# Pseudo Code

**My application class**

*Run*

Run the start of the program

*Choose A Data Input Option*

If user enters “Keyboard”

Then run the keyboard option method

If the user enters “Demo”

Then run the demo option method

If the user enters “File input”

Then run the file input option method

Else (Boolean)

Ask the user to re enter a valid option

*Run Keyboard Option*

The User will be prompted to enter some text

When the user enters some text

The user will be asked how they want it to be displayed: Table, Bar chart or word count or if they want to exit the program or return to the main menu

*Run Demo Option*

A hard coded sentence will be printed

The user will be asked how they want it to be displayed: Table, Bar chart or word count or if they want to exit the program or return to the main menu

*File Input Option*

Ask user to input valid file name

If it is valid

The user will be asked how they want it to be displayed: Table, Bar chart or word count or if they want to exit the program or return to the main menu

Else they will be presented with a file could not be found error and prompted to enter a valid file name

*Display Analysis*

If user enters Table

Then run the table method

If user enters Bar chart

Then run the Bar chart method

If user enters word count

Then run the word count method

If the user enters Main Menu

Then run the choose a data input option method

If user enters Exit

Then display the exit message and terminate the program

Else

Ask to re enter valid data input option

*Display Hard Coded Sentence For Demo*

Print out “Demo sentence” and call the demo sentence class and print demo sentence

*Ask To Input File Name*

Print out “Enter a file name”

*Ask To Input Any Text*

Print out “Enter some text”

*Display Welcome Message And Input Options*

Print out “Welcome to my Java Assignment, Pick and option, Keyboard, Demo, File Input”

*Ask To Choose Table Or Bar Chart Or Word Count Display*

Print out “How would you like it to be displayed? Table, Bar chart, Word count, Main Menu or Exit”

*Ask To Re Enter Data Input Option*

Print out “Please re enter a valid option”

*Display Exit*

Print out “Goodbye”

**Main class**

*Main*

Create application object

Run app

**Word Count Table class**

*Create*

Call in a method from calculate class to calculate number of words

Use a hash map to store the key “words” as a value word count

Call in a method from calculate class to calculate number of characters

Use a hash map to store the key “characters” as a value character count

Print the header of the table

Print the body of the table

Print the footer of the table

*Print Body*

Print out “| “ + words + ” |”

*Print header*

Print out “|----------------|-----------------------|”

Print out “|Word Count| Character Count|”

Print out “|----------------|-----------------------|”

*Print Footer*

Print out “|----------------|-----------------------|”

**Calculator class**

*Frequency*

For loop to loop round the length of the letters

IF the element of letters is equivalent to a letter in the entered text then count will increase if not count will not increase

*Relative Frequency*

((Frequency / the length of the text entered) \* 100 / 100) \*100

*Split Into Characters*

Split the string into individual characters using a split function

*Lower Case*

Convert upper case characters to lower case using a toLowerCase function

*Number Of Characters*

Calculate the amount of characters in the entered text by getting the length

*Number Of Words*

Create an array to split the text into words

Then get the amount of words

**My File Reader class**

*Reader*

Read the text from the text file input stream using a buffered reader

Return all the lines read

*Read All Lines*

While the line is not null, read the line

Convert to a string using the toString function

**My Demo class**

Static String Sentence that will equal “#I Love Programming!!!”

**My Characters class**

Static String array containing all characters "a", "b", "c", "d", "e", "f", "g", "h", "i", "j", "k", "l", "m", "n", "o", "p", "q", "r", "s", "t", "u", "v", "w", "x", "y", "z", "1", "2", "3", "4", "5", "6", "7", "8", "9", "0",

"!", "?", "$", "%", "^", "&", "\*", "(", ")", "\_", "-", "+", "=", "{", "[", "}", "]", "~", "#", ":", ";", "@", "'", "<", ",", ">", ".", "\", "|", " (white space)"

**Table class**

*Create*

Print the header

Print the rows with the entered sentence

**Header class**

*Print*

Print out “|--------------|---------------|---------------------------|”

Print out “|Calculator | Frequency| Relative Frequency |

Print out “|--------------|---------------|---------------------------|”

**Body class**

*Print Rows*

Call the my characters from my array

Loop through the characters in the array

Use the frequency calculation method form the calculator class and pass in the character array and entered text

Use the relative frequency calculation method from the calculator class and pass in the character array and entered text

Print out the character columns passing in the character array

Print out the frequency columns passing in the frequency

Print out the relative frequency columns passing in the relative frequency

Print the footer

*Print Character Column*

Print out “| “ + characters + “ |”

*Print Out Frequency Column*

Create a place holder with length of the word frequency

Change the number to a string to get the length

Then calculate the white spaces needed by doing place holder – the number of digits

Then loop through the white spaces needed

And increase the number of spaces needed when required

Print out “| “ + the number + number of white spaces required + “ |”

*Print Out Relative Frequency Column*

Create a place holder with length of the word relative frequency

Get the value of the number

Then calculate the white spaces needed by doing place holder – the number of digits

Then loop through the white spaces needed

And increase the number of spaces needed when required

Print out “| “ + the number + “ % “ + + number of white spaces required + “ |”

*Print Table Footer*

Print out “|------------------|----------------------|------------------------------|”

**Y Axis class**

*Create*

Get character array

Loop through as long as the length of my character array

Print out the letters and axis

And use the calculator class the calculate the relative frequency passing in the characters and entered text

Print out the bars (#)

*Print Bar*

Loop through same times as the relative frequency

Add a hash tag for each time

1 character = 1 #

*Print Letter And Axis On New Line*

Print out the letters

**X Axis class**

*Print*

Print out the X Axis line

Print out the points on the X Axis

Print out the percentage numbers on the X Axis

Print out X Axis title

*Print X Axis Line*

Loop through 10 times to print out “\_\_\_\_\_\_\_” until 10 is reached

*Left Margin*

Loop through the length of the margin

Create correct margin size

*Print Percentage Numbers On X Axis*

Print out the left margin

loop through and print out the percentages going up in 10 times table

*Print Points On X Axis*

Print out the left margin

Loop through 10 times and print out “ ‘ “ each time until 10 is reached

*Print X Axis Title*

Print out the left margin and “Relative Frequency (%)”

**Bar Chart class**

*Create*

Print out the title

Print out the Y Axis

Print out the X Axis

*Print Main Title*

Print out “Relative Frequency Table”