

# Lab Assignment 6 Design Document

## Functional Requirements:

The program aims to analyze the text of "The Phantom Tollbooth" and determine the fifty most common words while excluding articles, prepositions, conjunctions, and pronouns. The user should expect to see a list of these fifty words along with the amount of times the word was used.

## Decomposition Strategy:

A minimal version of the program can start with reading the text and tokenizing it into words. Then, it can count the frequency of each word and print the result without excluding any words initially. This minimal version ensures that the basic functionality of reading the text and counting word frequencies is working before adding the complexity of excluding specific words.

## Design Requirements:

### Data:

- Information to be obtained: The text of "The Phantom Tollbooth."
- Information to be tracked: Word frequencies.
- Data types:
  - Text: String
  - Word frequencies: Dictionary (key: word, value: frequency)

### Loops:

- Behavior to be repeated: Counting word frequencies.
- Loop type: for loop to iterate through words in the text.

### Conditions:

- Conditions to check:
  - Whether a word is an article, preposition, conjunction, or pronoun.
- Resulting behavior:
  - Exclude the word from the word frequencies count if it meets the conditions.

In the final version of the program, the conditions will be implemented to exclude specific words from the word frequencies count, achieving the desired functionality outlined in the functional requirements.

