Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
displayFloatingIcons	1	The spacing is less than 1	nMax = 5 nSpacing = 0	No characters will be printed	No characters printed	Р
	2	Max number of characters to be printed is less than 1	nMax = 0 nSpacing = 5	No characters will be printed	No characters printed	Р
	3	Spacing is less than the max number of characters to be printed. The icon to be printed will be printed at the indicated spacing from the start or last print.	nMax = 11 nSpacing = 7 clcon = '!'	To be printed: -6 space characters -1 icon character of choice ('!') -4 space characters	Printed: -6 space characters -1 icon character of choice ('!') -4 space characters	Р
	4	Spacing is greater than the ma max number of characters to be printed. The icon will not be printed. Only spaces will be printed	nMax = 10 nSpacing = 11	To be printed: -10 space characters	Printed: -10 space characters	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
getSingleChar	1	User entered an invalid string input; empty string; newline character excluded	sScan = "	*cChar1 = "	*cChar1 = "	Р
	2	User entered a valid character input	sScan = 'y'	*cChar1 = 'y'	*cChar1 = 'y'	Р
	3	User entered more than 1 character	User input: YnN <\n>	*cChar1 = 'Y'	*cChar1 = 'Y'	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
getString	1	User entered an invalid string	sString = "" /* new line character is not	0	0	Р
		input; empty string; newline	included*/			
		character excluded				
	2	User entered a cancel	*cCancelChar = "~"	-1	-1	Р
		character for string input	sString = "~"			
		cancelation.				
	3	User entered a valid string	sString = "Word"	1	1	Р

	input				
4	Entered string exceeds the	Entered string:	1	1	Р
	required string length	"ABCDEFGHIJKLMNOPQRSTUVWXYZ"			
			sString =	sString =	
		nLength = 20	"ABCDEFGHIJKLMNOPQRST"	"ABCDEFGHIJKLMNOPQRST"	

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
generateRandomNum	1	Generate random number between 0 and number of elements in the array of entries, including 0.	nMaxLim = 50	Returns an int value that is 0 <= int value < 50	42	P
	2	Generate random number between 0 and number of clues in a single entry, including 0.	nMaxLim = 7	Returns an int value that is 0 <= int value < 7	6	Р
	3	Indicated max limit for the range of random numbers to be executed is less than or equal to 0.	nMaxLim = 0	-1	-1	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
delay	1	No delay	nSeconds = 0	Program pauses for 0 seconds,	Paused for 0 seconds, then	Р
				then heads to the next line of	heads to the next line of	
				instruction.	instruction.	
	2	Delay for 3 seconds	nSeconds = 3	Program pauses for 3 seconds,	Paused for 3 seconds, then	Р
				then heads to the next line of	heads to the next line of	
				instruction.	instruction.	
	3	Delay for 5 seconds	nSeconds = 5	Program pauses for 5 seconds,	Paused for 5 seconds, then	Р
				then heads to the next line of	heads to the next line of	
				instruction.	instruction.	
	4	Negative value of time	nSeconds = -2	Skips the function and heads to	Skipped the function, then	Р
		_		the next line of instruction	heads to the next line of	
					instruction.	

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
getWordEntry	1	User entered an invalid string	sChosenWord = ""	*bValid = 0	*bValid = 0	Р
		input; empty string; newline		Displays invalid input note and	Displayed invalid input note	
		character excluded		asks for string input again		
	2	User entered a cancel character	Cancel Character: "~"	*bValid = -1	*bValid = -1	Р
		for string input cancelation.	sChosenWord = "~"	Exits the function	Exited the function	
	3	User entered a valid string input	sChosenWord = "Loop"	*bValid = 1	*bValid = 1	Р
				String in sChosenWord is kept,	String in sChosenWord kept,	
				and exits the funciton	and exited the function.	

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
IsUniqueLetter	1	The randomly chosen entry is not	nRandNum = 0	1	1	Р
-		yet used in any row	aEntry[0].use = 0			
	2	The randomly chosen entry is	nRandNum = 2	0	0	Р
		used already. It can be present in	aEntry[2].use = 2			
		any row.	//current row index is 0			
			//gameboard size 2 row, 3 col			
	3	The randomely chosen entry's	nRandNum = 0	0	0	Р
		first letter already exists in the	aEntry[0].answer[0] = 'A'			
		same row	aEntry[0].use = 1			
			gameboardRow[0] = 'A'			
			//current row index is 0			
			//gameboard size 2 row, 3 col			

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
checkLettersLeft	1	The entries that are not yet used	nElem = 7	6	6	Р
		for the gameboard has a set of	aEntries[0].answer = "Leaves"			
		unique first letters	aEntries[0].use = 0			
			aEntries[1].answer = "Ant"			
			aEntries[1].use = 1			
			aEntries[2].answer = "Apple			
			Pie"			
			aEntries[2].use = 0			
			aEntries[3].answer = "Car"			

		aEntries[3].use = 0 aEntries[4].answer = "Zebra" aEntries[4].use = 0 aEntries[5].answer = "Yoyo" aEntries[5].use = 0 aEntries[6].answer = "Tea" aEntries[6].use = 0			
		From File: (INIT1.txt) Object: Leaves Color: Green Grows on: Trees			
		Object: Ant Kind of: Insect			
		Object: Apple Pie Kind of: Dessert			
		Object: Car Size: Big			
		Object: Zebra Color: Black and white			
		Object: Yoyo Used for: Playing			
		Object: Tea Helps in: Relaxation			
2	The entries that are not yet used for the gameboard has a set of unique first letters	/* 2 rows and 4 columns*/ nElem = 7 aEntries[0].answer = "Ax" aEntries[0].use = 1 aEntries[1].answer = "Ant"	2	2	P

	All the entrine are used already	aEntries[1].use = 0 aEntries[2].answer = "Apple Pie" aEntries[2].use = aEntries[3].answer = "Car" aEntries[4].answer = "Ache" aEntries[4].use = 0 aEntries[5].answer = "Age" aEntries[6].use = 0 aEntries[6].use = 0 aEntries[6].use = 0 From File: (INIT2.txt) Object: Ax Usage: Wood cutting  Object: Ant Kind of: Insect  Object: Apple Pie Kind of: Dessert  Object: Car Size: Big  Object: Ache Synonym: Pain  Object: Age Can be: Counted  Object: Tea Helps in: Relaxation nElem = 8	0	0	P
3	All the entries are used already for the gameboard	aEntries[0].answer = "Leaves"	U	U	F

aEntries[0].use = 1	
aEntries[1].answer = "Ant"	
aEntries[1].use = 1	
aEntries[2].answer = "Apple	
Pie"	
aEntries[2].use = 2	
aEntries[3].answer = "Car"	
aEntries[3].use = 1	
aEntries[4].answer = "Zebra"	
aEntries[4].use = 1	
aEntries[5].answer = "Yoyo"	
aEntries[5].use = 2	
aEntries[6]answer = "Tea"	
aEntries[6].use = 2	
aEntries[7].answer = "Wheel"	
aEntries[7].use = 2	
From File: (INIT1.txt)	
Object: Leaves	
Color: Green	
Grows on: Trees	
Grows on. Trees	
Object: Ant	
Kind of: Insect	
Killa di. ilisect	
Object: Apple Pie	
Kind of: Dessert	
Mild of Dessett	
Object: Car	
Object: Car Size: Big	
Size. Dig	
Object: Zohra	
Object: Zebra Color: Black and white	
COIDI. DIACK AND WINE	
Object: Voya	
Object: Yoyo	

