

CCPROG2 MP – WORD TRIVIA

Function Name	Description	Input Parameter	Return Data
displayFloatingIcons	Prints characters in a single line format. The occurrences of the desired character to be printed can be manipulated using the spacing, and how long the characters will be printed can be manipulated using its max length	nMax – length of the characters to be printed clcon – the character to be printed every nSpacing nSpacing – the nth character where the clcon will be printed every time from the start or last print	Displays a single line of a specified format of character that is printed.

Function Name	Description	Input Parameter	Return Data
displayHeaderUnderline	Prints an underline for a header with unique character design	None	Prints an underline

Function Name	Description	Input Parameter	Return Data
displayScanDivider	Prints and displays a divider at the bottom part of the current display and it notifies user that user needs to enter a character or value	None	Prints a bottom divider and scanning to user

Function Name	Description	Input Parameter	Return Data
displayUpperUniversalChoiceBox	Displays the upper portion/border of the choice box	None	Prints upper part of choice box

Function Name	Description	Input Parameter	Return Data
displayLowerUniversalChoiceBox	Displays the lower portion/border of the choice box	None	Prints lower part of choice box

Function Name	Description	Input Parameter	Return Data
getSingleChar	Gets the single character input of user and ensures that it takes up the newline character to avoid being stored to other variables while it is in the input buffer	cChar – the address of the character choice of the user	*cChar – updated value of the character choice of user

Function Name	Description	Input Parameter	Return Data
---------------	-------------	-----------------	-------------

CCPROG2 MP – WORD TRIVIA

getString	Gets the string input user of the user in accordance to the required string length	sString – the address where the input string will be stored nLength – string length needed *cCancelChar – cancel character for cancelation of string input in string format	*sString – the updated string content
-----------	--	---	---------------------------------------

Function Name	Description	Input Parameter	Return Data
generateRandomNum	Generates a random number from 0 up to the given maximum limit	nMaxLim – max limit of range of values to be randomly generated	nRandNum – generated random number from the given range

Function Name	Description	Input Parameter	Return Data
delay	Pauses the program with the given number of seconds	nSeconds – time in seconds on how long the program should pause	Pauses program for nSeconds

Function Name	Description	Input Parameter	Return Data
getWordEntry	Gets the word entry for a specific chosen scenario (i.e. Add word, Play, etc.) until player enters a valid or input cancelation.	sChosenWord – where the entered string will be stored bValid – the address of the Boolean indicator if string input is valid or an input cancelation *sEntryFor – indicator for what type of word input the string for	sChosenWord – updated string content

Function Name	Description	Input Parameter	Return Data
isUniqueLetter	Checks if generated random entry is unique and not yet used	gameboardRow – the current row of the gameboard being checked. (1D array) nCols – current number of columns that have been initialized in the gameboard nRandNum – the generated random	1 – if unique and not yet used 0 – if not unique or entry is already in use

CCPROG2 MP – WORD TRIVIA

		number for the index of aEntries aEntries – the list of entries	
--	--	--	--

Function Name	Description	Input Parameter	Return Data
checkLetters Left	Checks the letters left in the current list of aEntries that are not yet used in the gameboard	aEntries – the list of entries nElem – number of elements in aEntries	nLettersLeft – total number of letters left in the aEntries that are not yet used in the gameboard

Function Name	Description	Input Parameter	Return Data
printOuterGameboard	Prints the outer(upper and lower) borders of the gameboard display	nCol – number of columns for the current game session cLeft – character to be printed on the left side of the border cRight – character to be printed on the right side of the border	Prints the outer border of the gameboard

Function Name	Description	Input Parameter	Return Data
printGameboardDivi	Prints the dividers inside the gameboard	nCol – number of columns for the current game session	Prints gameboard divider

Function Name	Description	Input Parameter	Return Data
printGameboardContent	Prints the contents of the gameboard	aGameLetters – the array of contents/characters of the gameboard per row nCol – number of columns for the current game session	Prints content of gameboard

