A Survey on Non English Based Programming Languages

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ABSTRACT

The main or primary motivation of our project is that there are subjects like Mathematics, Science etc. likewise computing is also concept which can be introduce through native language so our motivation is toward creating a language to introduce children to computing. Once they know to think in these logical modes (enumeration, recursion and procedural) then writing any program is an aggregation of ideas in some order. Marathi keywords and grammar are chosen to make the native Marathi speaker write programs in the Marathi Programming Language which allows easy representation of computer program closer to the Marathi language logical constructs equivalent to the conditional, branch and loop statements in modern English based programming languages.

Keywords: Regional Programming Language, Compiler Design.

I. INTRODUCTION

There are various programming languages present in the market. this are made for various special purposes. but majority of them are English based programming languages. such as keywords present in these languages are English base. very few languages present in the market which are non-English based. means that the keywords used in these languages are non-English keywords . these keywords are taken from their respective regional languages such as Chinese, Hindi, Tamil etc.

The different non-English based programming languages are Hindawi, Ezhil etc. Hindawi programming system is language proposed by Abhishek Chaudhary and Dr, Shweta Chaudhary which is based on Hindi language. Ezhil programming language is proposed by Muthiah Annamalai which is based on Tamil language

The primary motivation behind this is like mathematics is concept and it can be introduced to children in their native language we want to introduce programming as concept to children in their native language . To introduce computing towards children we want to create programming language and this is reason behind our project.

In china Chinese people use their own language for programming they are not using English programming language, so why not us?.

II. LITERATURE SURVEY

In this section we have discussed the literature view of already existing regional programming language.

Muthiah Annamalai [1] proposed a system named as - Ezhil (எழில்): A Tamil Programming Language. In this language they designed a programming language which is like procedure language (e.g. BASIC, LOGO) and dynamic typed

(Declaration free) like Ruby/Python i.e. which can write program on interpreter. Which is important for students to learn by immediate feedback edit-run-edit-run cycle instead of the edit-compile-re-edit-compile-execute cycle. In this they make computing easy and language semantics follow as closely as possible to reasoning in Tamil by allowing only Tamil keywords. They proposed programming language which allows only Tamil keywords by prototyping it in python.

Abhishek Chaudhary, Dr.Shwetha Chaudhary [2] Proposed a programming language named as Hindawi Programming language. This Language is designed which allows the non-English medium literates to learn programming which can be written in their regional languages. This Language is a suite of open source Indic-text programming languages.
It is a complete package to program in Hindi language but this Hindawi System is restricted to only Hindi language.

Mr. Zhongli [3] Proposed Lieutenant- this is a Chinese programming language which is based on python translation language 2.1.3 In this language variables names can be also used in Chinese language and built in data types can be operated in Chinese. Mr. Zhongli has added internal support for Chinese character encoding and now it run smoothly in Chinese systems of the Big Five and GB Code. This language is compatible with python 2.1.3 program. so large number of extension modules can be use directly.

The discussion of above survey is normalized in tabular format as follows.

SRN O.	PAPER NAME	AUTHOR	METHOD PROPOSED	LIMITATIONS
1.	Ezhil (எழில்): A Tamil Programming Language	Muthiah Annamalai	Proposed Programming language which allows only Tamil keywords by prototyping it in python	Limited for Tamil language only.
2.	Hindawi Programming System	Abhishek Chaudhary, Dr. Shweta Chaudhary	A suite of open source Indic-text programming languages	Limited for Hindi language only.
3	Lieutenant	Mr. Zhongli	Chinese programming language based on Python language with support of internal Chinese character encoding	Limited to Chinese language only

III. TXONOMY CHART

	Procedural	Object Oriented (OOP)	Language Restriction	Scope to use external libraries
Ezhil Programming language	✓	✗	✓	✓
Hindawi programming system	✗	✓	✗	✗
Lieutenant	✗	✓	✓	✓

IV. CONCLUSION

Our proposed System is designed to develop programming language which allows to write the programs in Marathi language. And it also have additional functionalities as compared to other existing non-English based programming languages and purposed system justifies the comparison as shown in taxonomy chart above. After surveying and studying some other non-English based programming languages, we can conclude that the purposed system is feasible with respect to all three formats, these are Market Feasibility, Technical Feasibility and Financial Feasibility.

V. ACKNOWLEDGEMENT

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