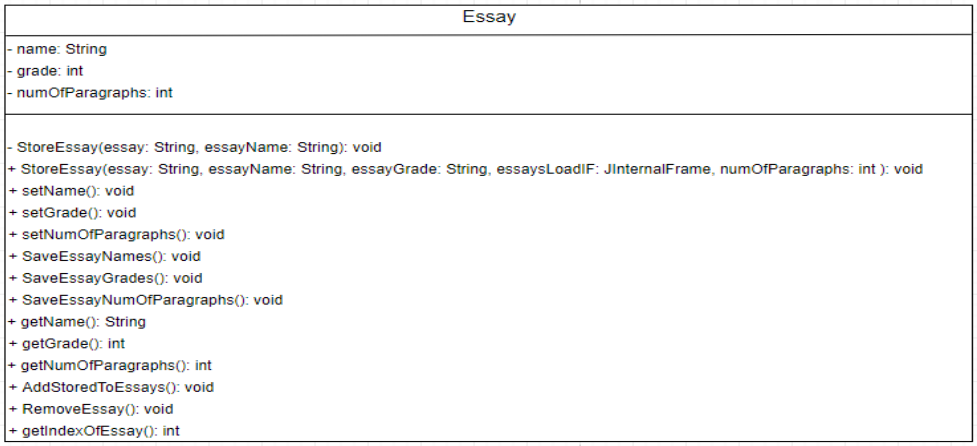
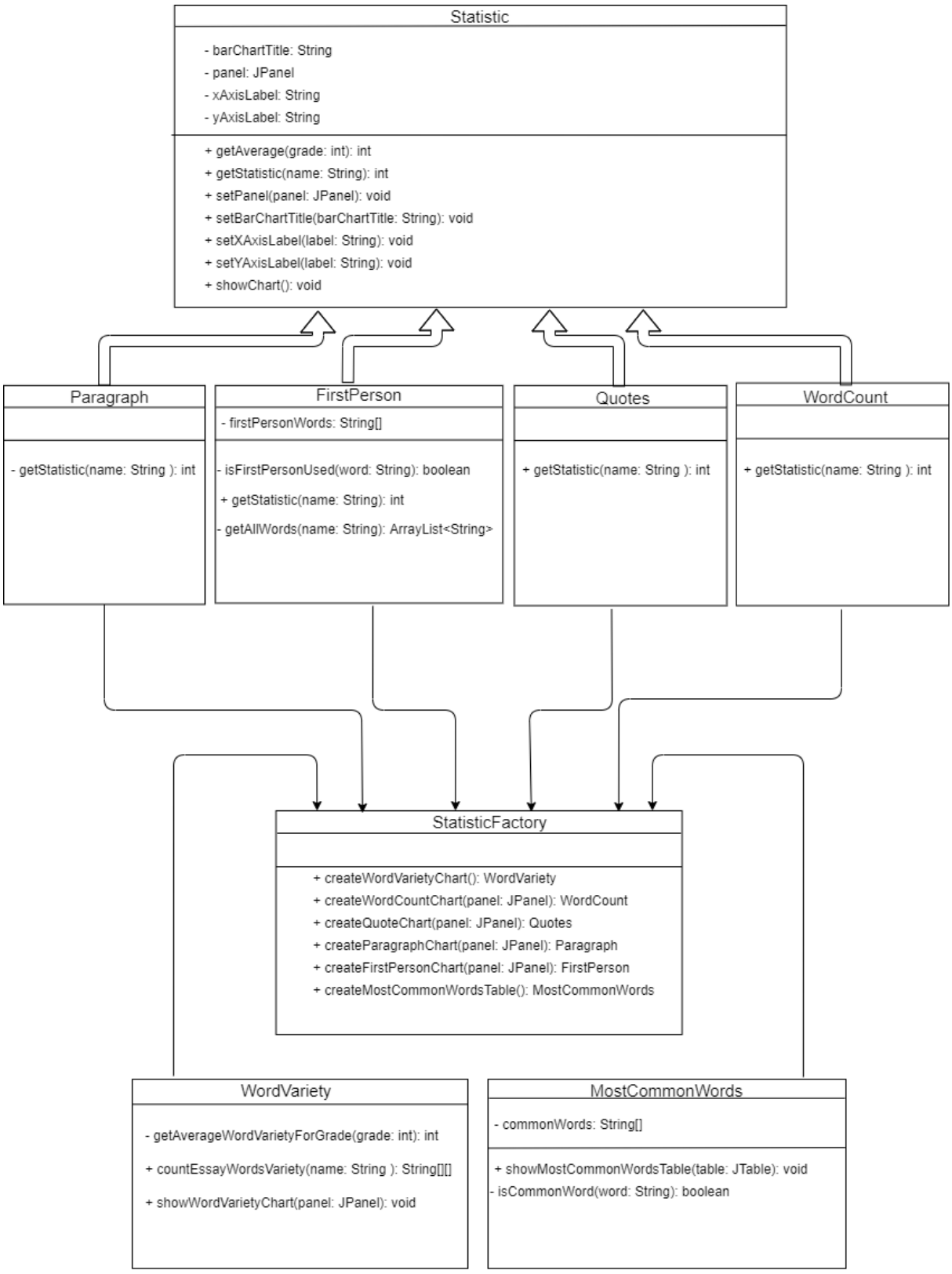
CRITERION B: DESIGN