Function Name	Description	Input Parameter	Return Data
printGameboard	Prints the whole gameboard display with current row indicator	aGameLetters – the array matrix of gameboard letters nRow – number of rows for the	Prints whole gameboard with current row indicator

CCPROG2 MP – WORD TRIVIA

		current game session nCol – number of columns for the current game session nCurrentRow – current row index of the gameboard that the player is answering	
--	--	--	--

Function Name	Description	Input Parameter	Return Data
checkGameboard	Checks if letter input of player exists in the current row of the gameboard	gameboardRow – the contents of the current row of gameboard. (1D array) aEntries – the array/list of word entries nElem – number of elements in aEntries nIndex – address where the index of the current entry being guessed in the aEntries nCurrCol – address where the column index of current letter being guessed in the gameboard cChoice – letter input/choice of player nCurrentRow - current row index of the gameboard that the player is answering nCol - number of columns for the current game session	*nIndex – updated value of index for aEntries *nCurrCol – updated value of column index for gameboard

Function Name	Description	Input Parameter	Return Data
displayMaintenanceContent	Displays the content for the choice box of action in the maintenance phase	nNum – number choice for indicated action for maintenance phase sString – String contains the indicated action for maintenance phase (i.e. Add Word, etc)	Prints the choice content

CCPROG2 MP – WORD TRIVIA

Function Name	Description	Input Parameter	Return Data
displayMaintenanceChoices	Displays all the choices that can be done in the maintenance phase	None	Prints the maintenance phase choices

Function Name	Description	Input Parameter	Return Data
initializeEntries	Initializes all the strings to empty string and integers to zero in aEntries	aEntries – array/list of word entries	aEntries – initialized contents of to empty values

Function Name	Description	Input Parameter	Return Data
printViewBorders	Frame for the listed words	cHeaderOrFooter – character Boolean for determining whether to display the header or footer part	Prints the borders

Function Name	Description	Input Parameter	Return Data
displayAddWordHeader	Displays the add word header during the add word action	None	Prints the header

Function Name	Description	Input Parameter	Return Data
displayAddTriviaHeader	Displays the add trivia header during the add trivia action	None	Prints header

Function Name	Description	Input Parameter	Return Data
addTriviaMenu	The main menu for the add trivia action. Executes the adding of new trivia to existing entry. Asks user which word to add trivia with. If word exists, it calls addTrivia() function. Otherwise it exits the function	aEntries – array/list of word entries nElem – number of elements in aEntries	Updated clue contents and number of clues in one element/entry in aEntries

Function Name	Description	Input Parameter	Return Data
displayModifyWordHeader	Displays the modify word header during the modify word action	None	Displays the header

CCPROG2 MP – WORD TRIVIA

Function Name	Description	Input Parameter	Return Data
modifyWord	Modifies word of the chosen oneEntry. Asks user for modified word. If entered word exists, it asks user for another string input. Otherwise it modifies the current word to the entered string by user	oneEntry – address of the single entry to be modified aEntries – array/list of word entries nElem – number of elements in aEntries	oneEntry->answer – modified string/word entry

Function Name	Description	Input Parameter	Return Data
displayModifyCluesHeader	Displays the modify clues header during the modify clues action	None	Displays the header

Function Name	Description	Input Parameter	Return Data
displayCluesChoices	Displays all the clues that can be modified in the chosen entry (oneEntry)	oneEntry – chosen word entry that will be modified nNumClues – number of clues oneEntry has toModify – Boolean if display would be for modification purposes or not	Displays all the clues of oneEntry

Function Name	Description	Input Parameter	Return Data
displayModifyTriviaChoices	Displays the options on which part of chosen clue that can be modified	None	Displays the choices for modification of a single clue

Function Name	Description	Input Parameter	Return Data
getClueModification	Gets the modified phrase for the chosen clue part (relation or relation value)	oneTrivia – address of the clue being modified sClueToModify – the specific part of the clue being modified sTypeOfClue – string that indicates whether the part of the being	sClueToModify – modified phrase for the chosen part of the clue

