

Q1-3. Linked List (25%)

The linked list is a linear data structure that is assembled by connecting nodes, i.e., nodes that have a "pointer to the next node" in them. Your program needs to fulfill the following requirements:

- You need to implement a linked list, the `insert()`, and `search()` functions for the linked list.
- You need to use functions such as `malloc()` to allocate space for the nodes of linked lists.
- Before the end of the program, you need to implement the function `freeList()` to release all memory.
- Your program needs to read the words from the standard input and create the corresponding linked list. Each node in the list will contain one word (e.g., "apple"). The next word will be given in the next line of input, and the other new node should be used to store the next word.
- Your program should count the frequency of each word. If a word starts with "-", its count should be decremented by one. However, if the word has not appeared before, it should be considered an invalid input and not be included in the output. For clarification, please refer to the third case in the example input and output.
- Your program needs to print the words in ascending order.
- **Technical Specifications**
The length of a single word will not exceed 1024.
Each word can appear up to 5 times, and a maximum of 10 words can appear in each input.
The end of input is represented by '0'.

The table below shows the example input and output.

Input	Output
apple banana apple cat banana apple 0	apple 3 banana 2 cat 1
apple pizza apple pizza banana cat banana -apple pizza -apple pizza 0	apple pizza 0 banana 2 cat 1
banana cat banana -apple pizza 0	banana 2 cat 1