The program loads in word documents as instances of the essay class;

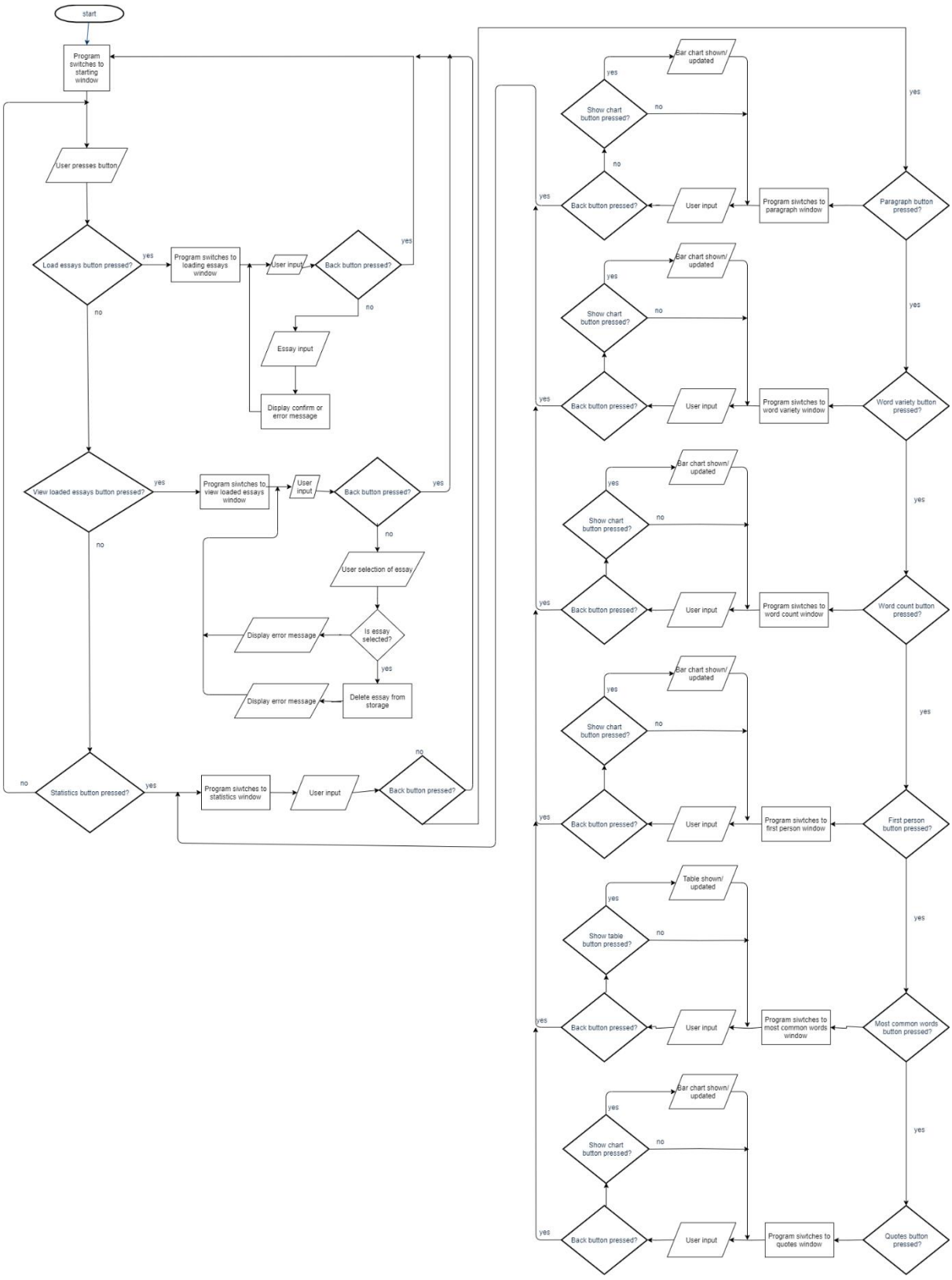


The UML diagram below is for the data model, which is generated from instances of the essay class.

