



INTERNATIONAL UNIVERSITY OF SARAJEVO

CS103 Project Report

CodeLab Notes

code-editor

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Abstract

This is a *brief* project report for CS103. This report will go over basic information of the program talking about its functionalities and abilities as a code editor, furthermore it will go over who went over what, what were the challenges that were face during the production of this program, and what were we able to learn from doing this project.

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1 Assignments

The following table will show all the assignments taken by the corresponding students:

| | EMRE ARAPCIC-UVAK | VEDAD SILJIC |
|----------------------------|-------------------|--------------|
| Design | x | ✓ |
| Tree File Display | ✓ | x |
| File Saving | ✓ | x |
| File / Dir Creating | ✓ | x |
| File / Dir Deleting | ✓ | x |
| File Opening | ✓ | ✓ |
| Multi File Tab | ✓ | ✓ |
| Syntax Highlighting | x | ✓ |
| Custom Text Widget | x | ✓ |
| About Sections | ✓ | ✓ |
| Font Customization | x | ✓ |
| Directory Model Management | ✓ | x |

2 Information about the program

2.1 Program overview

The program CODELAB NOTES is a plain code editor that supports multiple file editing, and syntax highlighting for **c** and **cpp** files.

Upon the start up of the program the user is greeted with an giant logo of the program as well as a tree view of the users root directory and a tool bar right above the tree view; right above the tool bar there are also drop down menus for even more options that are given to the user to choose from as all can be seen in Figure 1

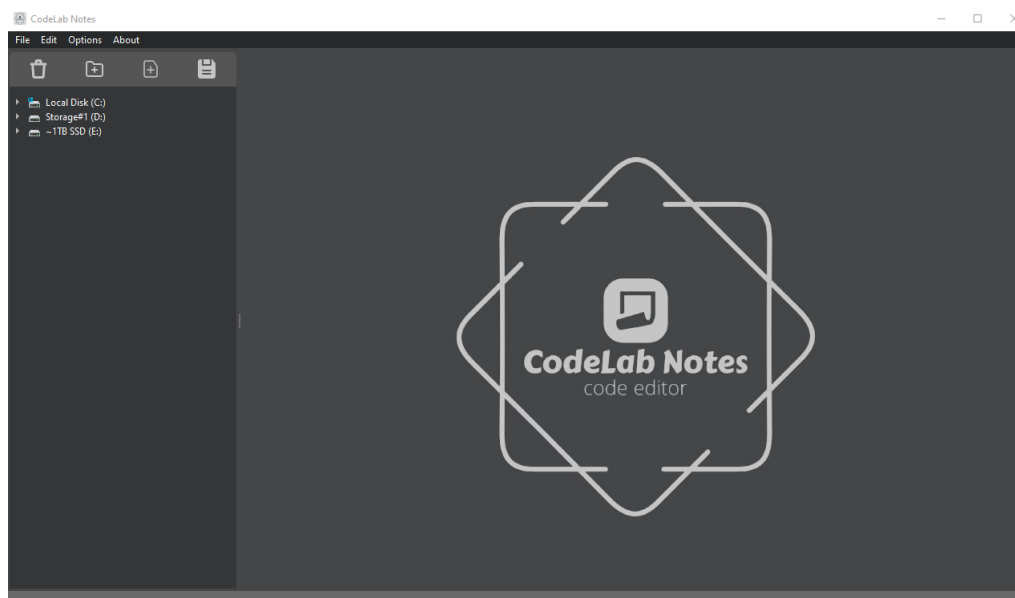


Figure 1: Starting screen of CodeLab - Notes

2.2 Tree view and working directory

Like many other code editors CodeLab Notes has the ability to select a directory which the user will be working with. For the user to select a working directory all that they will have to do is go to the *File* menu and select *Open Folder* as can be seen in Figure 2

