**Goal and Motivation**

- Cross-language communication between two countries plays a very crucial role to build a favorable environment for various benefits.
- The aim of this translation system is to provide a platform to do the translation which will enhance the well-learned society of Indians without the barrier of language.

**Background**

- **Machine Translation**: An automated system that analyses text from a Source Language (SL), applies some computation on that input and produces equivalent text in a required Target Language (TL) ideally without any kind of human intervention.
- **Rule Based Machine Translation (RBMT)** depends on numerous built-in linguistic rules retrieved from dictionaries covering semantic, syntactic and morphological regularities of each language.
- **Statistical Machine Translation (SMT)** depends on the statistical models derived from analyzing large text corpora.
- **Hybrid Machine Translation** system is built using multiple machine translation techniques to achieve a satisfactory level of accuracy.

**System Workflow**

- The system is build using Rule Based Machine Translation

**Implementation**

- The system uses Google Translate API to perform audio to text translation and vice versa.
- Every sentence is broken down into tokens and every token is given a tag like Noun, Pronoun etc.
- Each token is appropriately translated using dictionaries
- Using the rules generated by analyzing the structure of the languages the final translated output is generated.

**Results**

- **Accuracy of Tagging**
- **Accuracy of Translation and Rearrangement**

**Conclusion and Future Work**

- Successfully implemented Rule Based Machine Translation system.
- Creating a user friendly application and perform translation in real time.

**References**

- Dhariya, Omkar, Shrikant Malviya, and Uma Shanker Tiwary. "A hybrid approach for Hindi-English machine translation."
- Desai, Pratik et al. “A Domain-Restricted, Rule Based, English-Hindi Machine Translation System Based on Dependency Parsing.”

The output of the system:

The audio file contains: grandpa said that you need to find three keys that can unlock the treasure which can be found deep in the cave.

---Saving file at /Users/shweta/thakkar/Documents/output/---