UML

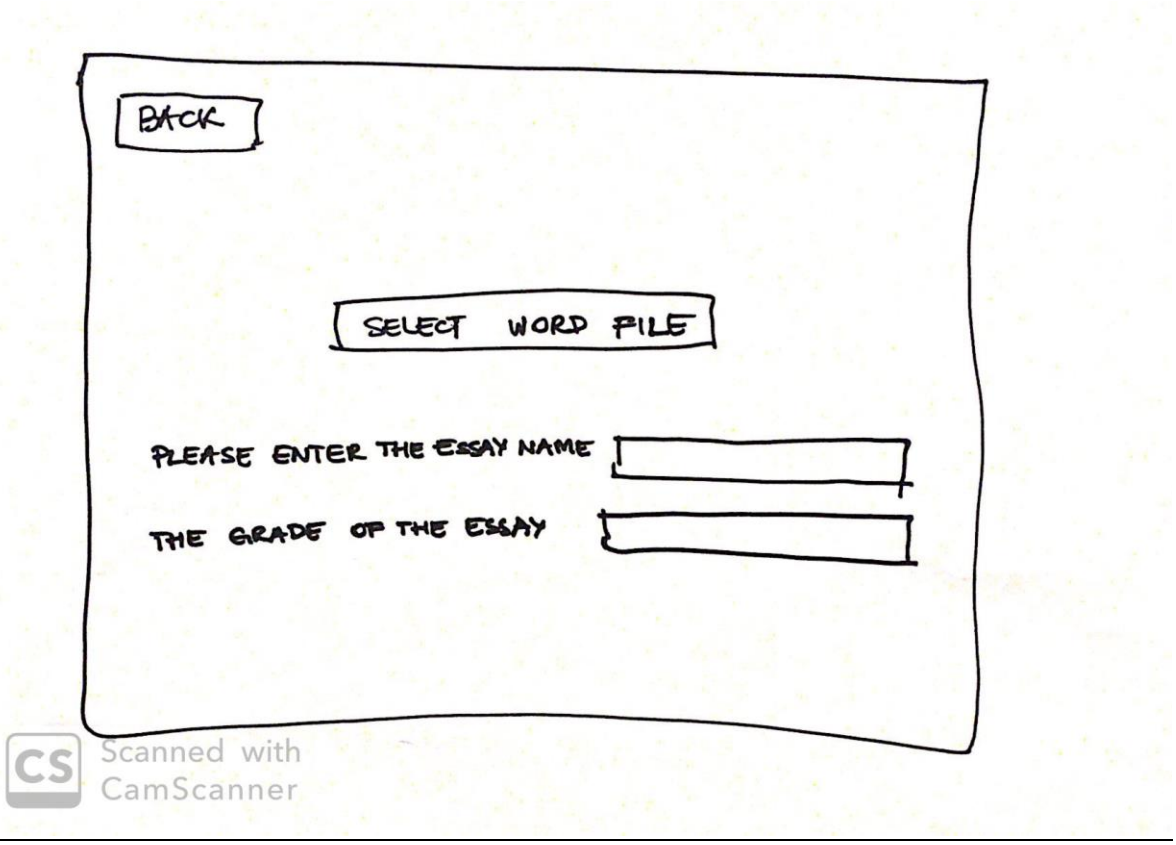

Statistic
- barChartTitle: String
- panel: JPanel
- xAxisLabel: String
- yAxisLabel: String
+ getAverage(grade: int): int
+ getStatistic(name: String): int
+ setPanel(panel: JPanel): void
+ setBarChartTitle(barChartTitle: String): void
+ setXAxisLabel(label: String): void
+ setYAxisLabel(label: String): void
+ showChart(): void
Paragraph
- getStatistic(name: String): int
FirstPerson
- firstPersonWords: String[]
- isFirstPersonUsed(word: String): boolean
+ getStatistic(name: String): int
- getAllWords(name: String): ArrayList<String>
Quotes
+ getStatistic(name: String): int
WordCount
+ getStatistic(name: String): int
StatisticFactory
+ createWordVarietyChart(): WordVariety
+ createWordCountChart(panel: JPanel): WordCount
+ createQuoteChart(panel: JPanel): Quotes
+ createParagraphChart(panel: JPanel): Paragraph
+ createFirstPersonChart(panel: JPanel): FirstPerson
+ createMostCommonWordsTable(): MostCommonWords
WordVariety
- getAverageWordVarietyForGrade(grade: int): int
+ countEssayWordsVariety(name: String): String[][]
+ showWordVarietyChart(panel: JPanel): void
MostCommonWords
- commonWords: String[]
+ showMostCommonWordsTable(table: JTable): void
- isCommonWord(word: String): boolean

