OBJECTIVES OF THE RESEARCH

India being a large and multilingual society, and in the interest of the regional languages, the government of India has allowed to use regional languages as the official language of respective region and adopt bilingual form (Hindi/English) as the official language of Union Government. Most of the state governments work in their respective regional languages whereas the union government’s official documents and reports are in bilingual form (Hindi/English). In order to have a proper communication there is a need to translate these reports and documents in the respective regional languages and vice versa.

The newspapers in regional languages are required to translate news received from agencies. Due to limitations of human translators, machine translation system will increase the efficiency of human translators.

Due to increase in use of computer and Internet in large scale last decade, lot of online data is created. Peoples awareness about development because of the increased literacy rate, need of machine translation arises.

All languages having great repository of historical documents, great literature work, there is need of Machine Translation systems, thus the richness of Hindi literatures opens up to Marathi knowing people.

MT can help to reduce the language barrier and enable easier communication.

Machine Translation Systems are in great demand and are widely in use. Over 50 years span of Machine Translation, number of such systems has been developed for Indian and foreign languages.

The summarized objectives of this work are as follows:

1. To develop Hindi to Marathi digital Dictionary for the purpose of translation.
2. To develop surname list, person name list, country name list, city name list, etc.

3. To develop word list used as it is in both Hindi and Marathi language.

4. To develop lexicon for collocations in Hindi text to be used during translation process.

5. To develop the lexicon and algorithm for handling surnames and titles in input text.

6. To develop transliteration module for handling out-of-vocabulary words.

7. To develop algorithm for postprocessing tasks.

8. To develop test cases for evaluating the system critically.

9. To study Hindi and Marathi Languages and their comparison.

So, the objective of this work is to design, develop and evaluate a system which will provide translation from Hindi text to Marathi text with high accuracy rate. Also, in this process Hindi-Marathi dictionary will be prepared in digital form.

**Scope:**

Hindi-Marathi Machine Translation system will be an attempt to provide an innovative base for the future natural language processing work on both Hindi and Marathi.

The use of computers is gaining popularity in day-to-day tasks of word processing, writing reports of official documents etc. All the documents are written in their regional official language. Thus for making these documents readable and useful for other regions, translation systems must be developed.

By implementing Hindi-Marathi Translation system, it will bridge the ethnical and cultural divisions between Hindi and Marathi speaking communities.
By implementing this system of translation, new horizons for thought, idea and belief will be shared and the world will gain an impetus on the efforts harmonizing relationships between communities. It will be one step ahead to develop multilingual resources.

Hindi-Marathi dictionary in digital form will be made available for reasearchers.

**Limitations:**

If technical/engineering/foreign terms/names used in input Hindi language, then it will not possible to translate to Marathi language. Developing a transliteration module will help to resolve this ambiguity. Ambiguity will be a major problem; will reduce the accuracy of the system. The system will fail to resolve the meaning of the word among the multiple meanings, eg. single Hindi word having multiple meanings in Marathi.

Reverse translation i.e. Marathi to Hindi is not possible, if needed the entire system needed to be developed from start once again.