

Report

Description :-

Pro wordle game runs by calling main. Main calls build_kb method which asks the user to input all the desired words and their categories and asserts it into the knowledge base until done is entered. Main method then lists the available categories by calling the categories(L) method. Categories method uses the setof method to place all the available categories in a list. Main method then initiates the play method. We divided the play method into several loops, chooseCategory, chooseLength, gameLoop, and also used the pick_word(W,L,C) method to choose the word that the user will try to guess. Pick_word method runs by choosing a word from the knowledge base and matching it with the length entered from chooseLength loop. chooseCategory(X) method runs by taking an input from the user, making sure the input is a defined category in the knowledge base by using the is_Category(X) method and loops again if the input word is not a category. chooseLength(L,C) method runs by taking an input and making sure there is a word inside the KB with the required category of the inputted length, similar to the chooseCategory method, repeats itself if the inputted length is invalid, i.e no words in the KB of that length. gameLoop(W,L,C,G) method runs by first asking the user to input a word of the required length, then tries to match one of the 4 cases. Case 1: the input word is not of the same length which recalls the loop without deducting number of guesses. Case 2: input word is the picked word from the knowledge base, game ends as a win. Case 3: number of guesses-1 = 0, game ends as a loss. Case 4 : input word is of correct length but is not the correct word, correct letters are outputted in a list using the correct_letters(L,L1,R) method that runs by using the predefined intersection method, correct letters are outputted in another list by correct_positions(L,L1,R) method that runs by comparing every position in the two lists and places it in the output result list if they are equal and in the same position. The game then continues by recalling gameLoop with a decrement in the number of guesses.

Run 1 (win):-

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SWI-Prolog (Multi-threaded, version 7.2.3)
File Edit Settings Run Debug Help
1 ?- main.
Welcome to Pro-Wordle!
-----
Please enter a word and its category on separate lines:
|: khaled.
|: names.
Please enter a word and its category on separate lines:
|: omar.
|: names.
Please enter a word and its category on separate lines:
|: done.
Done building the words database...The available categories are:[names]
Choose a category
|: names.
Choose a length
|: 3.
There are no words of this length.
Choose a length
|: 4.
Game started. You have 5 guesses.
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SWI-Prolog (Multi-threaded, version 7.2.3)
File Edit Settings Run Debug Help
Done building the words database...The available categories are:[names]
Choose a category
|: names.
Choose a length
|: 3.
There are no words of this length.
Choose a length
|: 4.
Game started. You have 5 guesses.
Enter a word composed of 4 letters
|: ramo.
Correct lettters are: [r,a,m,o]
Correct lettters in correct positions are: []
Remaining Guesses are 4
Enter a word composed of 4 letters
|: omar.
You won
true .

2 ?- |
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Run 2 (Loss) :-

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SWI-Prolog (Multi-threaded, version 7.2.3)
File Edit Settings Run Debug Help

2 ?- main.
Welcome to Pro-Wordle!
-----
Please enter a word and its category on separate lines:
|: zeyad.
|: names.
Please enter a word and its category on separate lines:
|: tarek.
|: names.
Please enter a word and its category on separate lines:
|: done.
Done building the words database...The available categories are:[names]
Choose a category
|: animals.
This category doesn't exist
Choose a category
|: names.
Choose a length
|: 8.
There are no words of this length.
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SWI-Prolog (Multi-threaded, version 7.2.3)
File Edit Settings Run Debug Help

There are no words of this length.
Choose a length
|: 5.
Game started. You have 6 guesses.
Enter a word composed of 5 letters
|: omar.
Word is not composed of 5 letters. Try again. Remaining Guesses are 6
Enter a word composed of 5 letters
|: power.
Correct lettters are: [e]
Correct lettters in correct positions are: []
Remaining Guesses are 5
Enter a word composed of 5 letters
|: kooko.
Correct lettters are: []
Correct lettters in correct positions are: []
Remaining Guesses are 4
Enter a word composed of 5 letters
|: omarr.
Correct lettters are: [a]
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Enter a word composed of 5 letters

|: omarr.

Correct lettters are: [a]

Correct lettters in correct positions are: []

Remaining Guesses are 3

Enter a word composed of 5 letters

|: kikki.

Correct lettters are: []

Correct lettters in correct positions are: []

Remaining Guesses are 2

Enter a word composed of 5 letters

|: lopoe.

Correct lettters are: [e]

Correct lettters in correct positions are: []

Remaining Guesses are 1

Enter a word composed of 5 letters

|: zoyou.

You lost

true .