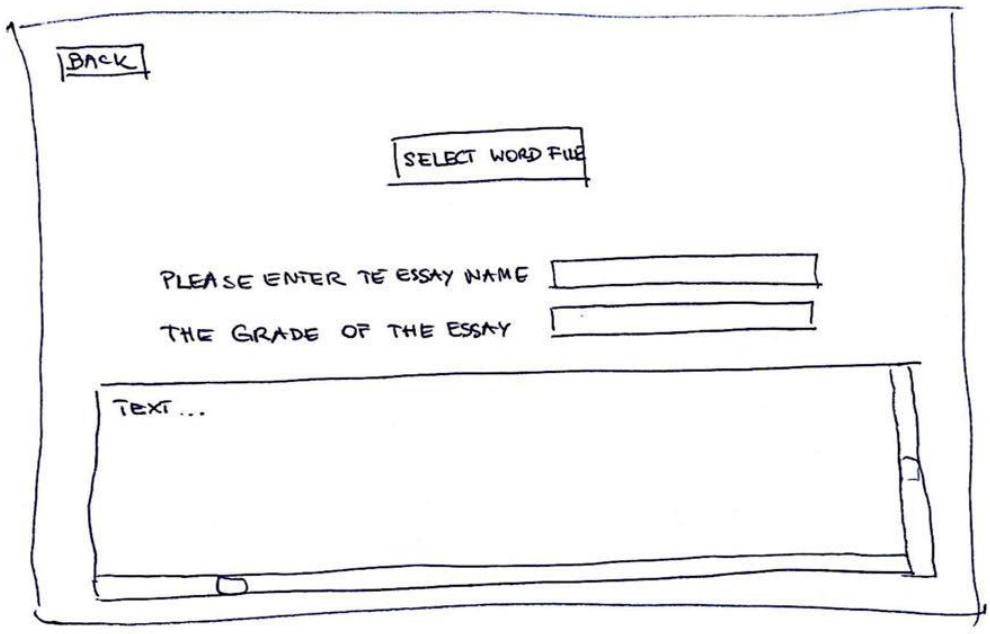
PROCESS DESCRIPTION

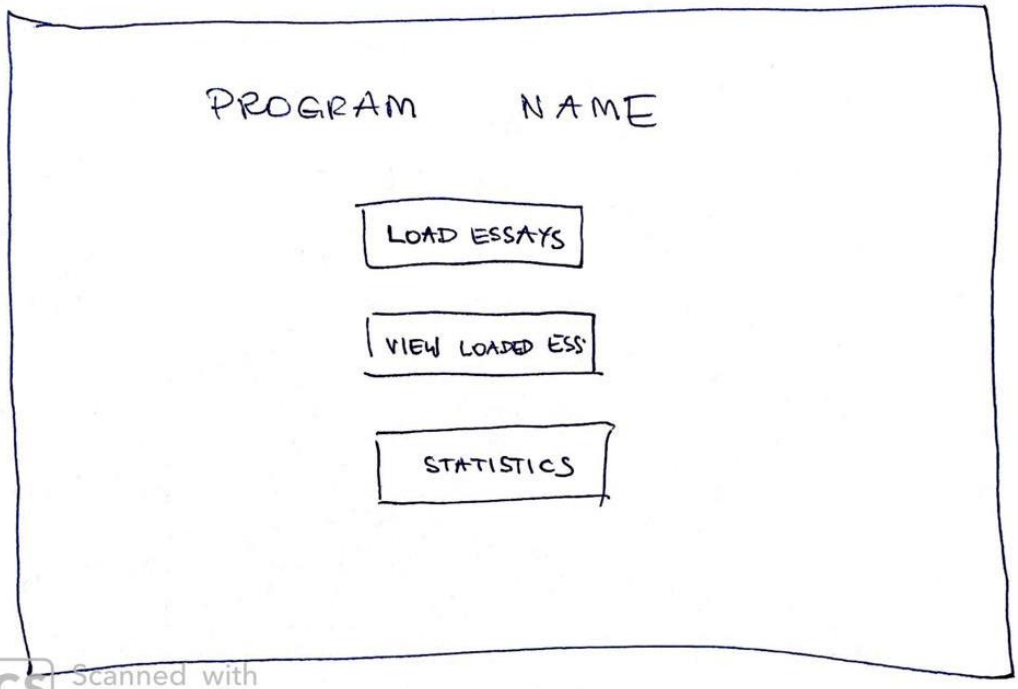


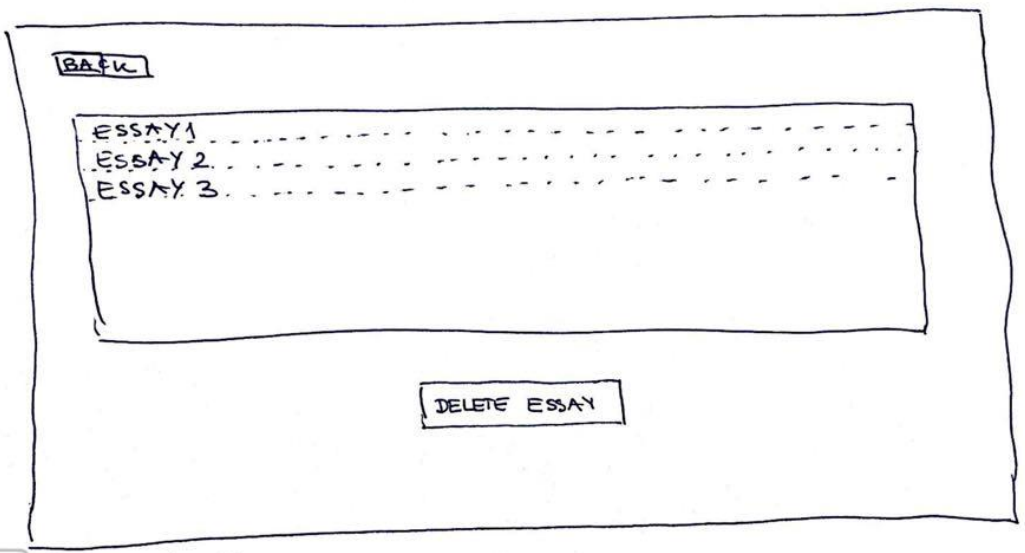
UI SKETCHES

