English to Pig Latin Converter LC-3 Project Design

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Author Note

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Abstract

This design document is meant to be a blueprint of the English to Pig Latin Converter LC-3 project. Within this document, you will find a feature description, data architecture, user interface, and architectural and process flow diagrams

*Keywords*:

Pig Latin: A language game using English to talk in secret.

**Detailed Feature Description**

**English to Pig Latin** **conversion**: The first letter of an approved word will be appended to the end of the string. The string “ay” will be appended to the end of the previous string completing the English to Pig Latin conversion.

# Data Architecture,

The ASCII characters will be entered in a continuous string by the user. The characters will be stored in R2, R3, and R4 respectively. The characters will be compared to the ASCII characters in a vowels file, and in a consonant file. When a character is recognized, the respective counters will be incremented. The counters will then be used to error-check the user’s input. First, if the vowel counter is 0 the program will display an error message and halt the program. If the vowel counter is greater than 0, the program will take the addition of the vowel counter to the consonant counter and negate the answer. It will then add this to the number 3, if this does not equal zero, an error message will be displayed.

## User Interface

The user will be greeted and prompted to enter a 3-character word. The program will be designed to check the word for a vowel and for non-letter entries. If no vowel is entered or a non-letter is entered, the program will output an error message to the user and halt the program. When the correct form of a word is entered the user will be displayed the Pig Latin translation of their inputted word.

#### Architectural and Process Flow Diagrams