	Used for: Playing		
	Object: Tea		
	Helps in: Relaxation		

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
checkGameboard	1	User letter input is not in the current row of gameboard	//currently in the 1 <sup>st</sup> row nCurrentRow = 1 nCol = 4 gameboardRow[4] = {'A','W','S','D'} cChoice = 'T' nElem = 5	*nIndex = -1 *nCurrCol = -1	*nIndex = -1 *nCurrCol = -1	Р
	2	User letter input is in the current row of gameboard	//currently in the 1 <sup>st</sup> row nCurrentRow = 1 nCol = 4 gameboardRow[4] = {'A','W','S','D'} cChoice = 'A' nElem = 5 aEntries[0].answer[0] = 'A' aEntries[0].use = 1	*nIndex = 0 *nCurrCol = 0	*nIndex = 0 *nCurrCol = 0	P
	3	Player chose a specific letter that is also present in the other row		*nIndex = 4 *nCurrCol = 0	*nIndex = 4 *nCurrCol = 0	P

		a =		
1		aEntries 4 .use = 1		

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
initializeEntries	1	Sets the strings of aEntries to empty strings, and the integers to zero	aEntries[0].answer = "Ant" aEntries[0].clueList[0].relation = "Kind of"	aEntries[0].answer = "" aEntries[0].clueList[0].relation = ""	aEntries[0].answer = "" aEntries[0].clueList[0].relation = ""	Р
			aEntries[0].clueList[0].relValue = "Insect"	aEntries[0].clueList[0].relValue = ""	aEntries[0].clueList[0].relValue = ""	
			aEntries[0].numClues = 1 aEntries[0].use = 3	aEntries[0].numClues = 0 aEntries[0].use = 0	aEntries[0].numClues = 0 aEntries[0].use = 0	
			aEntries[1].answer = "Apple Pie"	aEntries[1].answer = "" aEntries[1].clueList[0].relation =	aEntries[1].answer = "" aEntries[1].clueList[0].relation	
			aEntries[1].clueList[0].relation = "Taste"	"" aEntries[1].clueList[0].relValue	= "" aEntries[1].clueList[0].relValue	
			aEntries[1].clueList[0].relValue = "Sweet"	= "" aEntries[1].numClues = 0	= "" aEntries[1].numClues = 0	
			aEntries[1].numClues = 1 aEntries[1].use = 2	aEntries[1].use = 0 aEntries[2].answer = ""	aEntries[1].use = 0 aEntries[2].answer = ""	
			aEntries[2].answer = "Ax" aEntries[2].clueList[0].relation	aEntries[2].clueList[0].relation =	aEntries[2].clueList[0].relation = ""	
			= "Usage" aEntries[2].clueList[0].relValue	aEntries[2].clueList[0].relValue = ""	aEntries[2].clueList[0].relValue = ""	
			= "Wood cutting" aEntries[2].numClues = 1 aEntries[2].use = 1	aEntries[2].numClues = 0 aEntries[2].use = 0	aEntries[2].numClues = 0 aEntries[2].use = 0	
	2	The strings of entries are already set to empty strings and its integers to zero	aEntries[0].answer = "" aEntries[0].clueList[0].relation = ""	aEntries[0].answer = "" aEntries[0].clueList[0].relation = ""	aEntries[0].answer = "" aEntries[0].clueList[0].relation = ""	Р
			aEntries[0].clueList[0].relValue = ""	aEntries[0].clueList[0].relValue = ""	aEntries[0].clueList[0].relValue = ""	
			aEntries[0].numClues = 0 aEntries[0].use = 0 aEntries[1].answer = ""	aEntries[0].numClues = 0 aEntries[0].use = 0 aEntries[1].answer = ""	aEntries[0].numClues = 0 aEntries[0].use = 0 aEntries[1].answer = ""	
			aEntries[1].clueList[0].relation = ""	aEntries[1].clueList[0].relation =	aEntries[1].clueList[0].relation = ""	

		aEntries[1].clueList[0].relValue	aEntries[1].clueList[0].relValue	aEntries[1].clueList[0].relValue	
		= ""	= ""	= ""	
		aEntries[1].numClues = 0	aEntries[1].numClues = 0	aEntries[1].numClues = 0	
		aEntries[1].use = 0	aEntries[1].use = 0	aEntries[1].use = 0	
		aEntries[2].answer = ""	aEntries[2].answer = ""	aEntries[2].answer = ""	
		aEntries[2].clueList[0].relation	aEntries[2].clueList[0].relation =	aEntries[2].clueList[0].relation	
		= ""	6637	= ""	
		aEntries[2].clueList[0].relValue	aEntries[2].clueList[0].relValue	aEntries[2].clueList[0].relValue	
		= ""	= ""	= ""	
		aEntries[2].numClues = 0	aEntries[2].numClues = 0	aEntries[2].numClues = 0	
		aEntries[2].use = 0	aEntries[2].use = 0	aEntries[2].use = 0	
3	N/A	N/A	N/A	N/A	N/A

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
addTriviaMenu	1	User enters an invalid string; empty string	strWordToAddTrivia = ""	Prints an invalid input note, and asks user for another string input	Printed invalid input note and asked for another string input	Р
	2	User cancels and exits in the Add Trivia option	Cancel character: "~" strWordToAddTrivia = "~"	Exits the function	Exited the function	Р
	3	User entered a valid string input but string input doesn't exist in the current entry list	strWordToAddTrivia = "Holo"	Calls searchWord() function. nIndex = -1 Prints a note that word was not found and exits the function	Called searchWord() function nIndex = -1 Printed note that word was not found and exited the function	P
	4	User entered a valid string input, and string input exists in the current entry list	strWordToAddTrivia = "Apple Pie" aEntries[1].answer = "Apple Pie"	Calls searchWord() function. nIndex = 1 Calls addTrivia() Function	Called searchWord() function nIndex = 1 Called addTrivia() function	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
modifyWord	1	User enters an invalid string;	Current entry being modified:	Prints an invalid input note, and	Printed invalid input note and	Р
		empty string	aEntries[2].answer = "Ax" or	asks for another string input	asked for another string input	

		oneEntry->answer = "Ax" sModifiedWord = ""			
2	User cancels word modification	Current entry being modified: aEntries[2].answer = "Ax" or oneEntry->answer = "Ax" Cancel character: "~" strWordToAddTrivia = "~"	Exits the function	Exited the function	P
3	User entered a valid string input but string input for a new modified word already exists in the current entry list	Current entry being modified: aEntries[2].answer = "Ax" or oneEntry->answer = "Ax" strWordToAddTrivia = "Ant" // word exists in index 0 aEntries[0].answer = "Ant"	bUnique = 0 Prints a note that word already exists, and asks user for another string input	bUnique = 0 //index for aEntries  Printed a note that word already exists and asked user for another string input	P
4	User entered a valid string input, and string input for a new modified doesn't exists yet in the current entry list	Current entry being modified: aEntries[2].answer = "Ax" or oneEntry->answer = "Ax" strWordToAddTrivia = "Amazon"	bUnique = -1 Copies the string from strWordToAddTrivia to aEntries[2].answer (oneEntry- >answer) aEntries[2].answer (oneEntry- >answer) = "Amazon"	bUnique = -1 aEntries[2].answer (oneEntry- >answer) = "Amazon"	P

