End of Semester Project:

Candy Crush

Submitted by

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This project was made using C++ with assistance of SFML (Simple Fast Multimedia Library) for the UI portion of the project. The IDE used to make the project was Microsoft Visual Studio 2015. The SFML version used is "Visual C++ 14 (2015) - 32-bit".

The SFML library can be downloaded from here: https://www.sfml-dev.org/download.php

A tutorial to set up SFML for Visual Studio can be found here: https://www.youtube.com/watch?v=YfMQyOw1zik&

The images for all the candies (special and plain) and the character's images in the main menu are taken from the Candy Crush Wiki (https://candycrush.fandom.com/wiki/Candy_Crush_Saga_Wiki)

The remaining of the graphics (like grid, cursor, scoreboard, buttons etc.) were drawn by self although they were inspired by the actual game.

The game is coded so that user starts with random amount of points (based on the combinations by the random generated candies) and the user has to reach 10,000 points in 25 moves. Depending if the user is able to reach the target in 25 moves he or she will be shown the You Win screen or You Lose screen.

The Main Menu has 3 buttons: PLAY, LOAD and EXIT. EXIT closes the game. PLAY starts the game with random generated candies and LOAD loads data from savefile.txt and continues the game from it. If Savefile.txt does not exist the LOAD button greys out and is not clickable.

The Game Menu or the Game Window has a SAVE and an EXIT button. EXIT button closes the Game Window and SAVE button saves the game data in Savefile.txt. The grid containing candies is intractable via mouse. A red border will show what candy your mouse is over at and when you click on a candy, 4 small green arrow will form over it to show that it has been selected. Moreover if the 2nd Candy (the candy to swap) does not result in crushing of candies or the 2nd candy is out of bound of the selection area the number of remaining moves will decrement.

The folder “Project1” contains all the source files like images and text files and the source.cpp file which contains all the code regarding the project itself.

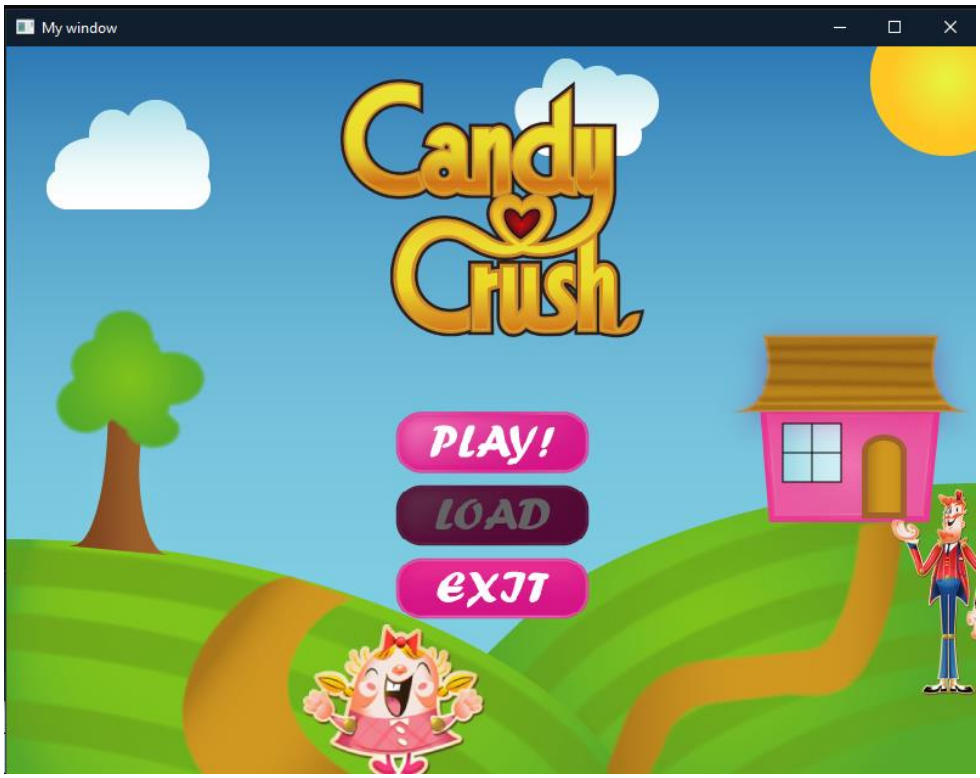
Additionally a working executable file of the project can be downloaded from here: https://drive.google.com/drive/folders/13ph2Q0x68BSho5-tBKW-kD_KryeW8Zp2?usp=sharing

The “Project1.exe” in the above folder should run the project fine.

