Lexathon User Manual

Lexathon is a MIPS based word game, based on the mobile Android application, in which the user is given a 3x3 matrix of randomly chosen letters, and has 120 seconds to enter as many words as possible using the letters that are given in the matrix. In addition, the user starts the game with 0 points. Each word that the user enters must be at least 4 letters long and no more than 9 letters long. The user cannot use each letter more times than they appear in the matrix. Lastly, each word that the user enters must contain the center letter.

When the program begins, the instructions will automatically be displayed to the user. When the user enters a correct word, 30 seconds will be added to the elapsed time, and 10 points will be added to the users score. Each correct word can only be entered once. When the time has reached 0, the total points will be displayed to the user and a new grid be generated immediately, starting a new game.

How to play:

Start the MARS simulator program and open the main.asm file. It is important to make sure that the Dictionary.txt file is in the same file or directory as the main.asm file. Also, the Dictionary.txt file should be open before the main.asm is assembled and run. To play the game, assemble and run main.asm. A new round will immediately begin, showing a 3x3 matrix of randomly selected letters. The timer will also immediately begin counting down from 120 seconds. The user has 120 seconds to enter as many words as they can that they can create from the letters given in the matrix. Each word that the user enters must be at least 4 letters long and no more than 9 letters long. The user cannot use each letter more times than they appear in the matrix, and each word that the user enters must contain the center letter. In addition, the user can only enter words in all lower-case. At any time, the user can enter 0 and quit the program. When the timer runs out, the game will end and the total number of points will be displayed to the user. Immediately, a second matrix will be displayed, the timer reset to 120 seconds, and another game will start. When the user decides to exit the program by entering 0, the game will end, the total points will be displayed, and the program will close.

Limitations:

This version of Lexathon creates 3x3 grids of letters that chooses all random consonants for the top row, all random vowels for the second row, and all random consonants for the bottom row. The center letter will always be a vowel as well. In addition, for each letter in a word that is entered, the program automatically begins searching the library. Consequently, there is no backspace or delete function while entering a word. If a word is accidentally misspelled while it is being input, it will count against the user since they cannot backspace and delete the word. The user can only enter lower-case letters. Any upper-case letters will result in a wrong answer. There is also no sound functionality or graphic user interface.