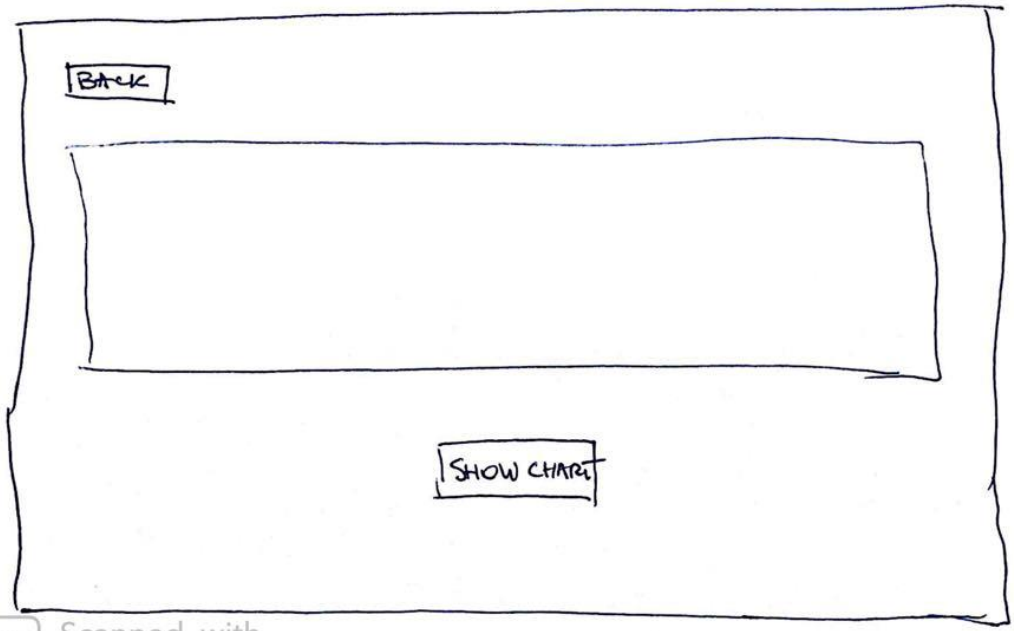
The sketch below was first presented to the client. After user feedback a textbox containing a part of the essay to be uploaded was added.