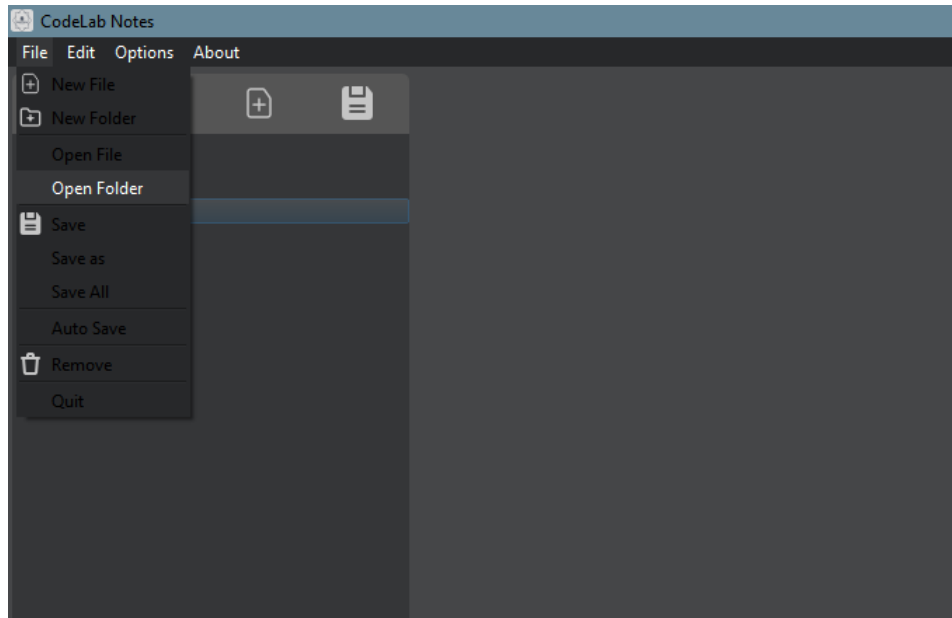


Figure 2: Open Folder option in CodeLab Notes

Upon selecting this option the user will be prompted a directory dialog which asks the user to select what folder they would like to open; afterwards the tree view will update such that it only displays the selected directory as can be seen in Figure 3 and Figure 4.

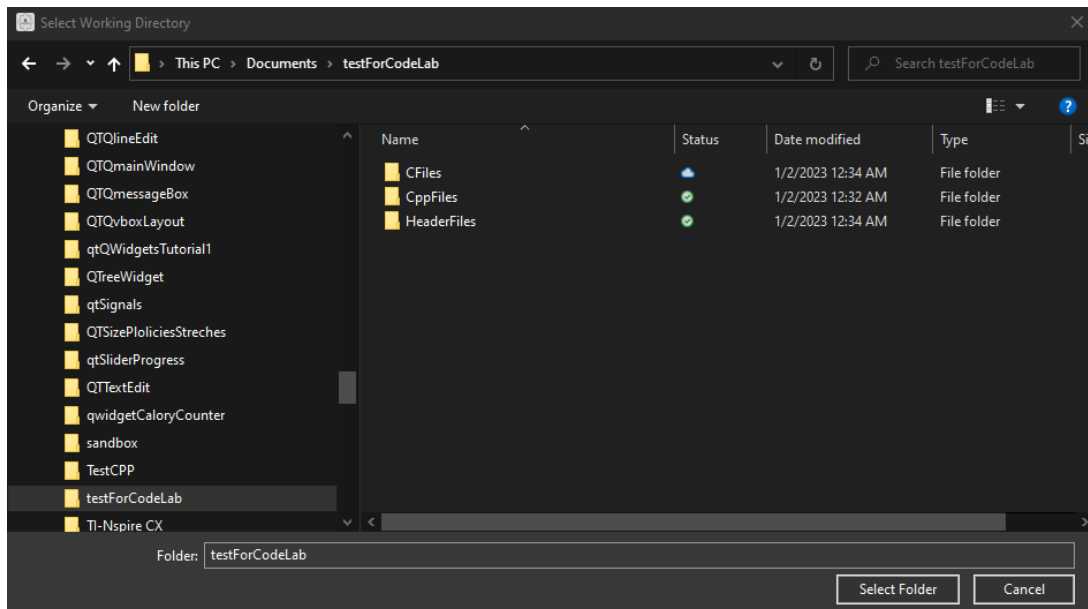


Figure 3: Directory prompt dialog

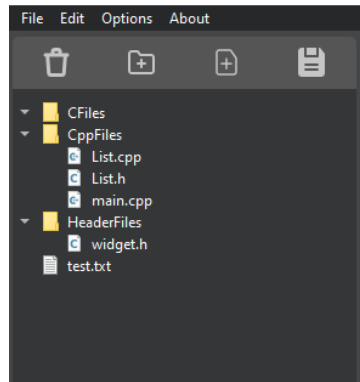


Figure 4: Tree view update

2.3 Opening and Modifying files

To open files all that has to be done is to double click on a file in the tree view, or select the open file option from the file menu which will open the text editor where the logo is, and give you tabs on the top of the text editor as can be seen in Figure 5

