



**Organization Name:**

Ministry of Commerce and Industries

**PS Code:** SIH1385

**Problem Statement Title:**

Developing a software that can translate resource material and other texts from English to other Indian regional languages.

**Team Name:** SANSKRITI\_06

**Team Leader Name:** Rupam Das

**Institute Code (AISHE):** U-0865

**Institute Name:** Techno India University

**Theme Name:** Smart Education

# Problem Statement

**Language Barrier Challenge:** People commonly face language barriers that hinder their understanding, particularly when researching or reading about topics related to cultures, history, and other interests in foreign languages.

**Translation Complexity:** Historical books, manuscripts, letters, articles, newspapers, and informative resources written in foreign languages pose challenges for translation, especially in online contexts.

**Software Solution:** We have developed software that partially addresses this challenge. It can translate various document formats, including Word files, PDFs, and images (converted to .png format), into the user's preferred language.

**Selective Translation:** Our application provides the flexibility to translate specific sections of text or entire documents or images, depending on the user's needs.

**Immediate Output:** Translated content is displayed as an image on the screen, allowing users to read it instantly or convert it into a document in their preferred format for later use.

**Enhanced Accessibility:** This software empowers individuals to access and understand content in their preferred language, breaking down language barriers and fostering cross-cultural understanding.

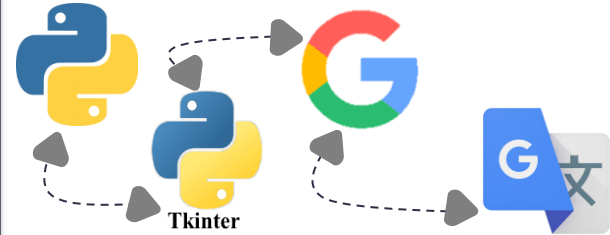
# Solution Details

- ❑ In response to the common challenge of language barriers and the difficulty in accessing content related to cultures, history, and various other subjects in foreign languages, we've introduced a comprehensive software solution.
- ❑ Our software acts as a bridge, facilitating access to content that would otherwise be challenging to understand. It is highly versatile, capable of translating multiple document formats, including Word files, PDFs, and images (converted to .png format) into the user's preferred language. This feature significantly enhances accessibility, ensuring that language is no longer a barrier to understanding.
- ❑ Users enjoy the flexibility of choosing the specific portions of text or entire documents they wish to translate, customizing the experience to their needs. The translated content is displayed in real-time as an image on the screen. Users can directly read this output or opt to convert it into a document in their preferred format for future use.
- ❑ In essence, our software empowers individuals to access and understand content in their preferred language, making cross-cultural communication more accessible and promoting knowledge acquisition. It streamlines the process of accessing and comprehending content, allowing users to explore diverse topics with ease. By breaking down language barriers and enhancing understanding, our solution enriches the overall user experience.

# Technology Stack

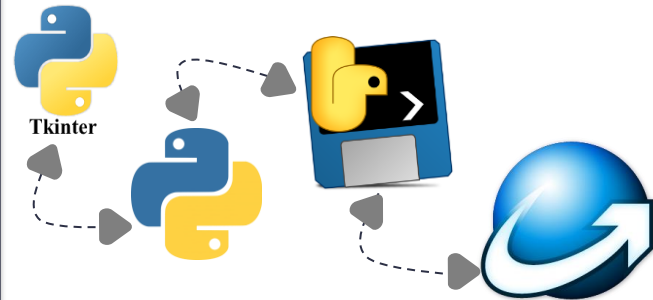
## BACKEND:

Python, Tkinter, Tesseract, Googletrans



## FRONTEND:

Python, Tkinter, PyInstaller, Inno



# Use Case Diagram



USER

Using tkinter library for the frontend design and development of the application.

APPLICATION



Using PyPDF2 and GoogleTranslate API to extract and translate content from Pdf file.



Using docx and GoogleTranslate API to extract and translate content from Word file.



Using Google's Tesseract-OCR Engine and GoogleTranslate API to extract and translate from an Image

# TEAM MEMBERS

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