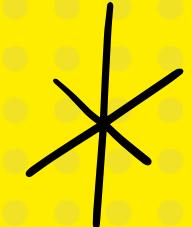
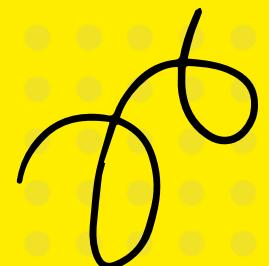




TABLE OF CONTENTS



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INTRODUCTION

Reason why you need it
Pig Latin is a fun and interesting language

•••

RELATED WORKS

Similar works done by other researchers

•••

IMPLEMENTATION & RESULTS

RE & CFG specification Valid & Invalid
Scanner & Parser sketch strings

•••

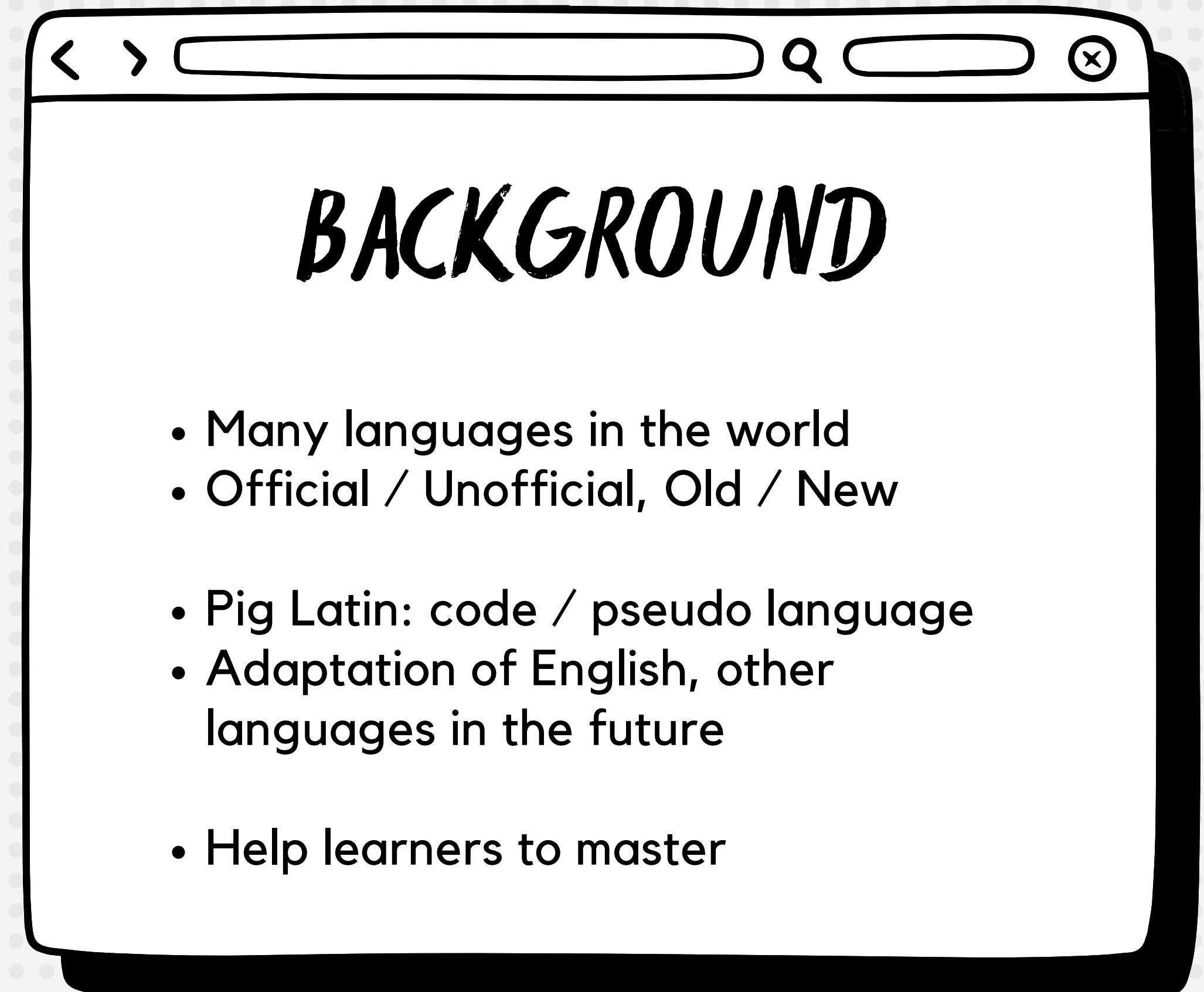
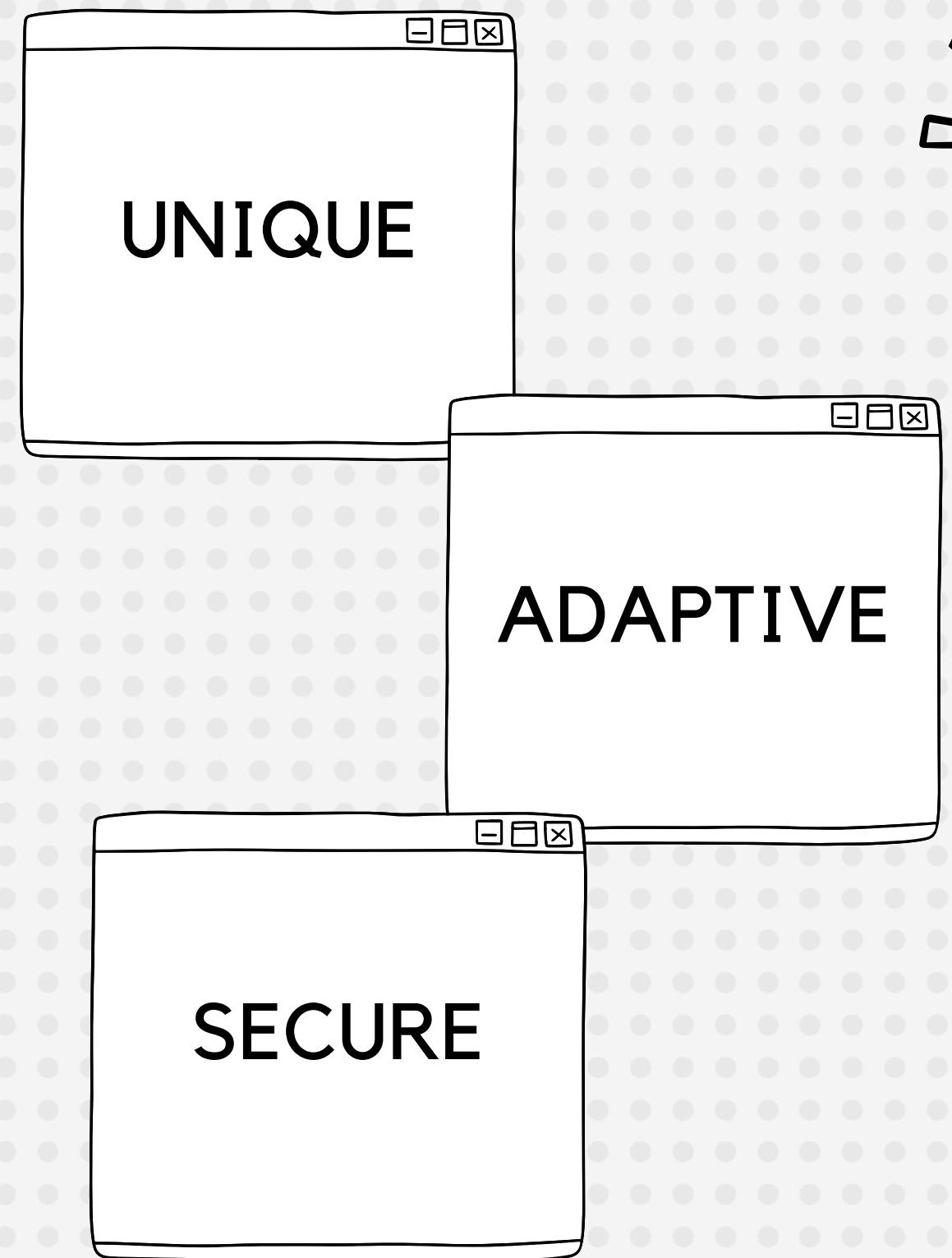
EVALUATION & DISCUSSION

