

## Reid3.py Algorithm:

### I. Initialization

1. Ask user the name of the file that they wish to open
  - A. If no file is chosen, or an invalid filename is given, a default text will load
2. Opened file returned to main program

### II. Menu creation

1. Selection menu printed with options specified in program
2. User is asked which option they choose
  - A User will be asked to choose until a valid selection is picked

### III. Run selection based on menu choice

#### 1. All Word Count

- A. Separates the words in the text and removes punctuation
- B. Iterates through separated words counting each word and adds to dictionary
- C. Create a sorted dictionary
- D. Create a set of the top five values
- E. Calculate and total number of words
- F. Print total number of words and total number of unique words in dictionary
- G. Print top five words and their values from sorted dictionary
- H. Return to main menu

#### 2. Single Word Count

- A. Asks user for a word to check - Loops until only one word is given
- B. Separates the words in the text and removes punctuation
- C. Iterates through separated words counting each user specified word
- D. Prints how many times, if any, the word appears in the text
- E. Return to main menu

#### 3. Replace Word

- A. Asks user for a word to replace
- B. Asks user what word they would like to replace it with

- C. Replace the old word with the new word
- D. Separates the words in the text and removes punctuation
- E. Iterates through separated words counting each user specified word
- F. Prints how many times, if any, the word appears in the text
- G. Prints new text on the screen
- H. Asks user if they wish to save the file
  - If user wishes to save, ask the user what filename they want to use
  - Print confirmation if file was saved or not
- I. Return to main menu

#### 4. Add Text

- A. Asks user if they want to add text to beginning or end of the text.
  - Continues to ask until a valid answer is given
- B. Asks user what they wish to add to the text
- C. Adds the new text to the specified location of the original text
- D. Asks user if they wish to save the file
  - If user wishes to save, ask the user what filename they want to use
  - Print confirmation if file was saved or not
- E. Return to main menu

#### 5. Delete Text

- A. Asks user what word they wish to delete
  - Verifies that only one word was given
- B. Replace first occurrence of the user word with an empty string
- C. Remove any extra spacing where the word was removed
- D. Prints new text on the screen
- E. Asks user if they wish to save the file
  - If user wishes to save, ask the user what filename they want to use
  - Print confirmation if file was saved or not
- F. Return to main menu

#### 6. Highlight

- A. Asks user what word they wish to highlight
- B. Saves word adding ‘\*\*’ to the beginning and end of the word
- C. Replaces all occurrences of the old word with the new highlighted word
- D. Prints new text on the screen
- E. Asks user if they wish to save the file
  - If user wishes to save, ask the user what filename they want to use
  - Print confirmation if file was saved or not
- F. Return to main menu

#### 7. Ransom Text

- A. Prints initial statement
- B. Alternates toggling each character as either uppercase or lowercase
- C. Alternates toggling each character as red or purple
- D. Saves one version with color change and one version without color change
- E. Prints the version with color change applied
- F. Asks user if they wish to save the non-color changed file
  - If user wishes to save, ask the user what filename they want to use
  - Print confirmation if file was saved or not
- F. Return to main menu

#### 8. Exit

- A. Exits the program