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# Hindi Language Graphical User Interface to DBMS for Transport System

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***Abstract: The Database Technology has the major impact on the growing use of computer and Internet. Database management system is used for storing and retrieving the data. People don't have the knowledge of database language may find it difficult to access Database. However, Information system isn't intelligible to each user as a result of they are arduous to use and perceive. Retrieving information from database needs knowledge and information of database languages like Structure Query language (SQL).Everybody is not able to write SQL queries they are not known to the syntax of SQL structured of the database. User do not need to learn any other formal language, they can execute query in their native Language. In this it required this method to accept Hindi sentence as a query, process it and after execution make the result available to the user in the same language which is nothing but the Hindi Language Interface to Database.***
***Keywords: DBMS, HLIDBMS, SQL, NLP, NLIDB.***

## I. INTRODUCTION

Database Management System is a collection of Interconnected Data and set of a programs to get those Data. There is a requirement to design and Develop an Interface in the Native Language so User can easily use System without Knowledge of English as well as Query Language.

With the help of interface, the end user can query the system in a Query Language like English, Hindi, Marathi, etc., and can see the result in the same language.

NLIDB system is proposed as a solution to the problem for accessing information in an easy way, allowing any type of users, mainly non-technical people to retrieved Information from a Database using Natural Language(NL). We are going to develop a system for people who know Hindi Language. User can access Database using in the Hindi Language and get the result in the same Language.

For Example:-उन सभी भेजनेवालो का नाम बताओ जो मुंबई से है|

## II. LITERATURE REVIEW

There is enormous improvement in the zone of NLIDB. Some of the developed NLIDB systems are discussed below.

### *A. Lunar System*

W. Woods etal has given information about LUNAR system that answer question about samples of rocks brought back from the moon. To accomplish its functions the LUNER systems uses two databases one for chemical analysis and other for literature references. The LUNAR system uses an Augmented Transition Network (ATN) parser and Woods Procedural Semantics.

### *B. Ladder*

It was design as a NLIDB of information about US Navy ships. The system uses semantic grammars technique that interleaves syntactic and semantic processing.

### *C. Planes*

PLANES include the English Language front end with the ability to understand and explicitly answer user request.

### *D. CHAT-80*

It transformed English into Prolog expressions, which were evaluated against the Prolog database. The code of CHAT-80 was circulated widely and formed the basis of several other experimental NLIDBs.

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*E. Team*

(Transportable Natural Language Interface system). TEAM was designed to be easily configurable by database administrators with no knowledge of NLIDBs

*F. SQL Tutor*

The SQL Tutor program tutors students by assisting the students through a number of database questions from four different databases.

## III.PROPOSED SYSTEM

*A. Problem Statement*

The interface is developed for the non-technical users who are unaware about the query languages. The TRANSPORT database is used as a case study for building this interface.

The input for this system is the Hindi language sentences. This sentences is translated into English language by using semantic matching technique. The equivalent database query is built from that English sentences which on execution provides result to user. The output of this system is obtained in Hindi Language.

*B. Methodology*

To achieve the above objective methodology used is given as we are going to use the rule based system which will follows and executes each and every query as per the rule made for it.

*1)* Make database for Transport which will store data about transport system
*2)* Identify the Nature of query i.e. select, delete, create, insert.
*3)* Appropriate mapping of tokens with database values be finished by extracting tables, columns data from input Hindi Sentences.
*4)* Create SQL queries on stored data by mapping input queries.
*5)* Execute the query and give result in Hindi Language.

*C. architecture Of The System*

The Architecture is known as HLIDBMS i.e. Hindi Language Interface to Database Management System is given below. There are important phases i.e. Tokenizer, query type rule, query table rule, basic query and its sub rule, query generator engine DBMS &database server.

In tokenize phase Hindi Sentence is break into tokens. Token may be a table name, column name, condition, any value, command name, operation name or any non-useful word.This system consists of two databases. First is the “Compiler Database” and second is the “Transport Database”. The column names of the Transport database will be stored in English language but the data in that columns will be stored in Hindi language.

