This program takes a string from the command line and extracts all the strings delimited by non-alpha characters. As per instruction, this program is unable to read system reserved words and other bash commands. Hence, the symbols, such as ! and $, as well as, reserve words, such as "type", "undefined", "infinity", "NULL", etc., must all be escaped. However, the words only need to be escaped only when they are stand alone, as shown below:

./pointersorter "NULL"

This command will result in an empty string residing in argv[1]. Hence, there will be nothing to sort and the program will print out nothing. Other than that, if there is only one argument provided and symbols escaped, the output will result in a list sorted in lexicographical order. In other words, the words will be sorted in alphabetical order regardless of case.

The programs takes all non-alpha characters and replaces them with an empty space. Then, the input string is tokenized by the space and then characters extracted are moved to a linked list. Once all the words are extracted, the linked list is then merge sorted to allow the maximum efficiency for long input strings. As long as there are no $ or ! in the string that are not escaped followed by more symbols, the program will execute.