README file for OOP1\_EX04

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General Description of program:

The program defines 13 classes: Menu class, Controller class, 2 base classes: character and button.

Character derived classes => Demon, Diamond, Digger, Stone, Wall.

Button derived classes => button\_delete, button\_new, button\_save.

Frame class that prints the characters inside the window.

Main purpose of the program is to build an Digger level builder using SFML using different characters and functionality.

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Design

We start by running main function , it then runs the controller function that will be the one which all will work with. If there is a file included it will read all of the details from it including the Hight, width and number of stones with the help of the frame class. If not the user does the same thing only manually. After that the board (frame) is built with the dimensions that are entered. Now the user can choose which characters to insert to table. Every characters includes the base class and its own derived class. If pushed a button it works accordingly to its name, new class creates new frame from the user, save button saves the level to a file and delete deletes the character the user clicked on, all buttons derived from the base button class. All objects are drawn using the Menu class.

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List of files

1) Controller.cpp - runs the main function, runs alongside the button and character classes.

2) Menu.cpp – purpose is to draw all characters in menu.

3) Frame.cpp – purpose is to draw the characters to the window and to the file.

3) Button.cpp – base function: derived => Button\_delete.cpp, Button\_new.cpp, Button\_save.cpp.

4) Character.cpp – base function: derived => Demon.cpp, Digger.cpp, Diamond.cpp, Stone.cpp, Wall.cpp

Also includes the headers for the Buttons, characters , Menu, Controller, Frame (all got the needed classes, functions and members declarations, and needed includes).

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Data structures:

1) Controller: holds hpp functions using SFML, array of objects, insertion to files.

2) Menu: holds the characters and buttons derived objects to draw.

3) Frame: holds the draw function and the file print.

3) Character and derived classes holds the position and char to print.

4) Button and derived classes holds the position and place on window to print.

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Worth to mention algorithms:

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Known Bugs: =======================================================================================

Other notes:

Must have a text file in the name of Board.txt otherwise returns an error because cmake needs a configured\_file.

When pushed on save button it creates a new separated Board.txt file.

To see if it has saved , need to close SFML window and run program again.