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
getClueModification	1	User enters an invalid string; empty string	sModifiedPhrase = ""	Prints an invalid input note, and asks for another string input	Printed invalid input note, and asked for another input	Р
	2	User cancels relation or relation value modification for current clue	Cancel character: "~" sModifiedPhrase = "~"	Exits the function	Exited the function	Р
	3	User enters a valid string input for relation or relation value	//relation under modification Current phrase: "Color" sModifiedPhrase = "Texture"	Copies string from sModifiedPhrase to oneTrivia->relation oneTrivia->relation = "Texture"	oneTrivia->relation = "Texture"	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
modifyClue	1	User character input is not within	cChoice = '8'	Prints an invalid input note, and	Printed invalid input note and	Р

	the choices 1, 2 and 0.		asks for another input	asked for another input	
2	User chooses to modify the relation of the current clue	cChoice = '1' aEntries[1].answer = "Apple Pie" aEntries[1].clueList[0].relation = "Color" aEntries[1].clueList[0].relValue = "Golden Brown"  New modified relation member field: "Texture"	Calls getClueModification() function to get new modified relation member field  aEntries[1].clueList[0].relation = "Texture"	Called getClueModification() function  aEntries[1].clueList[0].relation  = "Texture"	Р
3	User chooses to modify the relation value of the current clue	cChoice = '2' aEntries[1].answer = "Apple Pie" aEntries[1].clueList[0].relation = "Color" aEntries[1].clueList[0].relValue = "Golden Brown"  New modified relation value member field: "Crusty"	Calls getClueModification() function to get new modified relation value member field  aEntries[1].clueList[0].relValue = "Crusty"	Called getClueModification() function  aEntries[1].clueList[0].relValue = "Crusty"	Р
4	User cancels clue modification of the current clue	cChoice = '0'	Exits the function	Exited the function	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
executeModification	1	Entered word doesn't exist in the	sChosenWord = "qwerty"	Calls searchWord() function.	Called searchWord() function.	Р
		current entry list		nIndex = -1	nIndex = -1	
				Displays a note that word	Displayed a note that word	
				doesn't exist.	doesn't exist	
				Exits the function	Exited the function	
	2	Entered word exists	aEntries[2].answer = "Ax"	Calls searchWord() function.	Called searchWord() function	Р
			sChosenWord = "Ax"	nIndex = 1	nIndex = 1	
				Asks user which to modify or	Asked user which to	

			action: Word, Clue or Cancel modification	modify/action: Word, Clue or Cancel modification	
3	Entered word exists but entered	aEntries[2].answer = "Ax"	Displays an invalid input note,	Displayed invalid input note	Р
	value for cChoice is not in the	sChosenWord = "Ax"	and asks user for another	and asked user for another	
	options	cChoice = 'q'	cChoice	cChoice	
4	Entered word exists and player chose to modify the word of the	aEntries[0].answer = "Ant" sChosenWord = "Ant"	Calls the modifyWord() function	Called modifyWord() function	Р
	chosen entry	cChoice = 'W'	aEntries[0].answer = "Fire Ant"	aEntries[0].answer = "Fire Ant"	
		Change word to: "Fire Ant"			
5	Entered word exists and player chose to modify the clues of the	aEntries[2].answer = "Ax" sChosenWord = "Ax"	Calls the modifyEntry() function	Called modifyEntry() function	Р
	chosen entry	cChoice = 'C'	aEntries[0].clueList[0].relation = "Used for"	aEntries[0].clueList[0].relation = "Used for"	
		Change relation to: "Used for:"			
6	Entered word exists but chose to exit/cancel modification	aEntries[2].answer = "Ax" sChosenWord = "Ax" cChoice = 'X'	Exits the function	Exited the function	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
clearLastEntry	1	Called by the function	oneEntry->answer = "Kid"	oneEntry->answer = ""	oneEntry->answer = ""	Р
		deleteWord() to delete the last	oneEntry->clueList[0].relation	oneEntry->clueList[0].relation =	oneEntry->clueList[0].relation	
		entry	= "Species"	439	= ""	
			oneEntry-	oneEntry->clueList[0].relValue	oneEntry-	
			>clueList[0].relValue = "Homo	= ""	>clueList[0].relValue = ""	
			Sapien"	oneEntry->numClues = 0	oneEntry->numClues = 0	
			oneEntry->numClues = 1			
	2	Entry is already cleared	oneEntry->answer = ""	oneEntry->answer = ""	oneEntry->answer = ""	Р
			oneEntry->clueList[0].relation	oneEntry->clueList[0].relation =	oneEntry->clueList[0].relation	
			= ""	439	= ""	
			oneEntry-	oneEntry->clueList[0].relValue	oneEntry-	
			>clueList[0].relValue = ""	= ""	>clueList[0].relValue = ""	
			oneEntry->numClues = 0	oneEntry->numClues = 0	oneEntry->numClues = 0	
	3	Entry still contains some garbage	oneEntry->answer = ""	oneEntry->answer = ""	oneEntry->answer = ""	Р

values	oneEntry->clueList[0].relation	oneEntry->clueList[0].relation =	oneEntry->clueList[0].relation	
	= "Size"	<b>""</b>	= ""	
	oneEntry-	oneEntry->clueList[0].relValue	oneEntry-	
	>clueList[0].relValue = ""	= ""	>clueList[0].relValue = ""	
	oneEntry->numClues = 3	oneEntry->numClues = 0	oneEntry->numClues = 0	

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
executeClueDeletion	1	User deletes the last clue of the	nDeleteIndex = 3	*nNumClues = 3	*nNumClues = 3	Р
		current chosen entry	*nNumClues = 4	aCluesList[0].relation = "Usage"	aCluesList[0].relation =	
		,	aCluesList[0].relation = "Usage"	aCluesList[0].relValue =	"Usage"	
			aCluesList[0].relValue =	"Cleaning"	aCluesList[0].relValue =	
			"Cleaning"	aCluesList[1].relation = "Shape"	"Cleaning"	
			aCluesList[1].relation = "Shape"	aCluesList[1].relValue =	aCluesList[1].relation =	
			aCluesList[1].relValue =	"Cylinder"	"Shape"	
			"Cylinder"	aCluesList[2].relation = "Made	aCluesList[1].relValue =	
			aCluesList[2].relation = "Made	of"	"Cylinder"	
			of"	aCluesList[2].relValue = "Metal"	aCluesList[2].relation = "Made	
			aCluesList[2].relValue = "Metal"		of"	
			aCluesList[3].relation =		aCluesList[2].relValue =	
			"Powered by"		"Metal"	
			aCluesList[3].relValue =			
			"Electricity"			
	2	User deletes the first clue of the	nDeleteIndex = 0	*nNumClues = 3	*nNumClues = 3	Р
		current chosen entry	*nNumClues = 4	aCluesList[0].relation = "Shape"	aCluesList[0].relation =	
			aCluesList[0].relation = "Usage"	aCluesList[0].relValue =	"Shape"	
			aCluesList[0].relValue =	"Cylinder"	aCluesList[0].relValue =	
			"Cleaning"	aCluesList[1].relation = "Made	"Cylinder"	
			aCluesList[1].relation = "Shape"	of"	aCluesList[1].relation = "Made	
			aCluesList[1].relValue =	aCluesList[1].relValue = "Metal"	of"	
			"Cylinder"	aCluesList[2].relation =	aCluesList[1].relValue =	
			aCluesList[2].relation = "Made	"Powered by"	"Metal"	
			of"	aCluesList[2].relValue =	aCluesList[2].relation =	
			aCluesList[2].relValue = "Metal"	"Electricity"	"Powered by"	
			aCluesList[3].relation =		aCluesList[2].relValue =	
			"Powered by"		"Electricity"	

		aCluesList[3].relValue = "Electricity"			
3	User deletes a clue in between the first and last clues of the current chosen entry	nDeleteIndex = 2 *nNumClues = 4 aCluesList[0].relation = "Usage" aCluesList[0].relValue = "Cleaning" aCluesList[1].relation = "Shape" aCluesList[1].relValue = "Cylinder" aCluesList[2].relation = "Made of" aCluesList[2].relValue = "Metal" aCluesList[3].relation = "Powered by" aCluesList[3].relValue = "Electricity"	*nNumClues = 3 aCluesList[0].relation = "Usage" aCluesList[0].relValue = "Cleaning" aCluesList[1].relation = "Shape" aCluesList[1].relValue = "Cylinder aCluesList[2].relation = "Powered by" aCluesList[2].relValue = "Electricity"	*nNumClues = 3 aCluesList[0].relation = "Usage" aCluesList[0].relValue = "Cleaning" aCluesList[1].relation = "Shape" aCluesList[1].relValue = "Cylinder aCluesList[2].relation = "Powered by" aCluesList[2].relValue = "Electricity"	P