CCPROG2 MP – WORD TRIVIA

		modified is the “Relation” or “Relation Value”	
Function Name	Description	Input Parameter	Return Data
modifyClue	Modifies the clue. Modification menu of the chosen clue. Askes user which part of the clue would be modified. Calls getCluModification() function if player chooses to modify either the relation or relation value of the clue	oneTrivia – address of the clue being modified	*oneTrivia – modified phrases of the clue
Function Name	Description	Input Parameter	Return Data
displayModifyEntryHeader	Displays the modify entry header during the modify entry action	None	Displays the header
Function Name	Description	Input Parameter	Return Data
displayModificationChoices	Displays the modification choices/actions for the chosen entry	None	Displays the modification choices for the entry
Function Name	Description	Input Parameter	Return Data
executeModification	Main menu for the modify entry. Asks user which word to modify. If entered word exists, it displays the modification choices of the entries and asks user which to modify. Exits the function if entered word is not found. Calls modifyEntry() function for clue modification and modifyWord() for word modification	aEntries – array/list of word entries nElem – number of elements in aEntries	aEntries – modified one of its word entries
Function Name	Description	Input Parameter	Return Data
displayDeleteWordHeader	Displays the delete word header during the delete word action	None	Displays the header
Function Name	Description	Input Parameter	Return Data

CCPROG2 MP – WORD TRIVIA

clearLastEntry	Responsible for clearing the values and contents of the last entry	oneEntry – address of the last entry that is being deleted/cleared	*oneEntry – cleared contents of the last entry
----------------	--	--	--

Function Name	Description	Input Parameter	Return Data
executeClueDeletion	Responsible for the deletion of the chosen clue to be deleted and updates the number of clues left.	aCluesList – array/list of clues in one entry nNumClues – address where the number of clues would be updated nDeleteIndex – the index of the clue to be deleted in aCluesList	aCluesList – updated contents/list of clues *nNumClues – updated count of clues left for the entry

Function Name	Description	Input Parameter	Return Data
deleteClue	Main menu for delete clue action. Asks user which word to be deleted a clue with and deletes the chosen clue by calling executeClueDeletion() function. If number of clues of the chosen word is at minimum capacity (1 clue), then it will exit the function	aEntries – array/list of word entries nElem – number of elements in aEntries	aEntries – updated clue count and content in one of its elements or word entries

Function Name	Description	Input Parameter	Return Data
displayViewWordsHeader	Displays the view word header during the view word action	None	Displays the header

Function Name	Description	Input Parameter	Return Data
displayViewCluesHeader	Displays the view clues header during the view clues action	None	Displays the header

Function Name	Description	Input Parameter	Return Data
viewClues	Main menu for view clues. Asks user which words to view clues with	aEntries – array/list of word entries nElem – number of elements in aEntries	Displays the chosen word and its clues

Function Name	Description	Input Parameter	Return Data
---------------	-------------	-----------------	-------------

CCPROG2 MP – WORD TRIVIA

swapEntries	Swaps the contents of two chosen entries	sDestination – address of the desired destination for the contents of *sSource sSource – address where the desired contents would be coming from and the content from *sDestination will be placed	Swapped contents of *sDestination and *sSource
-------------	--	---	--

Function Name	Description	Input Parameter	Return Data
displayExportImportHeader	Displays the export/import header during the export/import action	None	Displays the header

Function Name	Description	Input Parameter	Return Data
import	Imports the entries from the file to the aEntries. If file doesn't exist, it notifies the user that file doesn't exist and exits the function. If there is a duplicate word in the current entry, then it asks the user if it should be overwritten or not.	fname – file name with the extension aEntries – array/list of word entries nElem – address that contains number of elements in aEntries	*nElem – updated number of elements in aEntries aEntries – updated contents/list/array of word entries

Function Name	Description	Input Parameter	Return Data
intiBoard	Responsible if gameboard can be initialized with the current list of word entries. If it can be initialized then it assigns entries to be used for the gameboard.	gameboard – 2D array of characters containing the first letter of the word entry nRows – number of rows to be initialized in gameboard nCols – number of columns to be initialized in gameboard aEntries – array/list of word entries nElem – number of elements in aEntries	0 – if gameboard not initialized 1 – if successfully initialized the contents of the gameboard gameboard – updates the character contents of gameboard if successfully initialized use member field – updates the row number the entry is being used