The user will enter the query in Hindi, this query will be processed and translated into its corresponding English query by using compiler database and depending upon that query result is calculated and provided to user. The result provided to user is also in Hindi language. There are some important phases i.e. Tokenizer, Mapper, SQL Query Generator and DBMS. While executing the query it is given in the HINDI language which is a Hindi sentence.

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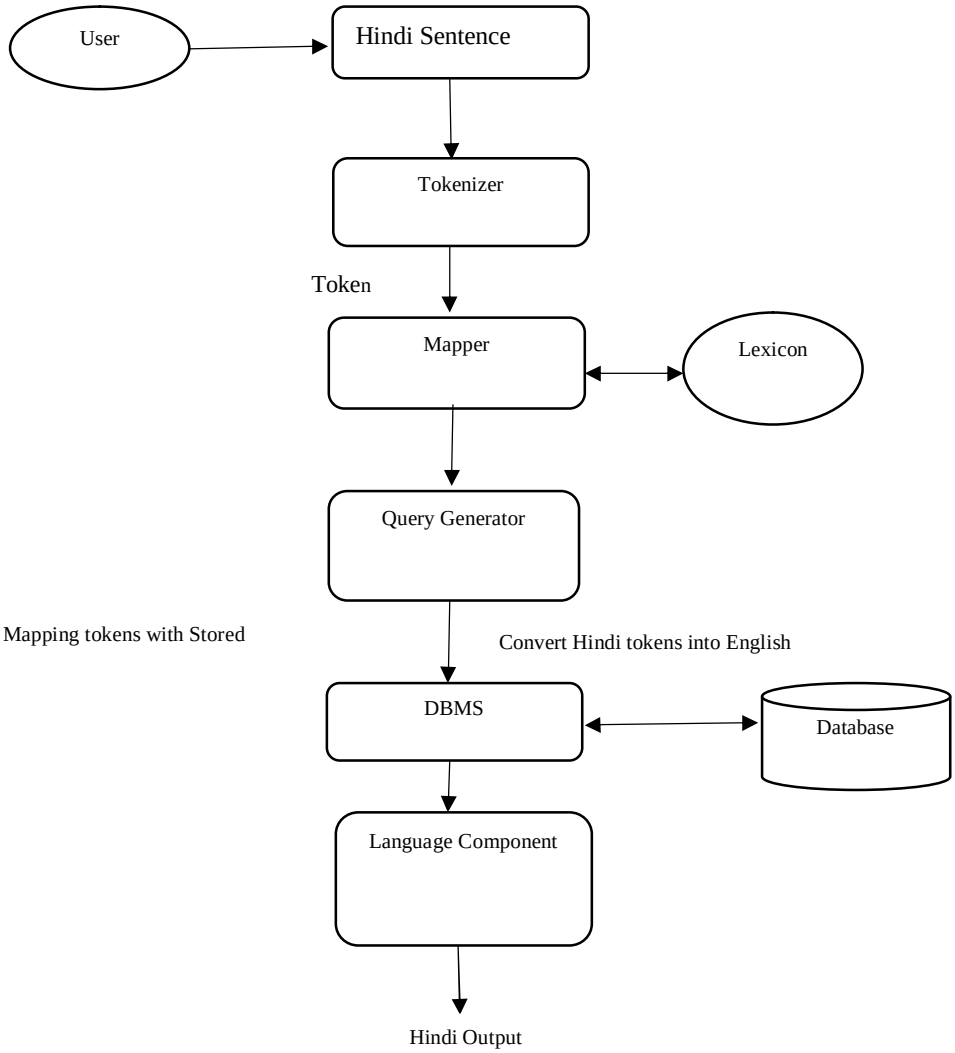



Fig.1 block diagram of NLIDBI

| Token word | Mapped word |
|---|---|
| जिसका | Where |
| जिसके | Where |
| का | From |
| बताओ | Select |
| करो | Update |
| हटाओ | Delete |