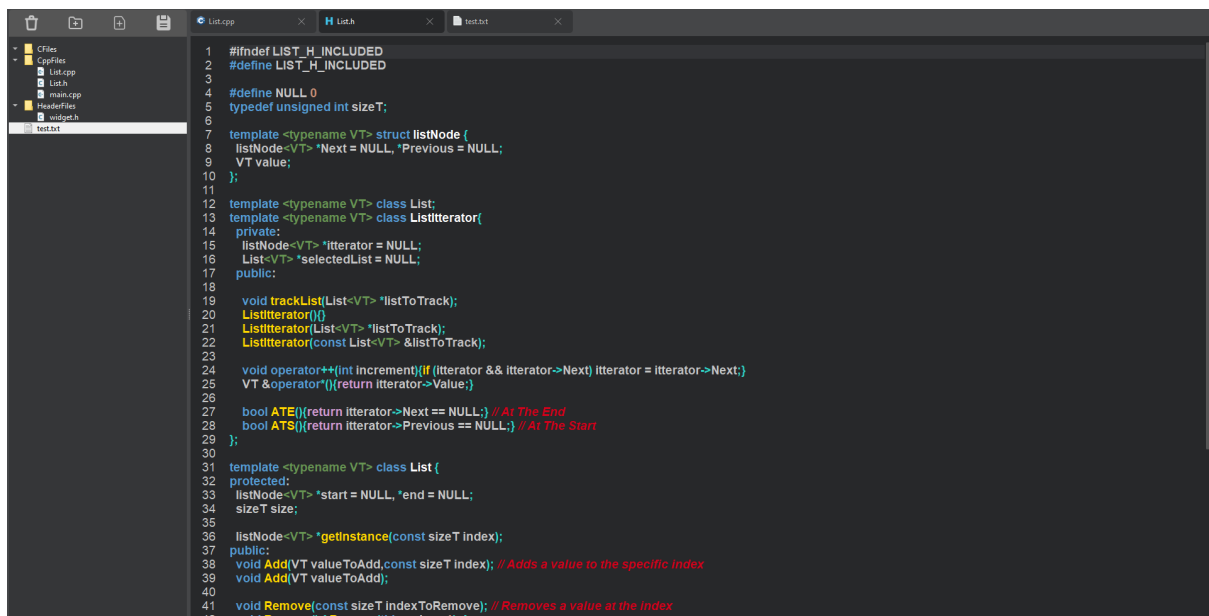


Figure 5: Opened files in CodeLab Notes

As we can also see CodeLab Notes also has its own syntax highlighting. One key feature of any code editor or any text editor in this matter is the ability to save your work. CodeLab Notes has four saving features and those are:

1. Save
2. Save As
3. Save All
4. Auto Save

Save and Save all are pretty self explanatory, Save saves the file currently focused and Save all save all files that have been opened. Auto Save is a feature that automatically saves your file

when u go to another tab or open another file, and Save As saves your files but prompts you a dialog similar to the dialog that can be seen in Figure 3 but this time it asks you where do you want to save the file and under what name and extension.

Deleting files/directories is also a possibility, all that has to be done is select what file / directory you want to delete in the tree view and press on the delete button in the tool bar or in the file menu; because the tool bar is just a faster way to get all the settings from the file menu.

2.4 Text editing features

If we take a look in the *Edit Menu* we can see a lot of useful feature the users are given, and those features are:

- Undo
- Redo
- Cut
- Copy
- Paste

A lot of these are self understandable but we will cover them briefly. Undo undoes any recent changes done to a file, redo does the exact same, cut cuts text and saves it into the clip board, copy copies selected and saves it into the clip board, and paste puts the text from the clip board into the text editor.

2.4.1 Customizability

CodeLabs does not have a lot of customizability but it does have the option to change the font size of the editor. To change the font size simply go to the options menu and and select the change font size option; afterwards you will be prompted with a dialog to insert your wanted font size as can be seen in Figure 6

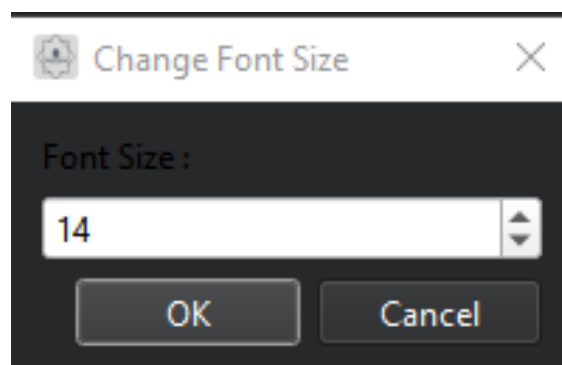


Figure 6: Font size dialog

3 Conclusion

3.1 What did we learn

We learned a lot about C-Make, QT, and QWidgets and saw how useful having the knowledge of C++ classes actually was and how it helped us make big projects by breaking and grouping things down.

3.2 Where did we struggle

We struggled a lot when it came to making custom widgets for the things that we needed such as the custom text editor that we have, we also struggled at the start a lot because we knew next to nothing about QT and QT Widgets but it was a fun learning experience for both of us and we are sure if we were to start from all over again we would have no problem making this application into a better version.

3.3 What new did we learn

Apart from QT and QWidgets we also learned how to utilize **Git** and GitHub to work together, we already knew a lot about **Git** but we never had the chance to work together with anyone else up until now.

3.4 More detailed overview of the project

For more details of the project please check our recorded video we did on the subject and check out our GitHub repository where we have all the code done for the project as well as the version history which can be checked out by anyone to see through what we went through while working on this project. Our GitHub repository can be found here:

<https://github.com/EmreArapcicUevak/CodeLab-Notes>