memory	7 (View Clues)	Import words first! No words in memory	Import words first! No words in memory	P
		3	3 (Modify Entry)	Displays all of the words in the struct array in alphabetical order Enter word to add trivia to:	Displays all of the words in the struct array in alphabetical order Enter word to add trivia to:	P
modifyWord		1 gives the user the choice to modify a word or hint	1 (Modify Word) Table	Enter new word: Chair (Table gets changed into Chair)	Enter new word: Chair (Table gets changed into Chair)	P
		2	2 (Modify Relation & Relation Value) 3 (3rd Relation & Relation Value)	Enter number (1 - 7) of hint to edit: 3 Enter hint to add (ex.Kind of, Part, Height): kind of Enter hint value to add (ex.Furniture, Leg, Meter): leg	Enter number (1 - 7) of hint to edit: 3 Enter hint to add (ex.Kind of, Part, Height): kind of Enter hint value to add (ex.Furniture, Leg, Meter): leg	P
		3 entry is left blank	1 (Modify Word) Table	Enter new word: (Table remains as Table)	Enter new word: (Table remains as Table)	P
deleteWord		1 deleteWord deletes a word from the array	riko sakurauchi	function removes RIKO SAKURAUCHI from sGameStruct	function removes RIKO SAKURAUCHI from sGameStruct	P
		2 word does not exist	riko sakurauchi	Word not found	Word not found	P
		3	yoshiko tsushima	function removes YOSHIKO TSUSHIMA from sGameStruct	function removes YOSHIKO TSUSHIMA from sGameStruct	P
deleteHint		1 deletes hint from array	Enter **WORD** of hint to DELETE: riko sakurauchi Enter **NUMBER** of hint to DELETE: 1	hint gets deleted from wordStruct	hint gets deleted from wordStruct	P
		2 hint number does not exist	Enter **WORD** of hint to DELETE: riko sakurauchi	Hint does not exist!	Hint does not exist!	P
		3 no words in array	4	Import words first! No words in memory	Import words first! No words in memory	P
viewHints		1 prints a list of words in sGameStruct then asks for a string input	Enter word of hints to view: riko sakurauchi	Hints for riko sakurauchi: (list of hints from 1 to how many were inputted)	Hints for riko sakurauchi: (list of hints from 1 to how many were inputted)	P
		2 word does not exist	Enter word of hints to view: riko sakurauchi	Word not found	Word not found	P
		3 no words in array	Enter word of hints to view: riko sakurauchi	Import words first! No words in memory	Import words first! No words in memory	P

boardSize	1	asks for board size	Input width of board (Minimum - 3, Maximum - 10): 3 Input length of board (Minimum - 3, Maximum - 10): 3	xAxis = 3 yAxis = 3 nProduct = 9	xAxis = 3 yAxis = 3 nProduct = 9	P
	2	y is below the minimum	Input width of board (Minimum - 3, Maximum - 10): 3 Input length of board (Minimum - 3, Maximum - 10): 2	Program will ask for input until a value within range is given	Program will ask for input until a value within range is given	P
	3	x is below the minimum	Input width of board (Minimum - 3, Maximum - 10): 2	Program will ask for input until a value within range is given	Program will ask for input until a value within range is given	P
printBoard	1	prints the board including an indicator as to where the player is	player is at the first level	1 2 3 4 5 STATUS ----- L K T N M YOU ARE HERE O H K S A A M S O K T Y T T M V U K W T	1 2 3 4 5 STATUS ----- L K T N M YOU ARE HERE O H K S A A M S O K T Y T T M V U K W T	P
	2		player is at the 3rd level	1 2 3 4 5 STATUS ----- L * T N M CLEAR O H * S A CLEAR A M S O K YOU ARE HERE T Y T T M V U K W T	1 2 3 4 5 STATUS ----- L * T N M CLEAR O H * S A CLEAR A M S O K YOU ARE HERE T Y T T M V U K W T	P
	3		player is at the final level of the board	1 2 3 4 5 STATUS ----- L * T N M CLEAR O H * S A CLEAR - * S - - CLEAR T Y T * M CLEAR V U K W T YOU ARE HERE	1 2 3 4 5 STATUS ----- L * T N M CLEAR O H * S A CLEAR - * S - - CLEAR T Y T * M CLEAR V U K W T YOU ARE HERE	P
fillStructBoard	1	fills the temporary 2d array with words from sGameStruct	nX = 3 nY = 3 nSize = 9	sGameStruct fills sTempStruct with 9 randomly picked words in a 3 * 3 board	sGameStruct fills sTempStruct with 9 randomly picked words in a 3 * 3 board	P