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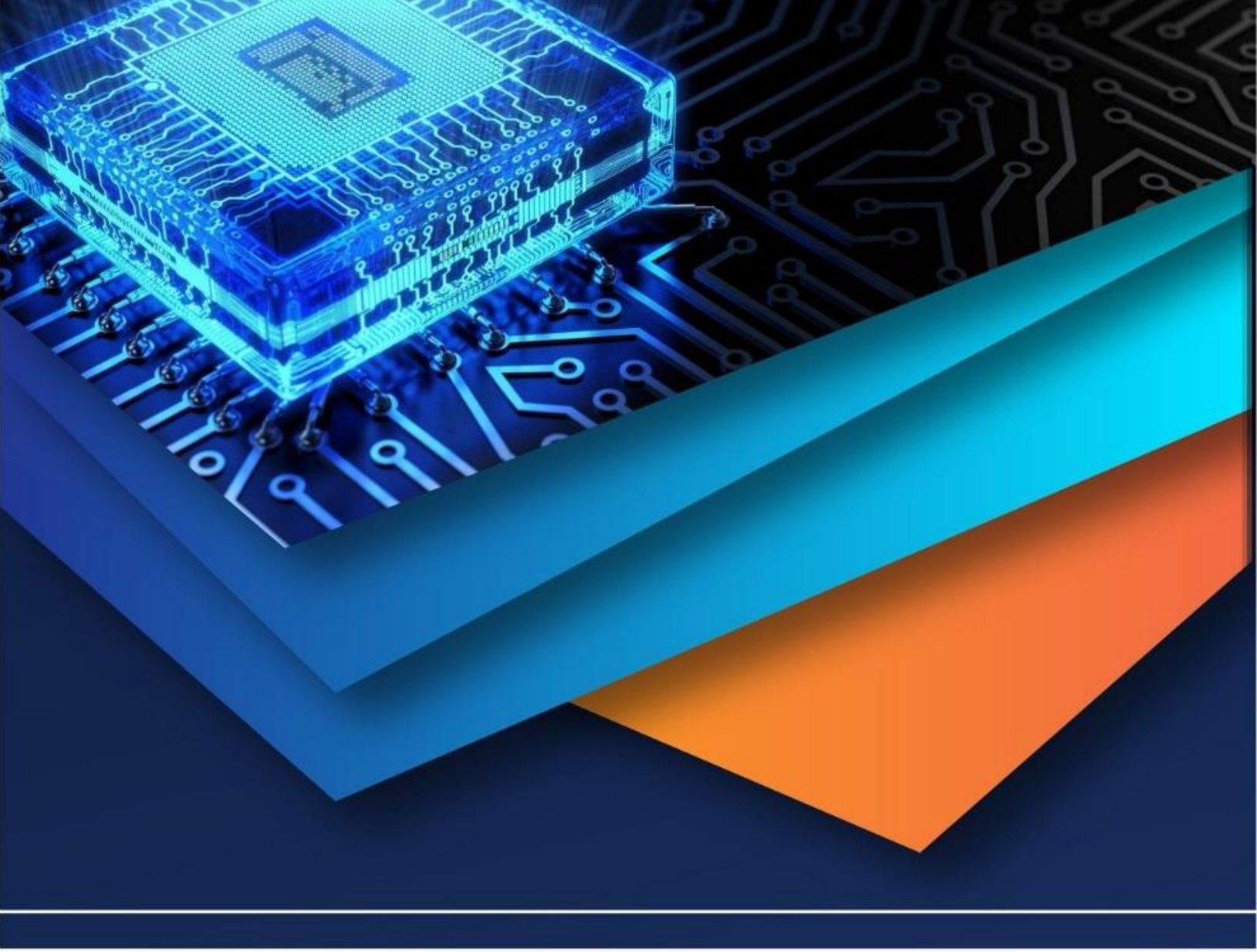
## IV. CONCLUSIONS

Hindi sentence query and give the output in Hindi itself. It is very easy for those people who don't have knowledge of relational Database and SQL query Language. With the assistance of Hindi Language Interface to NLP we can play out all the operations like select, delete, create, etc.

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