**Soal**

*Case*

**Boogle**

Boogle is a company that create, and document new slang words based on the internet. You as a programmer working at the Boogle company are asked to create an application that is useful for seeing what slang words have been released by Boogle. **Ensure that you didn’t use regex in your work, or it will affect your score. Please focus on the main logic and main feature! (Design are not scored)**. The requirements are:

* The application consists of **5 menus**:

1. **Release a new slang word**
2. **Search a slang word**
3. **View all slang words starting with a certain prefix word**
4. **View all slang words**
5. **Exit**

* If user choose menu **1** (“**Release a new slang word**”), then the program will:
* Ask the user to **input** the **new slang word**. Validate that the **slang word** must be **more than 1 character and contains no space**.
* Ask the user to **input** the **description (meaning)** of the new word. Validate that the **description** must be **more than 1 word**.
* **Store** the new released slang word to a **Trie** data structure along with its description.

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| Input a new slang word [Must be more than 1 characters and contains no space]: d  Input a new slang word [Must be more than 1 characters and contains no space]: d a  Input a new slang word [Must be more than 1 characters and contains no space]: da  Input a new slang word description [Must be more than 2 words]: The  Input a new slang word description [Must be more than 2 words]: The word the  Successfully released new slang word.  Press enter to continue... |

* If the slang word **already exists** in the Trie, then **update** the description with the new description.

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| Input a new slang word [Must be more than 1 characters and contains no space]: da  Input a new slang word description [Must be more than 2 words]: Same meaning as word “the”  Successfully updated a slang word.  Press enter to continue... |

* If user choose menu **2** (“**Search a slang word**”), then the program will:
* Ask the user to **input** the **slang word that want to be searched**. Validate that the **slang word** must be **more than 1 character and contains no space**.
* **Search** the input word in the Trie data structure.
* If there **is no such word**, please **show empty message** for the user and go back to main menu.

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| Input a slang word to be searched [Must be more than 1 characters and contains no space]: de  There is no word “de” in the dictionary.  Press enter to continue... |

* If there **is such word**, please **show the word along with its description**.

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| Input a slang word to be searched [Must be more than 1 characters and contains no space]: d  Input a slang word to be searched [Must be more than 1 characters and contains no space]: d a  Input a slang word to be searched [Must be more than 1 characters and contains no space]: da  Slang word : da  Description : Same meaning as word “the”  Press enter to continue... |

* If user choose menu **3** (“**View all slang words starting with a certain prefix word**”), then the program will:
* Ask the user to **input** the **prefix word that want to be searched**.
* **Search** the input word in the Trie data structure.
* If there **is no such word**, please **show empty message** for the user.

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| Input a prefix to be searched: de  There is no prefix “de” in the dictionary.  Press enter to continue... |

* If there **is such word**, please **show the list of words in the dictionary that starts with the prefix word in lexicographical order.**

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| Input a prefix to be searched: da  Words starts with “da”:  1. da  2. dadan  3. daijobu  4. dawg  5. dazz  Press enter to continue... |

* If user choose menu **4** (“**View all slang words**”), then the program will:
* If there **is no word yet** in the dictionary, please **show empty message** for the user.

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| There is no slang word yet in the dictionary.  Press enter to continue... |

* Else, please **show the list of all words in the dictionary** in **lexicographical order.**

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| List of all slang words in the dictionary:  1. da  2. dadan  3. daijobu  4. dawg  5. dazz  6. rizz  7. simp  Press enter to continue... |

* If user choose menu **5** (“**Exit**”), then the program will be closed.

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| Thank you... Have a nice day :) |