

# 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