CSC 122

Advanced Programming

Project 3 (Spelling Checker)

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<u>Project idea:</u>

This project is a simple application that checks the spelling of the inputted word. It's mechanism and test cases are as follows:

1- If there is more than one space before the word, the application raises an error not to add spaces before words.
2- If there is a space after the word, it is considered as there is nothing and the word is correct.
3- If there is a correct word, the application just says it is correct.
4- If there is an incorrect word, the application corrects and display the corrected word.
5- If there is more than one word, the program raises an error not to add more than one word.
6- If there is no input (one word) the program asks to input a word.
7- A random word which doesn't exist, the program will raise a "Not found" message.

<u>Note:</u>

This project needs extra libraries to be installed (pyspellchecker, textblob, re (note: it will be automatically installed with textblob)). Kindly make sure they are installed before running the code. If still didn't work, kindly run the code from the cmd.

```python
import tkinter
import re
from tkinter import *
from spellchecker import SpellChecker
from textblob import TextBlob
window = Tk()
window.title("Spelling Checker")
window.geometry("700x400")
window.maxsize(700,400)
window.config(background="#26292c")


def check():
    spell_function = SpellChecker()
    case.config(text="")
    spell.config(text="")
    wrong.config(text="")
    word = writing.get()
    check_symbol = re.findall("[a-zA-Z ]+", word)
    updated = ("".join(check_symbol))
    word_list = list(updated.split(" "))
    misspelled = spell_function.unknown(updated.split(" "))
    if (len(word_list) == 1 and word_list[0] != '') or (len(word_list) == 2 and
(word_list[0]=='' or word_list[1]=='')):
        if misspelled and misspelled != {''}:
            checking = TextBlob(updated)
            right = checking.correct()
            if checking.correct() != word and checking.correct() != updated:
                wrong.config(text="Wrong Spelling!")
                wrong.pack()
                case.config(text="Correct Spelling: ")
                case.place(x=250,y=200)
                spell.place(x=390,y=203)
                spell.config(text=right)
            else:
                case.config(text="Wrong word. Not found.")
                case.pack()
        else:
                case.config(text="Correct Word!")
                case.pack()
    elif len(word_list) == 1 and word_list[0] == '':
        case.config(text="Please Enter At Least One Word!")
        case.pack()
    else:
        case.config(text="Please Enter Only One Word!")
```

```python
        case.pack()
    writing.delete(0, END)


Title = Label(window, text="Welcome to Spelling Checker!", font=("Cascadia Mono",
20, "bold"), bg="#26292c", fg="#baa054")
Title.pack(pady=10)
writing = Entry(window, justify="left", width=30, font=("Cairo", 10),
bg="#9f9b95", border=1)
writing.pack(pady=10)
writing.focus()
Enter = Button(window, width=10, highlightcolor= "black", font=("Cascadia Mono",
10, "bold"), fg="#CBE4DE", bg="#5e7993" ,text= "Check",  command=check)
Enter.pack(pady=10)
wrong = Label(window, font=("Cairo", 15,"bold"), bg="#26292c", fg="#a25555")
case = Label(window, font=("Cairo", 15,"bold"), bg="#26292c", fg="#a25555")
spell = Label(window, font=("Cairo", 13), bg="#26292c", fg="#E4E4E4")
window.mainloop()
```