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
deleteClue	1	Entered word doesn't exist in the	sWordForClue = "qwerty"	Displays a note that word	Displayed a note that word	Р
		current entry list		doesn't exist in the list and exits	doesn't exist and exited the	
				the function	function	
	2	Entered a word exists and	sWordForClue = "Ax" or	Asks the user which clue to	Asked the user which clue to	
		number of clues is greater than 1	aEntries[2].answer = "Ax"	delete.	delete	
	3	Entered a word exists and	sWordForClue = "Ax" or	Asks user for another clue	Asked user for another clue	Р
		number of clues is greater than	aEntries[2].answer = "Ax"	number choice for clue	number choice for clue	
		1. Then player entered an invalid	aEntries[2].numClues = 3	deletion.	deletion	
		choice for clue deletion	nChoice = 5			
	4	Entered a word exists and	sWordForClue = "Ax" or	Calls executeClueDeletion()	Called executeclueDeletion()	P
		number of clues is greater than	aEntries[2].answer = "Ax"	function.	function	
		Then player entered a valid	aEntries[2].numClues = 3	aEntries[2].numClues = 3	aEntries[2].numClues = 3	
		choice for clue deletion	nChoice = 3	aEntries[2].clueList[0].relation =	aEntries[2].clueList[0].relation	
			aEntries[2].clueList[0].relation	"Used for"	= "Used for"	
			= "Used for"	aEntries[2].clueList[0].relValue	aEntries[2].clueList[0].relValue	

		aEntries[2].clueList[0].relValue = "Chopping wood" aEntries[2].clueList[1].relation = "Sharpness" aEntries[2].clueList[1].relValue = "High" aEntries[2].clueList[2].relation = "Made of" aEntries[2].clueList[2].relValue = "Wood and metal"	= "Chopping wood" aEntries[2].clueList[1].relation = "Sharpness" aEntries[2].clueList[1].relValue = "High"	= "Chopping wood" aEntries[2].clueList[1].relation = "Sharpness" aEntries[2].clueList[1].relValue = "High"	
5	Entered word exists but it only has 1 clue/trivia left	sWordForClue = "Apple pie" or aEntries[1].answer = "Apple pie" aEntries[1].numClues = 1 aEntries[2].clueList[0].relation = "Kind of" aEntries[2].clueList[0].relValue = "Dessert"	Displays a note to the user that there should be at least one trivia per word.	Displayed a note to the user that there should be at least one trivia per word/entry.	Р
6	Player cancels clue deletion.	sWordForClue = "~"	Exits the function	Exited the function	Р
7	Player entered valid word/entry but decides to cancel clue deletion while in the middle of picking a clue to delete	nChoice = 0	Exits the function	Exited the function	P

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
viewClues	1	Player decides to cancel	strViewClues = "~"	Exits the function	Exited the function	Р
	2	There are no existing entries yet, and player tried to enter a word	nElem = 0	Displays a note that there are no entries yet and exits the function	Displayed a note that there are no entries yet and exited the function	Р
	3	Player entered a word that doesn't exist yet	strViewClues = "Capybara"  aEntries[0].answer = "Leaves" aEntries[1].answer = "Ant" aEntries[2].answer = "Apple Pie"	Displays a note that word was not found and exits the function	Displayed a note that word was not found and exited the function	Р

		aEntries[3].answer = "Car" aEntries[4].answer = "Zebra" aEntries[5].answer = "Yoyo" aEntries[6].answer = "Tea"			
4	Player entered a word that exists	strViewClues = "Leaves"  aEntries[0].answer = "Leaves" aEntries[1].answer = "Ant" aEntries[2].answer = "Apple Pie" aEntries[3].answer = "Car" aEntries[4].answer = "Zebra" aEntries[5].answer = "Yoyo" aEntries[6].answer = "Tea"	Calls viewEntry() function and displays all the clues of aEntries[0].answer = "Leaves"	Called viewEntry() function and displayed all the clues of aEntries[0].answer = "Leaves"	P
5	After the clues was displayed, player entered an invalid exit character	cChoice = 'Q'	Refreshes the display	Refreshed the display	Р
6	After the clues was displayed, player exits the view clues	cChoice = 'X'	Exits the function	Exited the function	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
swapEntries	1	Called by the sortEntries()	sDestination = &aEntries[1].	sDestination = &aEntries[0]	sDestination = &aEntries[0]	Р
		function	sSource = &aEntries[0]	sSource = &aEntries[1]	sSource = &aEntries[1]	
	2	Current min entry is the minimum	aEntries[0].answer = "Ant"	aEntries[0].answer = "Ant"	aEntries[0].answer = "Ant"	Р
		(ASCII) for that round	Min: aEntries[0].answer			
			sDestination = &aEntries[0]			
			sSource = &aEntries[0]			
	3	Current min entry is not the min	Min: aEntries[0].answer =	aEntries[0].answer = "Ant"	aEntries[0].answer = "Ant"	Р
		ASCII	"Apple Pie"	aEntries[1].answer = "Apple	aEntries[1].answer = "Apple	
				Pie"	Pie"	
			aEntries[1].answer = "Ant"			
			sDestination = &aEntries[0]			
			sSource = &aEntries[1]			

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/ F
import	1	File doesn't exist	fname = "qwerty.txt"	Displays a note that the file doesn't exist	Displays a note that the file doesn't exist	Р
	2	File exists and there is a word in the file that is also in the current entry but user chose to retain the word in the entry.	fname = "SAMPLE-TRIVIA.txt" cChoice = 'N' aEntries[1].answer = "Apple pie" aEntries[1].numClues = 1 aEntries[1].clueList[0].relation = "Kind of" aEntries[1].clueList[0].relValue = "Dessert" *nElem = 3  In File with the same word: Object: Apple Pie	Retains the word in the entry and scan the unique entries left in the file.  aEntries[1].answer = "Apple pie" aEntries[1].numClues = 1 aEntries[1].clueList[0].relation = "Kind of" aEntries[1].clueList[0].relValue = "Dessert"  *nElem = 4 Added word:	Retained the word in the entry and scanned the unique entries left in the file.  aEntries[1].answer = "Apple pie" aEntries[1].numClues = 1 aEntries[2].clueList[0].relation = "Kind of" aEntries[2].clueList[0].relValue = "Dessert"  *nElem = 4 Added word:	P
			Made of: Apple and dough Cooked using: Oven  Other words in file: Object: Car Size: Big	aEntries[1].answer = "Car" aEntries[1].numClues = 1 aEntries[1].clueList[0].relation = "Size" aEntries[1].clueList[0].relValue = "Big"	aEntries[1].answer = "Car" aEntries[1].numClues = 1 aEntries[1].clueList[0].relation = "Size" aEntries[1].clueList[0].relValue = "Big"	
	3	File exists and there is a word in the file that is also in the current entry but user chose to overwrite the word in the entry with the word from the file.	fname = "SAMPLE-TRIVIA.txt" cChoice = 'Y' aEntries[1].answer = "Apple pie" aEntries[1].numClues = 1 aEntries[1].clueList[0].relation = "Kind of" aEntries[1].clueList[0].relValue = "Dessert" *nElem = 3	aEntries[1].answer = "Apple pie" aEntries[1].numClues = 2 aEntries[1].clueList[0].relation = "Made of" aEntries[1].clueList[0].relValue = "Apple and dough" aEntries[1].clueList[1].relation = "Cooked using" aEntries[1].clueList[1].relValue = "Oven"	aEntries[1].answer = "Apple pie" aEntries[1].numClues = 2 aEntries[2].clueList[0].relation = "Made of" aEntries[2].clueList[0].relValue = "Apple and dough" aEntries[2].clueList[1].relation = "Cooked using" aEntries[2].clueList[1].relValue = "Oven"	P
			In File with the same word: Object: Apple Pie Made of: Apple and dough	*nElem = 4 Added word:	*nElem = 4 Added word:	

