

CSE 3150 - Basic Text Editor Manual

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Overview:

This project will allow me to practice C++ programming by writing a console application: a vi-like text editor. Throughout this project, I will learn and gain experience with using different object-oriented approaches, such as Model View Controller and Observer pattern styles of design. Although the text editor itself is not particularly exciting to implement, the point of this project is to gain experience implementing a non-trivial program following the OO paradigm.

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Compile and Run

To compile this and run this program, please use the *make* utility on a Unix-based system. Using the included Makefile, the *make* utility will compile the necessary files and create an executable titled 'runThis'. A user can run the command **./runThis** to start the program.

```
$ cd Rumbel-Project_Phase1
```

\$ make clean

\$ make

```
g++ -c Commands.cpp -o Commands.o -O3 -std=c++14 -Wall -I.
```

```
g++ -c Document.cpp -o Document.o -O3 -std=c++14 -Wall -I.
```

```
g++ -c ECEditorTest.cpp -o ECEditorTest.o -O3 -std=c++14 -Wall -I.
```

```
g++ -c ECTextViewImp.cpp -o ECTextViewImp.o -O3 -std=c++14 -Wall -I.
```

```
g++ -c EditorController.cpp -o EditorController.o -O3 -std=c++14 -Wall -I.
```

```
g++ -o runThis Commands.o Document.o EEditorTest.o ETextViewImp.o EditorController.o
```

`$/runThis <filename>`

After the last command is run, the text editor will open and will be ready for text manipulation.

A screenshot of a terminal window titled "Rumbel-Project_Phase1 — runThis — 111x24". The terminal shows the output of a C++ program. The first line is "[This is a basic text editor]". The second line is "[Hello C++]". The third line is "Matt_". The fourth line is "[~". The fifth line is "[~". The sixth line is "[~". The seventh line is "[~". The eighth line is "[~". The ninth line is "[~". The tenth line is "[~". The eleventh line is "[~". The twelfth line is "[~". The thirteenth line is "[~". The fourteenth line is "[~". The fifteenth line is "[~". The sixteenth line is "[~". The seventeenth line is "[~". The eighteenth line is "[~". The nineteenth line is "[~". The twentieth line is "[~". The twenty-first line is "[~". The twenty-second line is "[~". The twenty-third line is "[~". The twenty-fourth line is "[~". The twenty-fifth line is "[~". The twenty-sixth line is "[~". The twenty-seventh line is "[~". The twenty-eighth line is "[~". The twenty-ninth line is "[~". The thirtieth line is "[~". The thirty-first line is "[~". The thirty-second line is "[~". The thirty-third line is "[~". The thirty-fourth line is "[~". The thirty-fifth line is "[~". The thirty-sixth line is "[~". The thirty-seventh line is "[~". The thirty-eighth line is "[~". The thirty-ninth line is "[~". The fortieth line is "[~". The forty-first line is "[~". The forty-second line is "[~". The forty-third line is "[~". The forty-fourth line is "[~". The forty-fifth line is "[~". The forty-sixth line is "[~". The forty-seventh line is "[~". The forty-eighth line is "[~". The forty-ninth line is "[~". The fiftieth line is "[~". The fifty-first line is "[~". The fifty-second line is "[~". The fifty-third line is "[~". The fifty-fourth line is "[~". The fifty-fifth line is "[~". The fifty-sixth line is "[~". The fifty-seventh line is "[~". The fifty-eighth line is "[~". The fifty-ninth line is "[~". The sixtieth line is "[~". The sixty-first line is "[~". The sixty-second line is "[~". The sixty-third line is "[~". The sixty-fourth line is "[~". The sixty-fifth line is "[~". The sixty-sixth line is "[~". The sixty-seventh line is "[~". The sixty-eighth line is "[~". The sixty-ninth line is "[~". The seventieth line is "[~". The seventy-first line is "[~". The seventy-second line is "[~". The seventy-third line is "[~". The seventy-fourth line is "[~". The seventy-fifth line is "[~". The seventy-sixth line is "[~". The seventy-seventh line is "[~". The seventy-eighth line is "[~". The seventy-ninth line is "[~". The eightieth line is "[~". The eighty-first line is "[~". The eighty-second line is "[~". The eighty-third line is "[~". The eighty-fourth line is "[~". The eighty-fifth line is "[~". The eighty-sixth line is "[~". The eighty-seventh line is "[~". The eighty-eighth line is "[~". The eighty-ninth line is "[~". The ninetieth line is "[~". The ninety-first line is "[~". The ninety-second line is "[~". The ninety-third line is "[~". The ninety-fourth line is "[~". The ninety-fifth line is "[~". The ninety-sixth line is "[~". The ninety-seventh line is "[~". The ninety-eighth line is "[~". The ninety-ninth line is "[~". The hundredth line is "[~".

CursorLoc: Line:4 Col: 4
Lines:4 Chars:40

Features

In this current version of text editor, functionality for basic text editing features are available for use. These include, inserting characters, carriage return, undo, and several others. Here is a list of all available features:

- Text Insertion
 - A /symbol can be inserted into the editor by pressing a desired character key from the keyboard (for example, pressing the letter **a**, number **7**, or symbol **+**).
- Text Deletion
 - A piece of text can be removed from the editor by pressing the **backspace** key (or **delete** key on MacOS). This will remove the symbol at the cursor position, if there is one to remove. If the cursor is all the way to the left of a row of text, the text deletion feature will move the text on the current row to the end of the previous row (if on row > 0).
- Line Break
 - A user can insert a line break by moving the cursor to the desired location and then tapping the **enter** key (or **return** on MacOS). On the same line, if there is text after the cursor location, that text will be moved to the new row.
- Undo/Redo
 - In this implementation, Undo and Redo will behave in a similar manner as other common text editors. As a note, you cannot Redo a command (text insertion, deletion, etc...) that has not been Undone. A user can press **CTRL-Z** to Undo and **CTRL-Y** to Redo.
- Quit
 - A user can quit out of the text editor by pressing **control** and **Q (Ctrl + Q)** keys at the same time. This will terminate the program.
- Specific File Editing
 - If you would like to edit a certain basic text file, include the file name as a command line argument when executing the *runThis* executable. See the **Compile and Run** section of this document for specific syntax. While editing, the file will auto-save, no need to press a unique button to tell the system to save your file.

User Interface

In this implementation, once text insertion has begun, the user will see a status bar located at the bottom of the text editor. The status bar will show useful information such as total lines and total characters within the editor, as well as current location.

Feature Overview

Feature	Status	Design Pattern	User Manual
Text Editing/Cursor Movement	Implemented	<ul style="list-style-type: none">• Observer• Model-View-Controller• Composition	Keyboard entry for all letters supported
Undo/Redo	Implemented	<ul style="list-style-type: none">• Model-View-Controller	All commands can be undone/redone
File Load	Implemented/ Some bugs depending on platform		To see specific syntax, see above manual
File Save	Implemented/ Some bugs depending on platform		To see specific syntax, see above manual
Output Formatting	Bugs	<ul style="list-style-type: none">• Strategy	By default, format style is set to Sublime Text app style formatting. Word document editor-style formatting coming soon