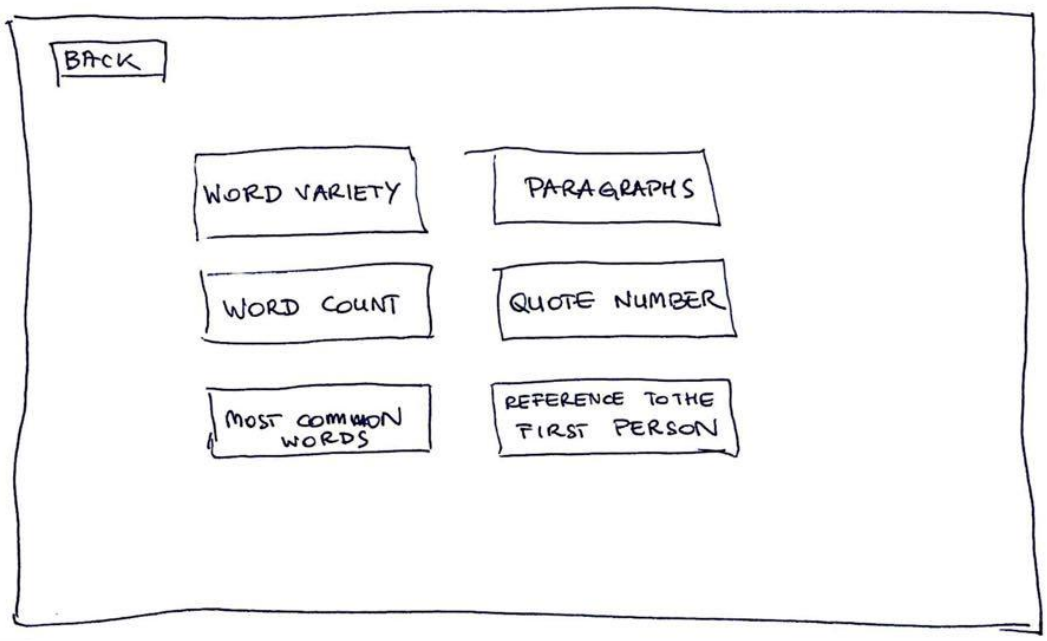


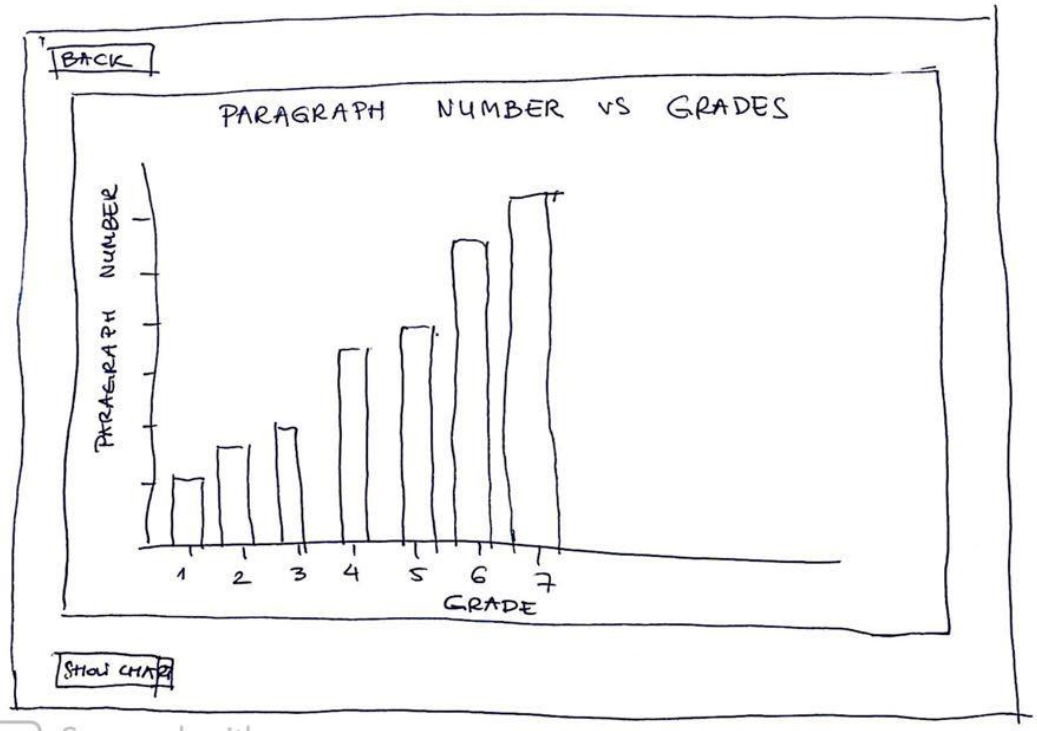


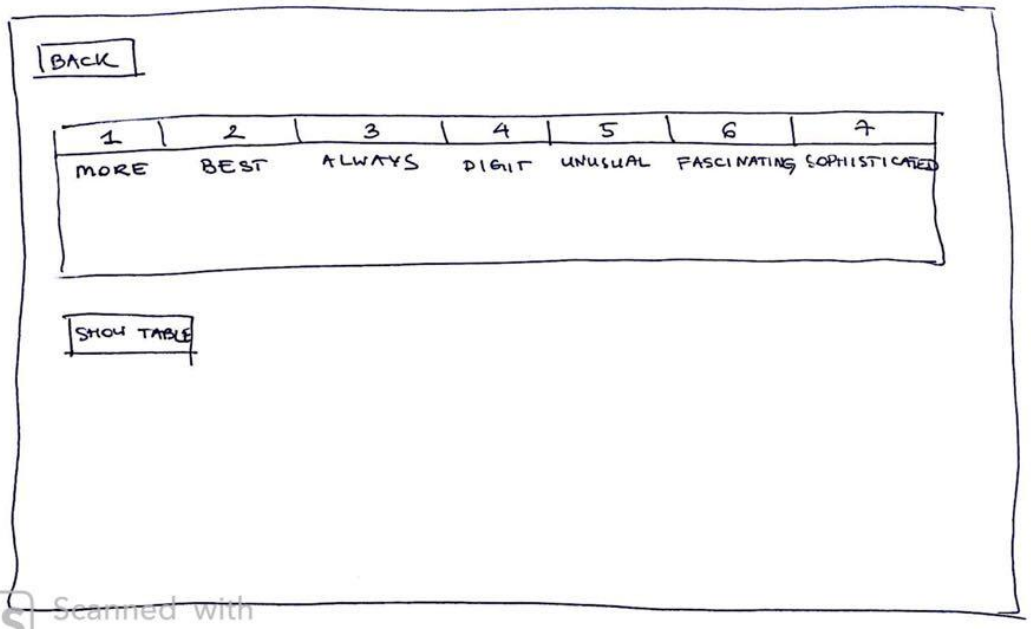


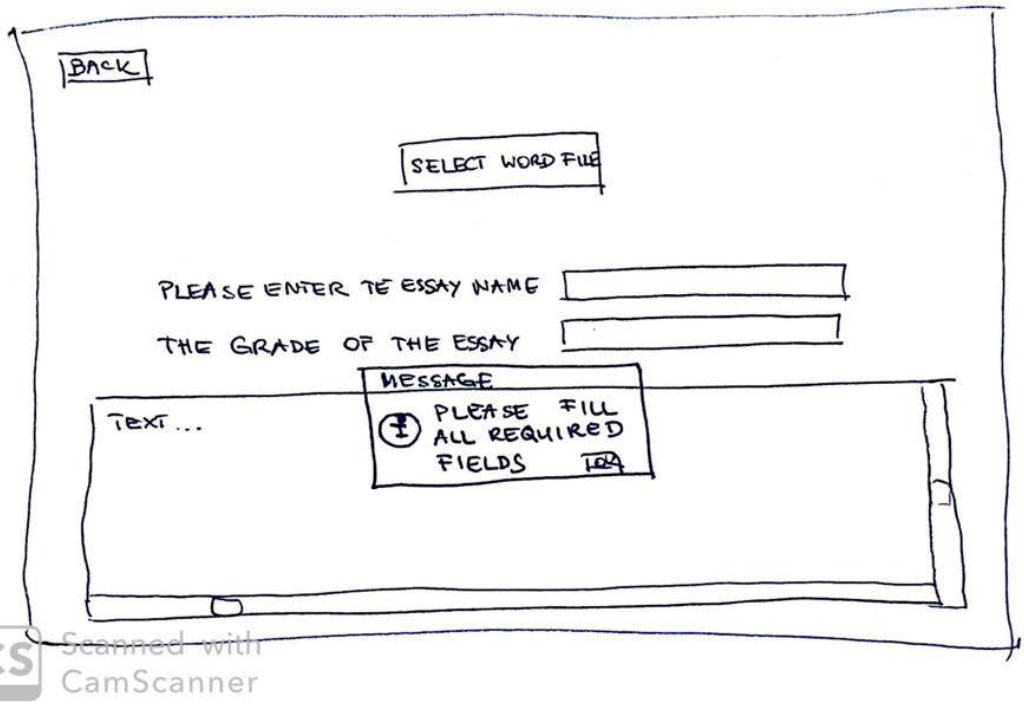












TEST PLAN

Action test	Way of testing and results	Expected result
1. The program needs to be able to load essays from .docx files	Load a sample docx file check if it can be viewed in the "view loaded essays" menu	File is visible in the "view loaded essays menu" with its given name
2. Each essay added must be associated with a name and grade.	If only one file is uploaded, statistics should be displayed for that entered grade and the name of the essay should be visible in the view loaded essays window	Essay name is visible in the view loaded essays window and the statistics appear for the entered grade
3. The program must analyze documents and calculate the required statistics.	Each statistic is displayed by program is verified, using 2 sample docx files for which statistics are known	Statistics are correct
4. Correct statistics need to be outputted by the program in the form of a bar chart.	Check if individual statistics are outputted in the form of a bar chart	Bar chart is visible
5. The program needs persistence so that data added is retained when the program is restarted.	After restarting the program, check the "view loaded essays" window	Essay names can still be viewed in "view loaded essays" window
6. The program can be operated quickly and with minimal keyboard use.	Is correct if it was easy for user to navigate while testing other points, not using the keyboard much	it was easy for user to navigate while testing other points, not using the keyboard much
7. It must be possible to view the list of all loaded documents.	Go to view loaded essays and see if the names of the loaded essays are visible	Names of essays are visible

8. It is possible to view the table of most common words omitting simple words such as: I, the, you etc.	Go to most common words in statistics and see if data is displayed omitting simple words, correct and in a table	Data is displayed omitting simple words, correct and in a table