		Cooked using: Oven Other words in file: Object: Car Size: Big	aEntries[1].answer = "Car" aEntries[1].numClues = 1 aEntries[1].clueList[0].relation = "Size" aEntries[1].clueList[0].relValue = "Big"	aEntries[1].answer = "Car" aEntries[1].numClues = 1 aEntries[1].clueList[0].relation = "Size" aEntries[1].clueList[0].relValue = "Big"	
4	Either the entries from files are unique for the current entries or there are no entries yet in the program	fname = "SAMPLE-TRIVIA2.txt"  In File: Object: Ant Kind of: Insect  Object: Apple Pie Taste: Sweet  Object: Ax Usage: Wood cutting	aEntries[0].answer = "Ant" aEntries[0].clueList[0].relation = "Kind of" aEntries[0].clueList[0].relValue = "Insect" aEntries[1].answer = "Apple Pie" aEntries[1].clueList[0].relation = "Taste" aEntries[1].clueList[0].relValue = "Sweet" aEntries[2].answer = "Ax" aEntries[2].clueList[0].relation = "Usage" aEntries[2].clueList[0].relValue = "Wood cutting"	aEntries[0].answer = "Ant" aEntries[0].clueList[0].relation = "Kind of" aEntries[0].clueList[0].relValue = "Insect" aEntries[1].answer = "Apple Pie" aEntries[1].clueList[0].relation = "Taste" aEntries[1].clueList[0].relValue = "Sweet" aEntries[2].answer = "Ax" aEntries[2].clueList[0].relation = "Usage" aEntries[2].clueList[0].relValue = "Wood cutting"	P
5	Number of entries in the program reached its max capacity	*pElem = 150 fname = "LAST.txt"  Last entry in program from file: aEntries[149] = "Zebra" aEntries[149].numClues = 1 aEntries[149].clueList[0].relation = "Color" aEntries[149].clueList[0].relValue = "Black and white"  Remaining in file LAST.txt: Object: zzz Meaning: Sleeping	aEntries[149] = "Zebra" aEntries[149].numClues = 1 aEntries[149].clueList[0].relation = "Color" aEntries[149].clueList[0].relValue = "Black and white"	aEntries[149] = "Zebra" aEntries[149].numClues = 1 aEntries[149].clueList[0].relation = "Color" aEntries[149].clueList[0].relValue = "Black and white"	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
initBoard	1	The desired number of elements to be generated on the gameboard is greater than the number of elements the current entry has.	nRows = 5 nCols = 6 /* total number of elements to be used for gameboard is 30 elements but there are only 7 entries*/ nElem = 7	0	0	P
	2	The desired number of elements to be generated on the gameboard is less than the number of elements the current entry has. Can be initialized	nRows = 3 nCols = 2 /* total number of elements to be used for gameboard is 6 elements */ nElem = 7  In File: (INIT1.txt) Object: Leaves Color: Green Grows on: Trees  Object: Ant Kind of: Insect  Object: Apple Pie Kind of: Dessert  Object: Car Size: Big  Object: Zebra Color: Black and white  Object: Yoyo Used for: Playing	Gameboard contains letters. Use member field of used entries are updated with the row that they've been used	1 gameboard = {{'Y','T'},{'C','A'},{'A','L'}} aEntries[0].answer = "Leaves" aEntries[0].use = 3 aEntries[1].answer = "Ant" aEntries[1].use = 2 aEntries[2].answer = "Apple Pie" aEntries[3].answer = "Car" aEntries[3].use = 2 aEntries[4].answer = "Zebra" aEntries[4].use = 0 aEntries[5].answer = "Yoyo" aEntries[5].use = 1 aEntries[6].answer = "Tea" aEntries[6].use = 1	P

		Object: Tea Helps in: Relaxation			
3	Gameboard can't be initialize because of the remaining letters are either the same first letters or it cannot provide a unique first letters for all the remaining rows in the gameboard.	nRows = 2 nCols = 3 /* total number of elements to be used for gameboard is 6 elements */ nElem = 7	0	0	P
		In File: (INIT2.txt) Object: Ax Usage: Wood cutting Object: Ant			
		Kind of: Insect  Object: Apple Pie Kind of: Dessert			
		Object: Car Size: Big Object: Ache Synonym: Pain			
		Object: Age Can be: Counted Object: Tea Helps in: Relaxation			

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
				=2.5000000000000000000000000000000000000	2 10 10 10 1	

play	1	Player entered a letter choice that is not in the current row	nCurrentRow = 0 gameboard[0][0] = 'Q' gameboard[0][1] = 'W' gameboard[0][2] = 'E' gameboard[0][3] = 'R' cPlyrInpt = 'T'	Displays a note that choice doesn't exist in the current row, and asks user for another letter of choice	Displayed that choice	P
	2	Player cancels the game in the middle of entering his letter input	cPlyrInpt = '~'	Exits the function	Exited the function	Р
	3	Player entered a letter choice that is in the current row	nCurrentRow = 0 gameboard[0][0] = 'Q' gameboard[0][1] = 'W' gameboard[0][2] = 'E' gameboard[0][3] = 'R' cPlyrInpt = 'W' aEntries[0].answer = "Wheel" aEntries[0].use = 1 aEntries[0].clueList[0].relation = "Shape" aEntries[0].clueList[0].relValue = "Circle"	Displays one randomly chosen clue from the chosen letter of entry, and asks the answer of the user.	Displayed: "Shape: Circle"  Asked user for the answer	P
	4	Player answered the chosen word correctly	nCurrentRow = 0 gameboard[0][0] = 'Q' gameboard[0][1] = 'W' gameboard[0][2] = 'E' gameboard[0][3] = 'R' cPlyrInpt = 'W' aEntries[0].answer = "Wheel" aEntries[0].use = 1 aEntries[0].clueList[0].relation = "Shape" aEntries[0].clueList[0].relValue = "Circle"  sPlyrAns = "Wheel"	gameboard[0][0] = '*' nCurrentRow = 1	gameboard[0][0] = '*' nCurrentRow = 1	P
	5	Player answered the chosen word wrong	nCurrentRow = 0 gameboard[0][0] = 'Q'	gameboard[0][0] = '-' nPlyrChance = 3	gameboard[0][0] = '-' nPlyrChance = 3	Р

