Execution Procedure for AI-Based Plagiarism Detection System

This document outlines the step-by-step execution procedure for deploying and running the AI-powered Plagiarism Detection System.

# Execution Steps

## 1. Environment Setup

- Install Python 3.10  
- Set up a virtual environment  
- Install necessary libraries using pip:  
 pip install -r requirements.txt

## 2. NLTK Resource Downloads

Run the following commands once in Python shell to download necessary resources:  
 import nltk  
 nltk.download('punkt')  
 nltk.download('stopwords')  
 nltk.download('wordnet')  
 nltk.download('omw-1.4')

## 3. Flask Application Setup

- Run the application using:  
 python app.py  
- Access the web interface via http://127.0.0.1:5000 in your browser.

## 4. Using the Application

- Use Offline Mode to compare two text inputs.  
- Use File Compare to upload two PDF/DOCX/TXT files for similarity checking.  
- Use Online Mode to check for potential plagiarism through web search using Google Custom Search API.

## 5. Testing

- Run unit tests using:  
 python -m unittest discover tests

## 6. Tools Used

- Python 3.10  
- Flask  
- NLTK  
- Sentence Transformers  
- PyPDF2  
- Docx  
- Google Custom Search API  
- Postman (for API testing)  
- VS Code / PyCharm