

# Spelling and Grammar Checker

Spoken Tutorial Project

<https://spoken-tutorial.org>

National Mission on Education through ICT

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# Learning Objectives

**In this tutorial we will learn to**



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In this tutorial we will learn to

- **Create functions to identify spelling and grammar errors**



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- Implement text processing techniques in Python



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In this tutorial we will learn to

- Create functions to identify spelling and grammar errors
- Implement text processing techniques in Python
- Create a GUI application with a text area and buttons



# System Requirements

**To record this tutorial, I am using**



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To record this tutorial, I am using

- **Ubuntu Linux OS 22.04**



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- Ubuntu Linux OS 22.04
- Python 3.12.3





# Pre-requisites

- **You must have basic knowledge of using Linux Terminal and Python**



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- For pre-requisite Linux and Python Tutorials, please visit this website <https://spoken-tutorial.org>



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- You must have basic knowledge of using Linux Terminal and Python
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- Python libraries required for automation must be installed



# Code files

- The files used in this tutorial are provided in the Code files link



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- The files used in this tutorial are provided in the Code files link
- Please download and extract the files

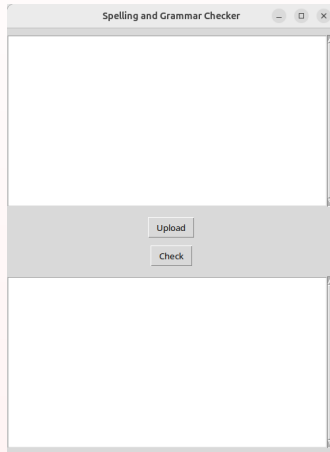


# Code files

- The files used in this tutorial are provided in the Code files link
- Please download and extract the files
- Make a copy and then use them while practicing



# Spelling and Grammar checker - GUI



# Spelling and Grammar Checker

- The checker will refer to an inbuilt dictionary to identify wrong spellings





# Spelling and Grammar Checker

- The checker will refer to an inbuilt dictionary to identify wrong spellings
- It will use `language_tool_python` to recognize incorrect grammar and suggest corrections



# Spelling and Grammar Checker - Libraries



# Spelling and Grammar Checker - Libraries

- `Language_tool_python` **provides grammar and style-checking capabilities**



# Spelling and Grammar Checker - Libraries

- `Language_tool_python` **provides grammar and style-checking capabilities**
- **NLTK is a library for text processing and natural language understanding tasks**



# Spelling and Grammar Checker - Libraries

- **re module helps manipulate strings based on patterns using regular expressions**



# Spelling and Grammar Checker - Libraries

- **re module helps manipulate strings based on patterns using regular expressions**
- **tkinter is the standard GUI toolkit for Python**



# Spelling and Grammar Checker - Libraries

- docx is for reading and writing **Microsoft Word files**



# Spelling and Grammar Checker - Libraries

- **docx** is for reading and writing **Microsoft Word files**
- **fitz (PyMuPDF)** is for reading **PDF files**





# Install java and tkinter

- **sudo apt-get update**
- **sudo apt-get install default-jdk**
- **sudo apt-get install openjdk-11-jdk**
- **java -version**
- **sudo apt-get install python3-tk**



# Summary

In this tutorial, we have learnt to

- Create functions to identify spelling and grammar errors
- Implement text processing techniques in Python
- Create a GUI application with a text area and buttons



# Assignment

- **Modify the `checker.py` and print the total number of errors in the result area**
- **Hint: Use the `len()` function to calculate the number of errors**



# About the Spoken Tutorial Project

- Watch the video available at [http://spoken-tutorial.org/What\\_is\\_a\\_Spoken\\_Tutorial](http://spoken-tutorial.org/What_is_a_Spoken_Tutorial)
- It summarises the Spoken Tutorial project
- If you do not have good bandwidth, you can download and watch it



# Spoken Tutorial Workshops

## The Spoken Tutorial Project Team

- Conducts workshops using spoken tutorials
- Gives certificates to those who pass an online test
- For more details, please write to [contact@spoken-tutorial.org](mailto:contact@spoken-tutorial.org)



# Answers for THIS spoken tutorial

- Questions in THIS Spoken Tutorial
- Visit <https://forums.spoken-tutorial.org>
- Choose the minute and second where you have the question
- Explain your question briefly
- The Spoken Tutorial project will ensure an answer
- You will have to register to ask questions



# FOSSEE Forum

- For any general or technical questions on **Python for Automation**, visit the **FOSSEE** forum and post your question <https://forums.fossee.in/>



# Acknowledgement

- **The Spoken Tutorial project was established by Ministry of Education, Govt. of India**





# Thank you

- **This is Jasmine Tresa Jose, a FOSSEE Semester Long Intern 2024, IIT Bombay**