		gameboard[0][1] = 'W' gameboard[0][2] = 'E' gameboard[0][3] = 'R' cPlyrInpt = 'W' aEntries[0].answer = "Wheel" aEntries[0].use = 1 aEntries[0].clueList[0].relation = "Shape" aEntries[0].clueList[0].relValue = "Circle"  sPlyrAns = "Pizza"	Asks user for another letter choice to answer	Asked user for another letter to answer	
6	Player answered all the words in the current row of the gameboard wrong	nPlyrChance = 0	Displays gameover, and exits the function	Displayed gamover and exits	Р
7	Player decides to exit the game while in the middle of entering his answer	Cancel Character: "~" sPlyrAns = "~"	Exits the function	Exited the function	Р
8	Player wins	nRows = 2 nCurrentRow = 2	Displays a congratulations note	Displayed congratulations note	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
maintenance	1	Player entered a letter that is not	cChoice = 'L'	Displays an invalid input note	Displayed an invalid input	Р
		in the options		and asks user for another letter	note and asked user for	
				input	another input	
	2	Player decides to exit the	cChoice = 'X'	Exits the maintenance()	Exited the maintenance()	Р
		maintenance phase		function.	function	
	3	Player chose the Add Word	cChoice = '1'	Calls the addWord() function	Called the addWord() function	Р
		option				
	4	Player chose the Add Clue option	cChoice = '2'	Calls the addTriviaMenu()	Called the addTriviaMenu()	А
				function	function	
	5	Player chose the Modify Entry	cChoice = '3'	Calls the sortEntries() and	Called the sortEntries() and	Ь
		option		executeModification() functions	executeModification()	
					funcitons	
	6	Player chose the Delete Word	cChoice = '4'	Calls the sortEntries() and	Called the sortEntries() and	Р

		option		deleteWord() functions	deleteWord() functions	
7	7	Player chose the Delete Clue option	cChoice = '5'	Calls the sortEntries() and deleteClue() functions	Called the sortEntries() and deleteClue() functions	Р
8	8	Player chose the View Words option	cChoice = '6'	Calls the sortEntries() and viewWords() functions	Called the sortEntries() and viewWords() funcitons	Р
S	9	Player chose the View Clues option	cChoice = '7'	Calls the sortEntries() and viewClues() functions	Called the sortEntries() and viewClues() funcitons	Р
	10	Player chose the Export option, and enters a file name	cChoice = '8' sFileName = "SAMPLE- TRIVIA.txt"	Calls the sortEntries() and export() functions	Called the sortEntries() and export() funcitons	Р
	11	Player chose the Export option, but cancels export.	cChoice = '8' sFileName = "~"	Loops back on asking the user which option/action to be executed in the maintenance phase	Looped back on asking the user which option/action to be executed in the maintenance phase	P
1	12	Player chose the Import option, and enters a filename	cChoice = '9' sFileName = "SAMPLE- TRIVIA.txt"	Calls the sortEntries() and import() functions	Called the sortEntries() and import() functions	Р
1	13	Player chose the Import option, but cancels import.	cChoice = '9' sFileName = "~"	Loops back on asking the user which option/action to be executed.	Looped back on asking the user which option/action to be executed in the maintenance phase	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
searchWord	1	There are no words yet in the	nElem = 0	-1	-1	Р
		entries	key = "Acrylic"			
	2	The word doesn't exist in the current entry list	nElem = 3 aEntries[0].answer = "Ant" aEntries[1].answer = "Apple Pie" aEntries[2].answer = "Ax" key = "Acrylic"	-1	-1	Р
	3	The word exists in the current entry list	nElem = 3 aEntries[0].answer = "Ant" aEntries[1].answer = "Apple Pie"	2	2	Р

	aEntries[2].answer = "Ax"		
	key = "Ax"		

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
addWord	1	Player cancels to add word	strNewWord = "~"	Exits the function, and returns to the maintenance phase	Exited the function	Р
	2	Player entered a word that already exists in the current entry list.	strNewWord = "Ax" aEntries[2].answer = "Ax"	Displays a note that word already exists, and exits the function	Displayed a note that word already exists and exited the function	Р
	3	Player entered a unique entry	*nElem = 3 aEntries[0].answer = "Ant" aEntries[1].answer = "Apple Pie" aEntries[2].answer = "Ax" strNewWord = "Bulldog"	Copies strNewWord to aEntries[3].answer, and calls addTrivia() function * nElem = 4 aEntries[3].answer = "Bulldog"	* nElem = 4 aEntries[3].answer = "Bulldog"  Called the addTrivia() function	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
addTrivia	1	Player decides to cancel add trivia, but number of trivia is not at least 1 (numClues = 0)	oneEntry->numClues = 0 oneEntry->clueList[0].relation = "~" bHasRel = -1	Displays a note that there should be at least one trivia per word, and then asks user for a relation and relation value again		P
	2	Player cancels to add trivia, and trivia/clue count is greater than 1	oneEntry->numClues = 2 oneEntry->clueList[0].relation = "~" bHasRel = -1	Exits the function	Exited the function	Р
	3	Player entered an invalid input for relation member field	oneEntry->clueList[0] .relation= "" bHasRel = 0	Displays invalid input note, and asks for an input for the relation member field	Displayed an invalid input note and asked for input for relation member field	Р
	4	Player entered a valid input for the relation but invalid input for relation value	oneEntry->clueList[0] .relation= "Texture" bHasRel = 1 oneEntry->clueList[0] .relValue= ""	Displays invalid input note, and asks for an input for the relation value member field to pair with the recent entered relation member field	Displayed an invalid input note and asked for input for relation value member field to pair with the recent entered relation member field	P

		bHasRelVal = 0			
5	Player entered a valid input for the relation, then cancels input for relation value	oneEntry->clueList[1] .relation= "Texture" bHasRel = 1 oneEntry->clueList[1] .relValue= "~" bHasRelVal = -1	It will clear the content of the recent relation, and then exits the function. oneEntry->clueList[1] .relation=		P
6	Player entered a valid input for both relation and relation value	oneEntry->numClues = 0 oneEntry->clueList[0] .relation= "Texture" bHasRel = 1 oneEntry->clueList[0] .relValue= "Rough"	oneEntry->numClues = 1 oneEntry->clueList[0] .relation= "Texture" oneEntry->clueList[0] .relValue= "Rough"	oneEntry->numClues = 1 oneEntry->clueList[0] .relation= "Texture" oneEntry->clueList[0] .relValue= "Rough"	P
		bHasRelVal = 1	Then asks user for another set of clues	Then asked user for another set of clues	
7	Player reached the max capacity of trivia/clue count	oneEntry->numClues = 10	Displays a note that the entry has reached the maximum capacity of clues, and then exits the function	Displayed a note that entry has reached maximum capacity of clues, and then exited the function	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
modifyEntry	1	Player decides to cancel	nNumChoice = 0	Exits the function	Exited the function	Р
		modification of clues of one entry				
	2	Player enters an invalid integer input; input is not in the range of choices	nNumChoice = 5 oneEntry->numClues = 4	Displays an invalid input note	Displayed an invalid input note	Р
	3	Player enters a valid integer input	oneEntry->numClues = 4 nNumChoice = 2	Calls the modifyClues() function	Called modifyClues() funciton	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
deleteWord	1	Entered word to delete doesn't exists in the current entry list	sWordToDelete = "Carrot" *pElem = 3	Displays a note that word entered doesn't exist	Displayed a note that word doesn't exist	Р
			aEntries[0].answer = "Ant"			
			aEntries[1].answer = "Apple			