	2		nX = 5 nY = 5 nSize = 25	sGameStruct fills sTempStruct with 25 randomly picked words in a 5 * 5 board	sGameStruct fills sTempStruct with 25 randomly picked words in a 5 * 5 board	P
	3		nX = 10 nY = 10 nSize = 100	sGameStruct fills sTempStruct with 100 randomly picked words in a 10 * 10 board	sGameStruct fills sTempStruct with 100 randomly picked words in a 10 * 10 board	P
hintCounter	1	counts the number of hints in sHintStruct	sHintStruct has 1	returns 1	returns 1	P
	2		sHintStruct 10	returns 10	returns 10	P
	3		sHintStruct 5	returns 5	returns 5	P
wordPick	1	where the game happens (assume board width is 7 and height is 3)	From left to right, enter a NUMBER: 5	shows 5th word in the 1st row You picked M Here is your hint: Seiyuu: Murakami Natsumi Enter answer here (input in all caps): miyashita ai	shows 5th word in the 1st row You picked M Here is your hint: Seiyuu: Murakami Natsumi Enter answer here (input in all caps): miyashita ai	P
	2	player fails all numbers	Enter value within range of the board (1 to 7): 7	Enter value within range of the board (1 to 7): 7 You picked O Here is your hint: Hair: Long Enter answer here (input in all caps): 7 **Wrong answer Correct Answer: OSAKA SHIZUKU Pick another one from the same row** **You lose! Better luck next time**	Enter value within range of the board (1 to 7): 7 You picked O Here is your hint: Hair: Long Enter answer here (input in all caps): 7 **Wrong answer Correct Answer: OSAKA SHIZUKU Pick another one from the same row** **You lose! Better luck next time**	P
	3	player inputs out of bounds number	Enter value within range of the board (1 to 7): 8	Enter value within range of the board (1 to 7):	Enter value within range of the board (1 to 7):	P
	4	player fails a question	Enter value within range of the board (1 to 7): 2	**Wrong answer** Correct Answer: KUNIKIDA HANAMARU **Pick another one from the same row** You can't select a word that you failed, choose another one Enter value within range of the board (1 to 7):	**Wrong answer** Correct Answer: KUNIKIDA HANAMARU **Pick another one from the same row** You can't select a word that you failed, choose another one Enter value within range of the board (1 to 7):	P

	5	player tries to select a failed question	Enter value within range of the board (1 to 7): 2	You can't select a word that you failed, choose another one Enter value within range of the board (1 to 7):	You can't select a word that you failed, choose another one Enter value within range of the board (1 to 7):	P
	6	player wins		**Correct Answer! Advance to the next level!**	**Correct Answer! Advance to the next level!**	P
				You win! I'm proud of you	**You win! I'm proud of you**	P
gamePhase				Input width of board (Minimum - 3, Maximum - 10): 3 Input length of board (Minimum - 3, Maximum - 10): 3 1 2 3 STATUS ----- U T M YOU ARE HERE S T K O K S From left to right, enter a NUMBER:	Input width of board (Minimum - 3, Maximum - 10): 3 Input length of board (Minimum - 3, Maximum - 10): 3 1 2 3 STATUS ----- U T M YOU ARE HERE S T K O K S From left to right, enter a NUMBER:	P
	1	gamePhase executes all of the functions necessary for the game	nXAxis = 3 nYAxis = 3 nSize = 9 nWordCount = 9			
				Input width of board (Minimum - 3, Maximum - 10): 3 Input length of board (Minimum - 3, Maximum - 10): 5 1 2 3 STATUS ----- M V L YOU ARE HERE O A S S N U O T M T K Y From left to right, enter a NUMBER:	Input width of board (Minimum - 3, Maximum - 10): 3 Input length of board (Minimum - 3, Maximum - 10): 5 1 2 3 STATUS ----- M V L YOU ARE HERE O A S S N U O T M T K Y From left to right, enter a NUMBER:	P
	2		nXAxis = 3 nYAxis = 5 nSize = 15 nWordCount = 20			
				Not enough words in list to make board (Inputted size of board: 9) (Words in word list: 5)	Not enough words in list to make board (Inputted size of board: 9) (Words in word list: 5)	P
	3	sGameStruct doesn't have enough words	nXAxis = 3 nYAxis = 3 nSize = 9 nWordCount = 5			