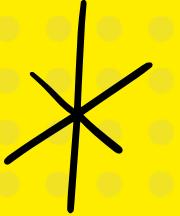
Live demo on the program

•••

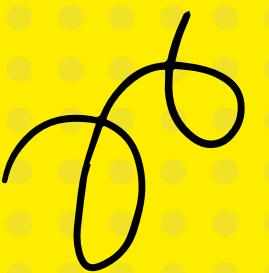
CONCLUSION & RECOMMENDATION

What is done and can be improved





RELATED WORK



**Regular
Expressions
in Natural
Language
Processing**



**Natural
Language
Processing**



**Pig Latin
Translation**

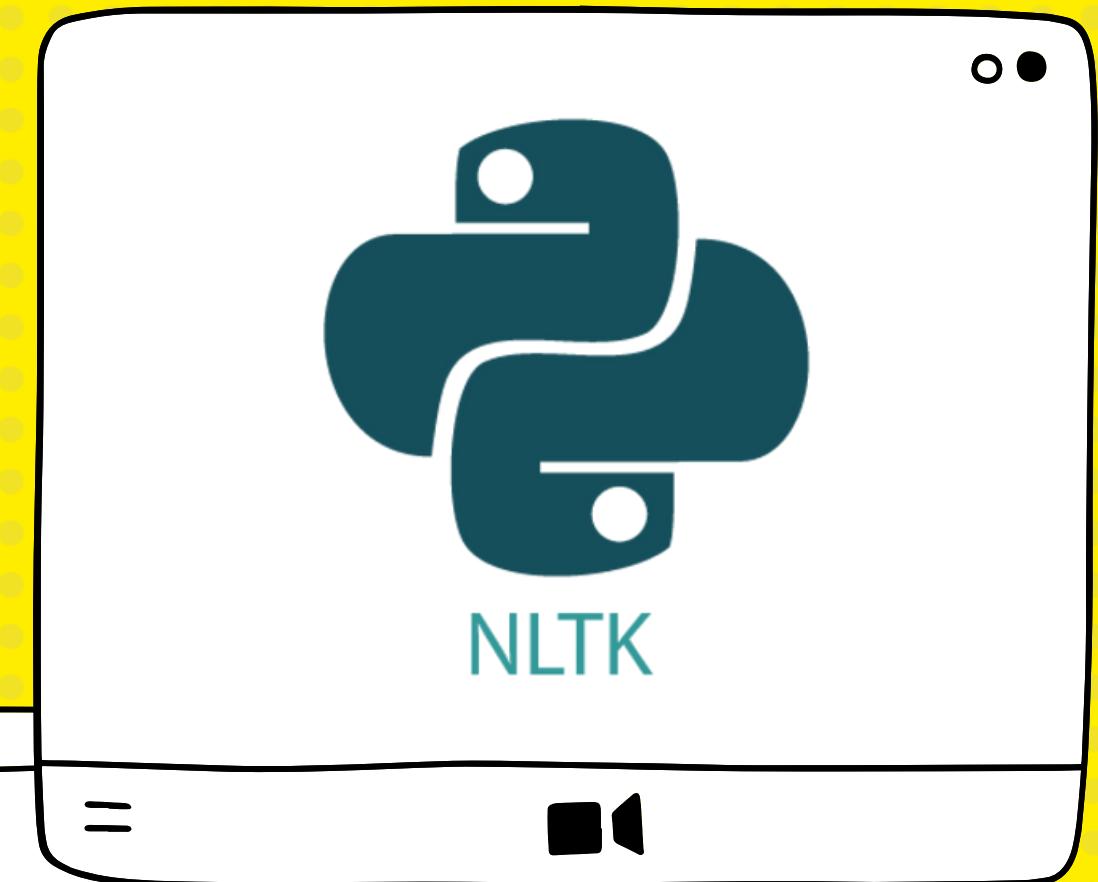