		Pie"			
		aEntries[2].answer = "Ax"			
2	Entered word to delete exists in the current entry list	sWordToDelete = "Apple Pie" *pElem = 3 aEntries[0].answer = "Ant" aEntries[1].answer = "Apple Pie" aEntries[2].answer = "Ax"	Deletes the word "Apple Pie" with all its clues (aEntries[1].answer). *pElem = 2 aEntries[0].answer = "Ant" aEntries[1].answer = "Ax"	Deleted the word "Apple Pie" with all its clues (aEntries[1].answer). *pElem = 2 aEntries[0].answer = "Ant" aEntries[1].answer = "Ax"	P
3	Player decides to cancel word deletion	sWordToDelete = "~"	Exits the function	Exited the function	Р
4	There are no words to delete because the list of entries is empty	*pElem = 0	Displays a note that there are no entries/words left to delete, and then exits the function	Displayed a note that there are no entries/words left to delete and exited the function	Р

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
viewWords	1	Player tries to enter previous character even though it is the first word/entry being displayed	e = 0 cChoice = '<'	Refreshes the current displayed entry/word	Refreshed the current displayed entry/word	Р
	2	Player tries to enter next character even though it is the last word/entry being displayed	nElem = 3 nLastElem = 2 e = 2 cChoice = '>'	Refreshes the current displayed entry/word	Refreshed the current displayed entry/word	Р
	3	Player entered an invalid input or character choice	cChoice = '+'	Refreshes the current displayed entry/word	Refreshed the current displayed entry/word	Р
	4	Player entered a valid input or character choice	nElem = 3 nLastElem = 2 e = 0 cChoice = '>'	e = 1 Displays the entry/word of aEntries[1]	e = 1 Displayed the entry/word of aEntries[1]	P
	5	Player decides to exit the viewing of words/entries	cChoice = 'X'	Exits the function	Exited the function	Р
	6	There are no existing entries yet	nElem = 0	Displays a note that there are no existing entries yet	Displayed a note that there are no existing entries yet	Р
		There are no existing entries yet and player tries to enter next/previous characters	nElem = 0 cChoice = '>'	Refreshes the current display	Refreshed the current display	Р

7	There are no exsiting entries yet,	nElem = 0	Exits the function	Exited the function	Р
	and player exits the view clues	cChoice = 'X'			

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
export	1	File doesn't exist yet	aEntries[0].answer = "Ant"	Creates the file:	Created the file:	Р
			aEntries[0].clueList[0].relation	(EXPORT1.txt)	(EXPORT1.txt)	
			= "Kind of"			
			aEntries[0].clueList[0].relValue	To be printed in file:	Printed in file:	
			= "Insect"	Object: Ant	Object: Ant	
			aEntries[1].answer = "Apple	Kind of: Insect	Kind of: Insect	
			Pie"			
			aEntries[1].clueList[0].relation	Object: Apple Pie	Object: Apple Pie	
			= "Taste"	Taste: Sweet	Taste: Sweet	
			aEntries[1].clueList[0].relValue			
			= "Sweet"	Object: Ax	Object: Ax	
			aEntries[2].answer = "Ax"	Usage: Wood cutting	Usage: Wood cutting	
			aEntries[2].clueList[0].relation			
			= "Usage"			
			aEntries[2].clueList[0].relValue			
			= "Wood cutting"			
	2	File already exists and overwrites	aEntries[0].answer = "Ant"	Overwriten file:	Overwriten file: (EXPORT2.txt)	Р
		a new list of entries in it	aEntries[0].clueList[0].relation	(EXPORT2.txt)		
			= "Kind of"		Object: Ant	
			aEntries[0].clueList[0].relValue	Object: Ant	Kind of: Insect	
			= "Insect"	Kind of: Insect		
			aEntries[1].answer = "Apple		Object: Apple Pie	
			Pie"	Object: Apple Pie	Taste: Sweet	
			aEntries[1].clueList[0].relation	Taste: Sweet	Made of: Apple and dough	
			= "Taste"	Made of: Apple and dough		
			aEntries[1].clueList[0].relValue		Object: Ax	
			= "Sweet"	Object: Ax	Usage: Wood cutting	
			aEntries[1].clueList[1].relation	Usage: Wood cutting		
			= "Made of"			
			aEntries[1].clueList[1].relValue			
			= "Apple and dough"			

		aEntries[2].answer = "Ax" aEntries[2].clueList[0].relation = "Usage" aEntries[2].clueList[0].relValue = "Wood cutting"  Exisiting File: (EXPORT2.txt) Object: Balloon Made of: Plastic Contains: Air or Gas			
3	File already exists and the exported entries has no changes	aEntries[0].answer = "Ant" aEntries[0].clueList[0].relation = "Kind of" aEntries[0].clueList[0].relValue = "Insect" aEntries[1].answer = "Apple Pie" aEntries[1].clueList[0].relation = "Taste" aEntries[1].clueList[0].relValue = "Sweet" aEntries[1].clueList[1].relation = "Made of" aEntries[1].clueList[1].relValue = "Apple and dough" aEntries[2].answer = "Ax" aEntries[2].clueList[0].relation = "Usage" aEntries[2].clueList[0].relValue = "Wood cutting"  In File: (EXPORT2.txt) Object: Ant Kind of: Insect	In File: (EXPORT2.txt)  Object: Ant Kind of: Insect  Object: Apple Pie Taste: Sweet Made of: Apple and dough  Object: Ax Usage: Wood cutting	In File: (EXPORT2.txt)  Object: Ant Kind of: Insect  Object: Apple Pie Taste: Sweet Made of: Apple and dough  Object: Ax Usage: Wood cutting	P

	Object: Apple Pie	
	Taste: Sweet	
	Made of: Apple and dough	
	Object: Ax	
	Usage: Wood cutting	

Function	#	Descriptions	Sample Input Data	Expected Output	Actual Output	P/F
sortEntries	1	There are no entries to sort	nElem = 0	Exits the function	Exited the function	Р
	2	Entries are already sorted	nElem = 7	nElem = 7	nElem = 7	Р
			aEntries[0].answer = "Ant"	aEntries[0].answer = "Ant"	aEntries[0].answer = "Ant"	
		aEntries[0].clueList[0].relation	aEntries[0].clueList[0].relation =	aEntries[0].clueList[0].relation		
		= "Kind of"	"Kind of"	= "Kind of"		
			aEntries[0].clueList[0].relValue	aEntries[0].clueList[0].relValue	aEntries[0].clueList[0].relValue	
			= "Insect"	= "Insect"	= "Insect"	
			aEntries[0].numClues = 1	aEntries[0].numClues = 1	aEntries[0].numClues = 1	
			aEntries[1].answer = "Apple	aEntries[1].answer = "Apple	aEntries[1].answer = "Apple	
			Pie"	Pie"	Pie"	
			aEntries[1].clueList[0].relation	aEntries[1].clueList[0].relation =	aEntries[1].clueList[0].relation	
			= "Kind of"	"Kind of"	= "Kind of"	
			aEntries[1].clueList[0].relValue	aEntries[1].clueList[0].relValue	aEntries[1].clueList[0].relValue	
			= "Dessert"	= "Dessert"	= "Dessert"	
			aEntries[1]. numClues = 1	aEntries[1]. numClues = 1	aEntries[1]. numClues = 1	
			aEntries[2].answer = "Car"	aEntries[2].answer = "Car"	aEntries[2].answer = "Car"	
			aEntries[2].clueList[0].relation	aEntries[2].clueList[0].relation =	aEntries[2].clueList[0].relation	
			= "Size"	"Size"	= "Size"	
			aEntries[2].clueList[0].relValue = "Big"	aEntries[2].clueList[0].relValue = "Big"	aEntries[2].clueList[0].relValue = "Big"	
			aEntries[2]. numClues = 1	aEntries[2]. numClues = 1	aEntries[2]. numClues = 1	
		aEntries[3].answer = "Leaves"	aEntries[3].answer = "Leaves"	aEntries[3].answer = "Leaves"		
		aEntries[3].clueList[0].relation	aEntries[3].clueList[0].relation =	aEntries[3].clueList[0].relation		
			= "Color"	"Color"	= "Color"	
			aEntries[3].clueList[0].relValue	aEntries[3].clueList[0].relValue	aEntries[3].clueList[0].relValue	
			= "Green"	= "Green"	= "Green"	