Function Name	Description	Input Parameter	Return Data
play	Facilitates the game play of the user	gameboard – 2D array of characters	Displays and executes the whole

CCPROG2 MP – WORD TRIVIA

		containing the first letter of the word entry nRows – number of rows to be initialized in gameboard nCols – number of columns to be initialized in gameboard aEntries – array/list of word entries nElem – number of elements in aEntries	gameplay
--	--	---	----------

Function Name	Description	Input Parameter	Return Data
maintenance	The maintenance phase. It contains all the maintenance actions. Calls specific functions for specific action of choice	None	Exports entries to file if player decides to export it

Function Name	Description	Input Parameter	Return Data
searchWord	Searches if entered word by user exists in the current list of word entries	key – the string of the word to look for aEntries – array/list of word entries nElem – number of elements in aEntries	-1 – if key is not found Returns the index in aEntries if key is found

Function Name	Description	Input Parameter	Return Data
listWords	Lists all the words in aEntries (list/array of word entries)	aEntries – array/list of word entries nElem – number of elements in aEntries	Displays the list of words

Function Name	Description	Input Parameter	Return Data
addWord	Asks user for new word to be added to aEntries. If entered word exists it exits the function, and if not it calls the addTrivia() function to add trivia to the new word	aEntries – array/list of word entries nElem – address that contains number of elements in aEntries	*nElem – updated value/count of elements in aEntries if new word is successfully added aEntries – updated list of word entries

CCPROG2 MP – WORD TRIVIA

Function Name	Description	Input Parameter	Return Data
addTrivia	Continuously asks user for phrases for relation and relation value member field of one entry until max capacity is reached or at least 1 trivia is successfully entered or user decides to cancels to add trivia	oneEntry – address of the single word entry to be added trivia with	*oneEntry – updated clue contents and clue count

Function Name	Description	Input Parameter	Return Data
modifyEntry	Asks user which clue would be modified in the chosen entry	oneEntry – address of the single word entry to be modified clues with	*oneEntry – updated clue contents

Function Name	Description	Input Parameter	Return Data
deleteWord	Asks user which word to delete. If word exists it deletes the word and updates the contents of aEntries and number of elements left. If not, it exits the function	aEntries – array/list of word entries nElem – address that ccontains number of elements in aEntries	*nElem – updated number of elements left when deletion is successful aEntries – updated list of word entries

Function Name	Description	Input Parameter	Return Data
viewWords	Displays all the entries in the aEntries with its corresponding in an alphabetical next-or-previous format by calling viewEntry() funciton. Asks user whether to view the next or previous clue or exit.	aEntries – array/list of word entries nElem – number of elements in aEntries	Displays all the entries in alphabetical order

Function Name	Description	Input Parameter	Return Data
viewEntry	Displays one entry/word with its corresponding clues with help of displayAllClues() funciton	entry – the struct that contains the word and clues of an entry	Displays the word entry with its corresponding clues

Function Name	Description	Input Parameter	Return Data
displayAllClues	Displays all the clues of the entry	aList – list/array of clues of the	Displays all the clues of the entries

CCPROG2 MP – WORD TRIVIA

		current entry nNumClues – number of clues in the current entry	
--	--	--	--

Function Name	Description	Input Parameter	Return Data
export	Exports the contents of aEntries to a file.	fname – the file name with the extension aEntries – array/list of word entries nElem – number of elements in aEntries	Creates a file if file doesn't exist yet, and writes the contents of aEntries there. Overwrites a file if it exists

Function Name	Description	Input Parameter	Return Data
sortEntries	Sorts the word entries in alphabetical order using selection sort	aEntries – array/list of word entries nElem – number of elements in aEntries	aEntries – updated the order of the word entries

Function Name	Description	Input Parameter	Return Data