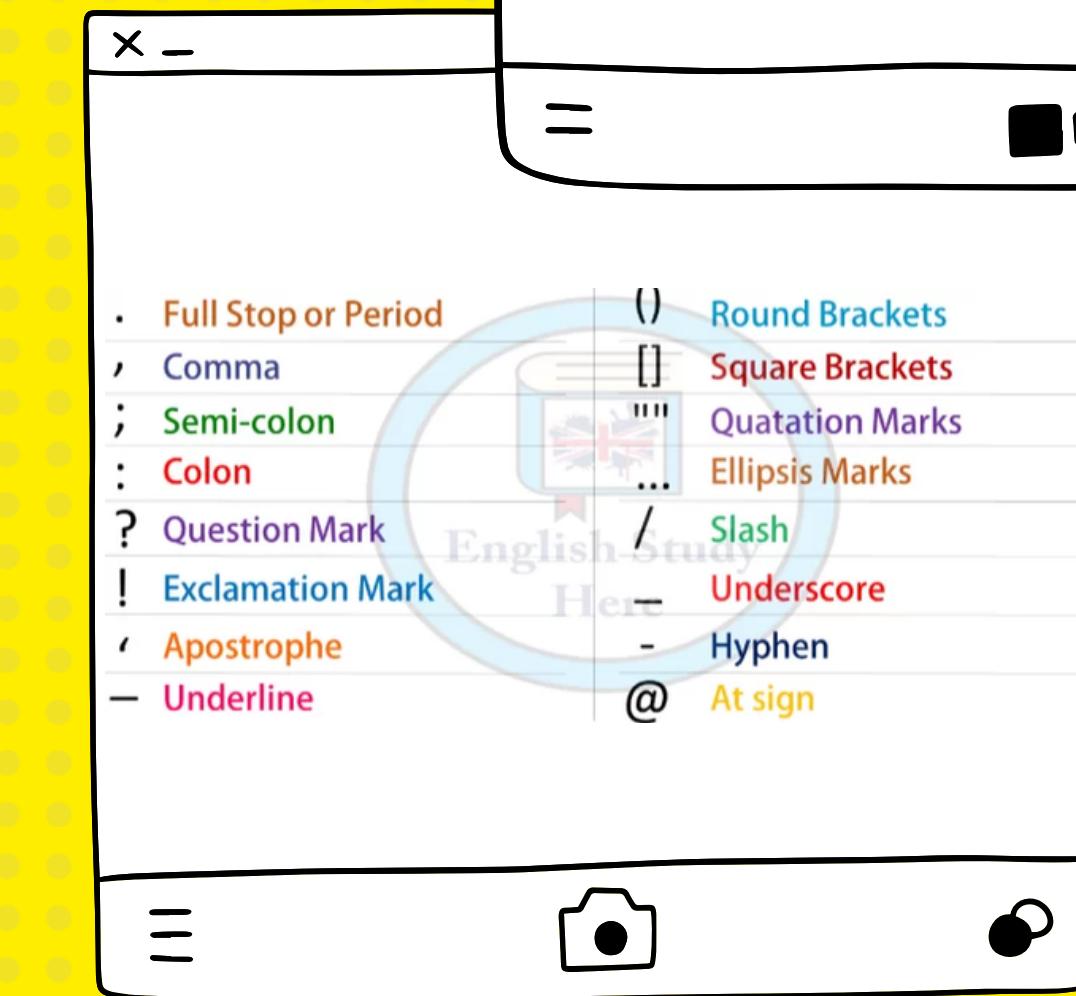
IMPLEMENTATION

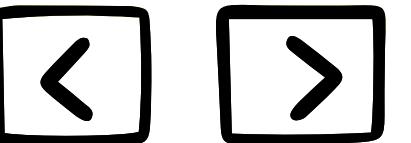
BASIC COMPONENTS

- Tokenizer
- Lexer
- Parser

TOOLS USED

- Python
- NLTK (Word, Punctuation, Number)





IMPLEMENTATION

REGULAR EXPRESSION

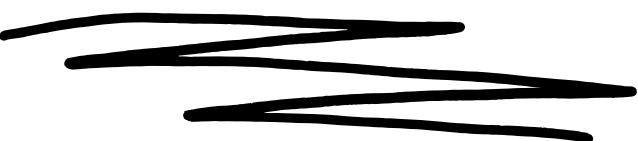
- Words = [a-zA-Z]
- Punctuations =
[!"#\$%&()'*,.-./:;<=>?
@[\]^_`{}~]
- Numbers = [0-9]