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		aEntries[3].clueList[1].relation = "Grows on"	aEntries[3].clueList[1].relation = "Grows on"	aEntries[3].clueList[1].relation = "Grows on"	
		aEntries[3].clueList[1].relValue	aEntries[3].clueList[1].relValue	aEntries[3].clueList[1].relValue	
		= "Trees"	= "Trees"	= "Trees"	
		aEntries[3].numClues = 2	aEntries[3].numClues = 2	aEntries[3].numClues = 2	
		aEntries[4].answer = "Tea"	aEntries[4].answer = "Tea"	aEntries[4].answer = "Tea"	
		aEntries[4].clueList[0].relation	aEntries[4].clueList[0].relation =	aEntries[4].clueList[0].relation	
		= "Helps in"	"Helps in"	= "Helps in"	
		aEntries[4].clueList[0].relValue	aEntries[4].clueList[0].relValue	aEntries[4].clueList[0].relValue	
		= "Relaxation"	= "Relaxation"	= "Relaxation"	
		aEntries[4]. numClues = 1	aEntries[4]. numClues = 1	aEntries[4]. numClues = 1	
		aEntries[5].answer = "Yoyo"	aEntries[5].answer = "Yoyo"	aEntries[5].answer = "Yoyo"	
		aEntries[5].clueList[0].relation	aEntries[5].clueList[0].relation =	aEntries[5].clueList[0].relation	
		= "Used for"	"Used for"	= "Used for"	
		aEntries[5].clueList[0].relValue	aEntries[5].clueList[0].relValue	aEntries[5].clueList[0].relValue	
		= "Playing"	= "Playing"	= "Playing"	
		aEntries[5]. numClues = 1	aEntries[5]. numClues = 1	aEntries[5]. numClues = 1	
		aEntries[4].answer = "Zebra"	aEntries[4].answer = "Zebra"	aEntries[4].answer = "Zebra"	
		aEntries[4].clueList[0].relation	aEntries[4].clueList[0].relation =	aEntries[4].clueList[0].relation	
		= "Color"	"Color"	= "Color"	
		aEntries[4].clueList[0].relValue	aEntries[4].clueList[0].relValue	aEntries[4].clueList[0].relValue	
		= "Black and white"	= "Black and white"	= "Black and white"	
		aEntries[4]. numClues = 1	aEntries[4]. numClues = 1	aEntries[4]. numClues = 1	
3	Entries are not sorted	nElem = 7	nElem = 7	nElem = 7	Р
		aEntries[0].answer = "Leaves"	aEntries[0].answer = "Ant"	aEntries[0].answer = "Ant"	
		aEntries[0].clueList[0].relation	aEntries[0].clueList[0].relation =	aEntries[0].clueList[0].relation	
		= "Color"	"Kind of"	= "Kind of"	
		aEntries[0].clueList[0].relValue	aEntries[0].clueList[0].relValue	aEntries[0].clueList[0].relValue	
		= "Green"	= "Insect"	= "Insect"	
		aEntries[0].clueList[1].relation	aEntries[0].numClues = 1	aEntries[0].numClues = 1	
		= "Grows on"	aEntries[1].answer = "Apple	aEntries[1].answer = "Apple	
		aEntries[0].clueList[1].relValue	Pie"	Pie"	
		= "Trees"	aEntries[1].clueList[0].relation =	aEntries[1].clueList[0].relation	
		aEntries[0].numClues = 2	"Kind of"	= "Kind of"	
		aEntries[1].answer = "Ant"	aEntries[1].clueList[0].relValue	aEntries[1].clueList[0].relValue	
		aEntries[1].clueList[0].relation	= "Dessert"	= "Dessert"	

	= "Kind of" aEntries[1].clueList[0].relValue = "Insect" aEntries[1].numClues = 1 aEntries[2].answer = "Apple Pie" aEntries[2].clueList[0].relation = "Kind of" aEntries[2].clueList[0].relValue = "Dessert" aEntries[2]. numClues = 1 aEntries[3].answer = "Car" aEntries[3].clueList[0].relation = "Size" aEntries[3].clueList[0].relValue = "Big" aEntries[3]. numClues = 1 aEntries[4].answer = "Zebra" aEntries[4].clueList[0].relation = "Color" aEntries[4].clueList[0].relValue = "Black and white" aEntries[4]. numClues = 1 aEntries[5].answer = "Yoyo" aEntries[5].clueList[0].relation	aEntries[1]. numClues = 1 aEntries[2].answer = "Car" aEntries[2].clueList[0].relation = "Size" aEntries[2].clueList[0].relValue = "Big" aEntries[2]. numClues = 1 aEntries[3].answer = "Leaves" aEntries[3].clueList[0].relation = "Color" aEntries[3].clueList[0].relValue = "Green" aEntries[3].clueList[1].relation = "Grows on" aEntries[3].clueList[1].relValue = "Trees" aEntries[3].numClues = 2 aEntries[4].answer = "Tea" aEntries[4].clueList[0].relation = "Helps in" aEntries[4].clueList[0].relValue = "Relaxation" aEntries[4]. numClues = 1 aEntries[5].answer = "Yoyo" aEntries[5].clueList[0].relation =	aEntries[1]. numClues = 1 aEntries[2].answer = "Car" aEntries[2].clueList[0].relation = "Size" aEntries[2].clueList[0].relValue = "Big" aEntries[2]. numClues = 1 aEntries[3].answer = "Leaves" aEntries[3].clueList[0].relation = "Color" aEntries[3].clueList[0].relValue = "Green" aEntries[3].clueList[1].relation = "Grows on" aEntries[3].clueList[1].relValue = "Trees" aEntries[3].numClues = 2 aEntries[4].answer = "Tea" aEntries[4].clueList[0].relation = "Helps in" aEntries[4].clueList[0].relValue = "Relaxation" aEntries[4]. numClues = 1 aEntries[5].answer = "Yoyo" aEntries[5].clueList[0].relation
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	<b>-</b> -	<b>- -</b>	• •
			I
		aEntries[5].clueList[0].relation = "Used for"	aEntries[5].clueList[0].relation = "Used for"
	aEntries[5].clueList[0].relValue = "Playing"	aEntries[5].clueList[0].relValue = "Playing"	aEntries[5].clueList[0].relValue = "Playing"
	aEntries[5]. numClues = 1	aEntries[5]. numClues = 1	aEntries[5]. numClues = 1
	aEntries[6].answer = "Tea"	aEntries[4].answer = "Zebra"	aEntries[4].answer = "Zebra"
	aEntries[6].clueList[0].relation = "Helps in"	aEntries[4].clueList[0].relation = "Color"	aEntries[4].clueList[0].relation = "Color"
	aEntries[6].clueList[0].relValue	aEntries[4].clueList[0].relValue	aEntries[4].clueList[0].relValue
	= "Relaxation"	= "Black and white"	= "Black and white"
	aEntries[6]. numClues = 1	aEntries[4]. numClues = 1	aEntries[4]. numClues = 1

Function	#	Description	Sample Input Data	Expected Output	Actual Output	P/F
	1					
	2					
	3					