In the source.cpp file there are some terminologies used so here are the explanation for them:
(cont. next page)

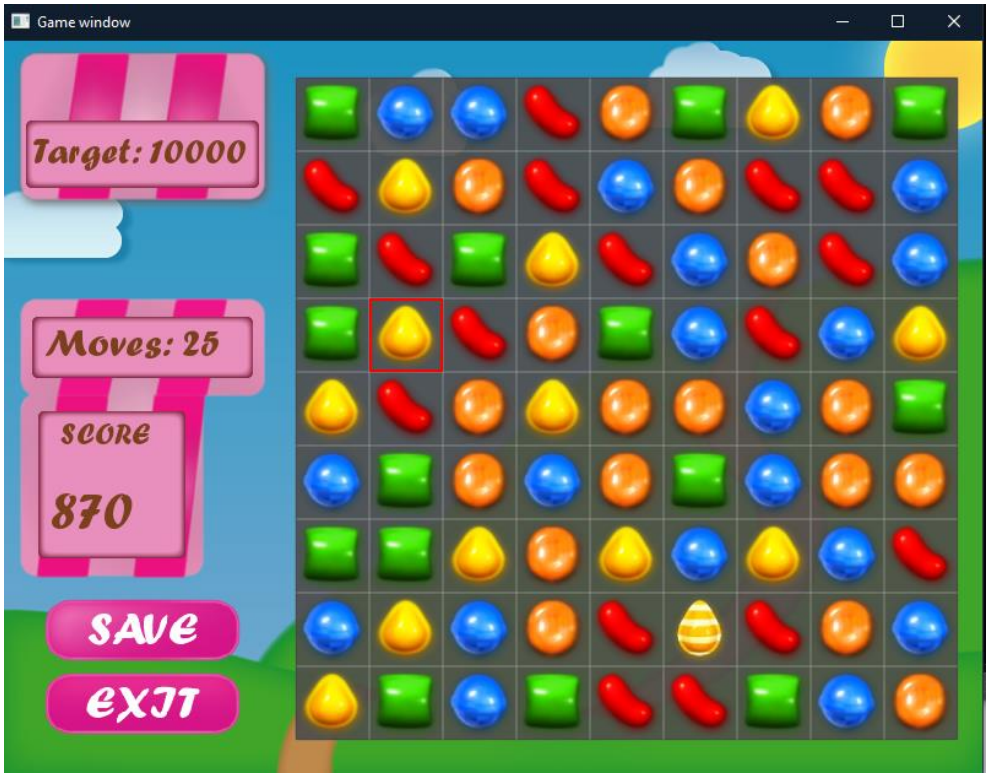
Main Menu:

Main Menu if Savefile.txt exists.



Main Menu if Savefile.txt does not exist.

Game Menu / Game window:



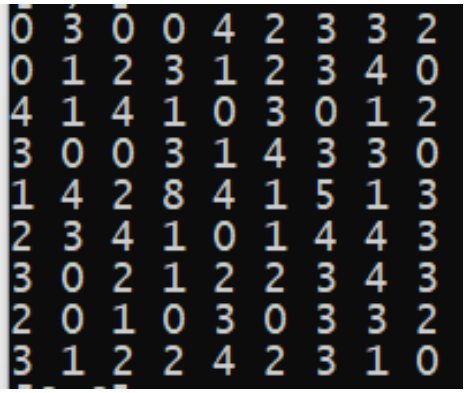
Different orientation of T:

T	T	T						
	T				T			
	T				T	T	T	
					T			
	T							
	T						T	
T	T	T			T	T	T	
							T	

Different orientation of L:

	L							
	L				L	L	L	
	L	L	L				L	
							L	
	L	L	L					
	L						L	
	L						L	
					L	L	L	

Back-end array containing the values of ID of candies



The different values can be looked up using this table:

#	COLOR	TYPE
0	BLUE	REGULAR/PLAIN
1	RED	REGULAR/PLAIN
2	ORANGE	REGULAR/PLAIN
3	GREEN	REGULAR/PLAIN
4	YELLOW	REGULAR/PLAIN
5	BLUE	Horizontal Striped

6	RED	Horizontal Striped
7	ORANGE	Horizontal Striped
8	GREEN	Horizontal Striped
9	YELLOW	Horizontal Striped
10	BLUE	Vertical Striped
11	RED	Vertical Striped
12	ORANGE	Vertical Striped
13	GREEN	Vertical Striped
14	YELLOW	Vertical Striped
15	BLUE	Packeted
16	RED	Packeted
17	ORANGE	Packeted
18	GREEN	Packeted
19	YELLOW	Packeted
20	BOMB	

“+” orientation

The Candies that can be swapped around the central orange candy are in a “+” shape as shown by the black line