CONTEXT FREE GRAMMAR

LL(1)

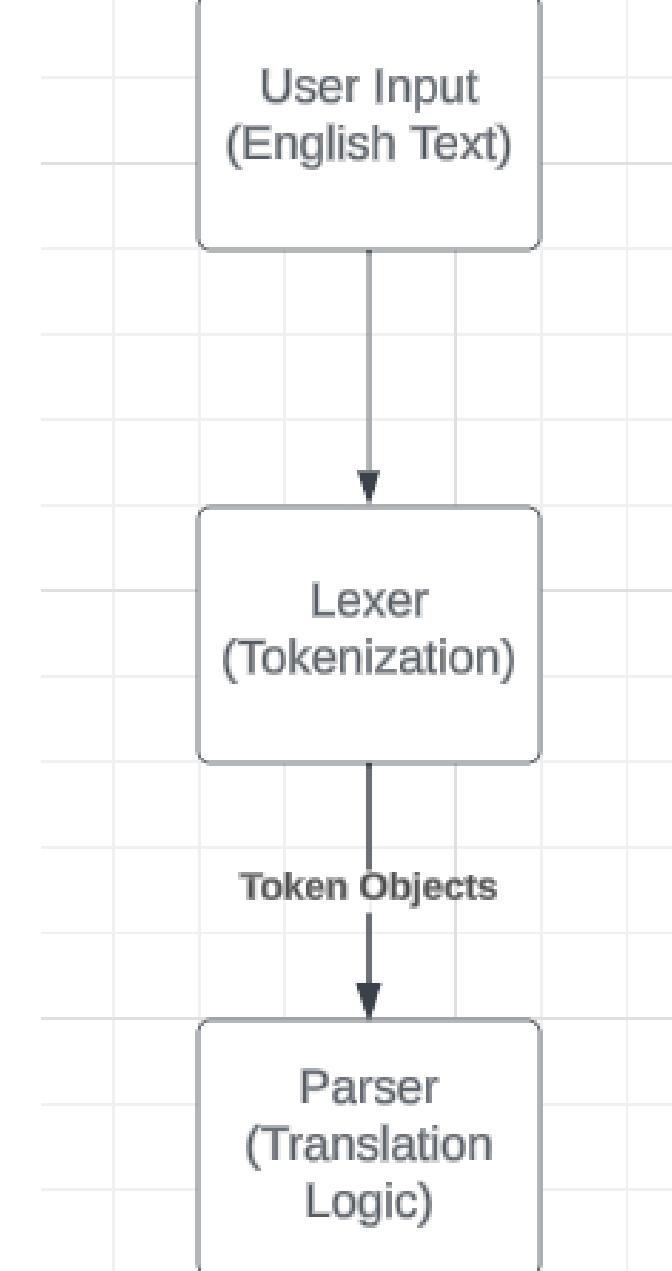
- Sentence -> WordList
- WordList -> Word WordList | Word
- Word -> ConsonantWord | VowelWord
- ConsonantWord -> Consonant Cluster 'ay'
- VowelWord -> Vowel 'way'
- Consonant -> 'b' | 'c' | 'd' | 'f' | 'g' | 'h' | 'j' | 'k' | 'l'
'm' | 'n' | 'p' | 'q' | 'r' | 's' | 't' | 'v' | 'w' | 'x' | 'y' | 'z'
- Cluster -> Consonant Cluster | Consonant
- Vowel -> 'a' | 'e' | 'i' | 'o' | 'u'

SKETCH



SCANNER

The scanner efficiently categorizes input into tokens, uses NLTK to validate English words.

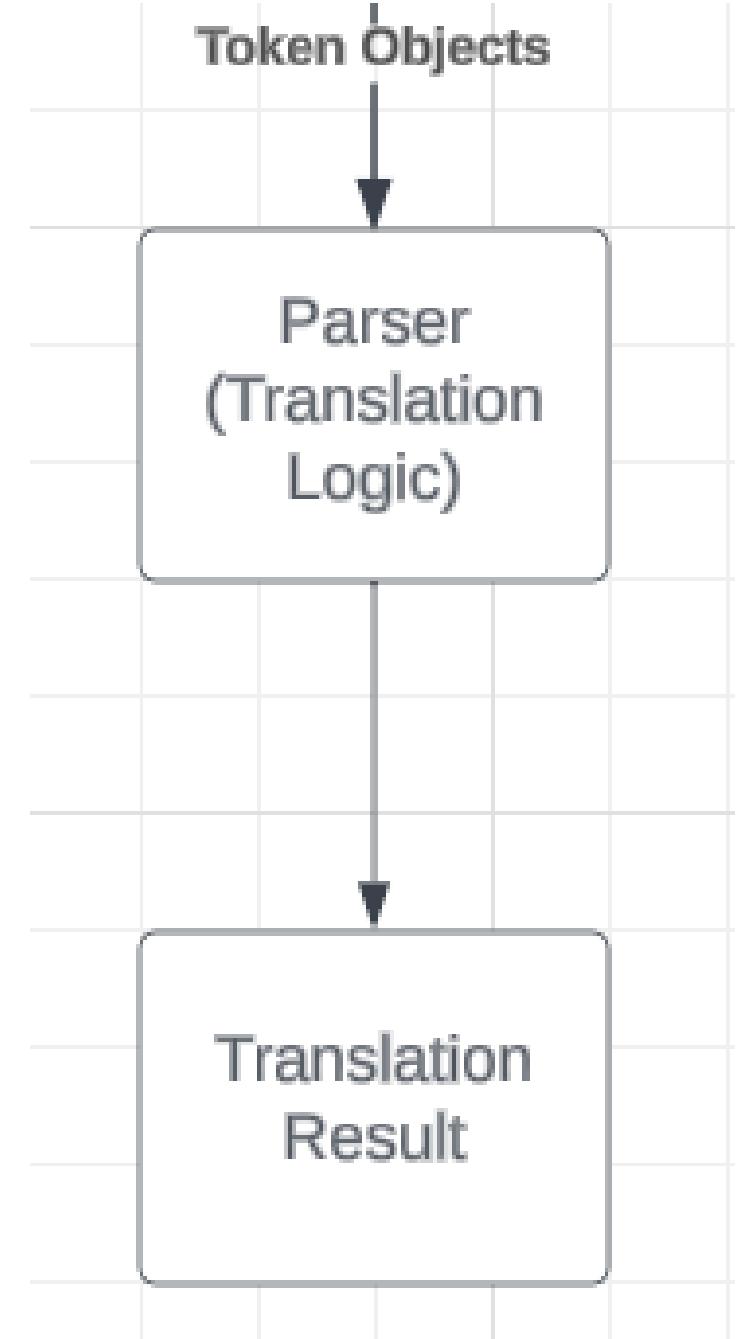


SKETCH



PARSER

The parser translates English text into Pig Latin by grabbing the tokenized words (terms and expressions) from the input and converting it using the formula.



RESULTS

VALID STRINGS

- Hello World ==> elloHay orldWay
- In The Year 1999 ==> inway
ethay earyay 1999
- Hello, My name is ==> elloHay,
Myay amenay isway

INVALID STRINGS

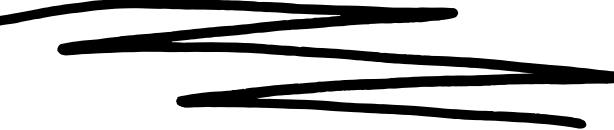
- asdfasfasd asfd (giberish)
- apa kabar (non-english
sentences)
- Hey 😊 (undefined symbols)

EVALUATION & DISCUSSION

LIVE DEMO

Code Implementation
Input & Output

CONCLUSION



- Implements an English to Pig Latin translator using regular expressions, context-free grammar, and lexer techniques.
- Utilizes NLTK library and python
- Successfully handles English sentences and words
- Has several limitations

Recommendation

Address Limitations
Vocabulary Expansion

User-Friendly Features

Refinement of Translation Logic



THANK YOU
FOR LISTENING

ANY QUESTIONS??

REFERENCES

