24-780 Engineering Computation HW 5 Instruction

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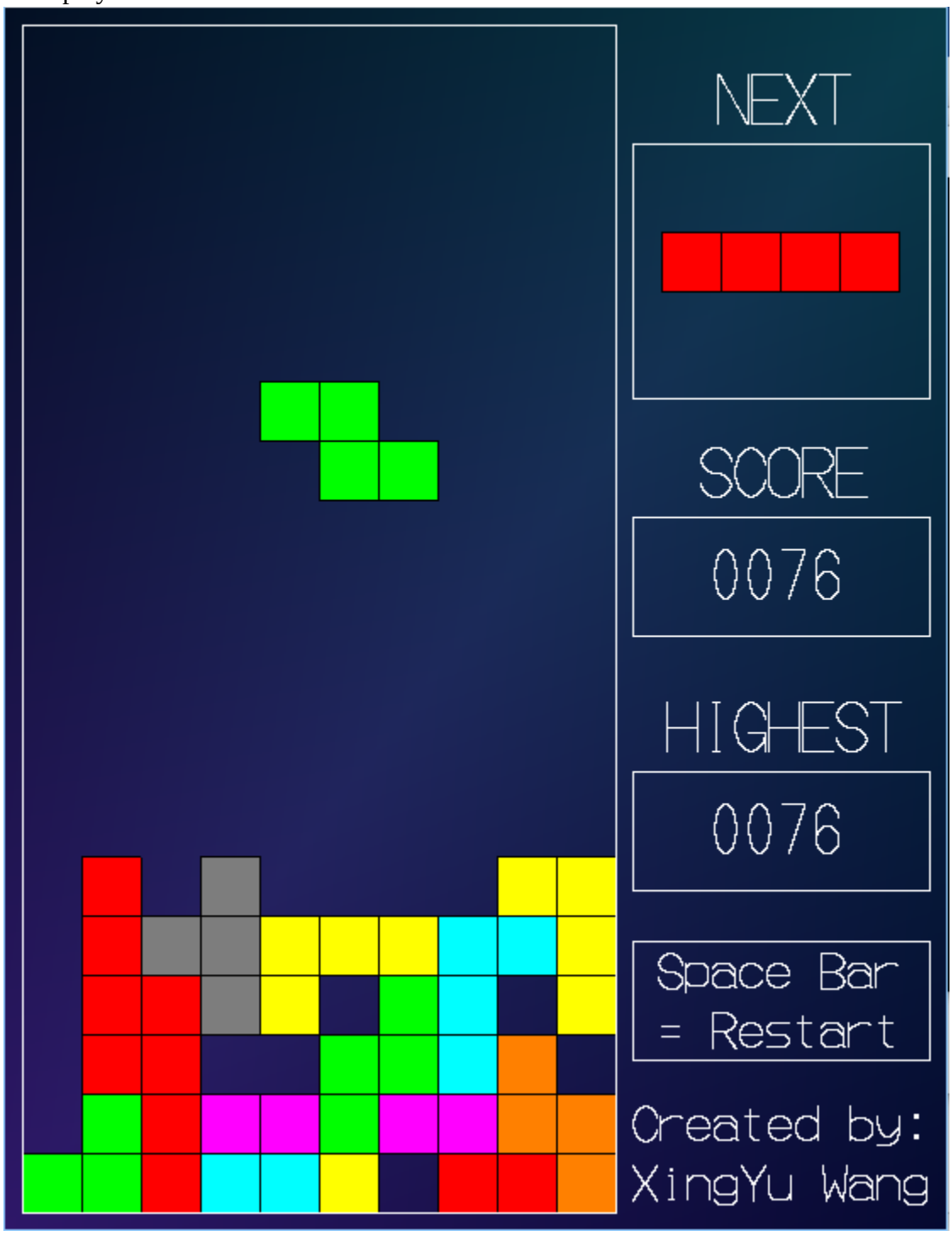
Project Title:

Tetris

Project display:



Project description:
I chose to create a Tetris game as my homework assignment. My project is a simple version of this very famous game with the following features:

1. Simple-style interface
2. Nice background music
3. Score board and highest score count
4. Easy to re-start the game and get addicted

How to play my game:

keyboard up = rotate block
left = move left
right = move right
down = move down
space = restart
ESC = quit
For each row that player cleared simultaneously, the player gets a score that is equal to (3 to the power of the number of rows cleared) + 1

Submitted files:

1. TETRIS_main_xingyuwa.cpp
2. TETRIS_xingyuwa.cpp
3. TETRIS_xingyuwa.h
4. bg_music.wav
5. TETRIS_xingyuwa.pdf

Note: if you have trouble compiling my file due to the background music, or if the music is not playing correctly, you can comment out line 43 in the main file to disable the music. The program should till run correctly without music. You can also replace the music file with the ones that you like while playing this very addictive game ☺

Other files that are necessary to include in order to run the program:

1. fssimplewindow.cpp
2. fssimplewindow.h
3. ysglfontdata.c
4. ysglfontdata.h

How does my project satisfy the homework requirement:

In this project, I used OpenGL animation with double-buffering to create the entire game interface. My program runs the animation in a while loop until the user wants to terminate the game. The user can interact with the game by using keyboards. The game uses color gradation to draw nice background. The program also uses GL_LINE_LOOP and GL_QUADS extensively to draw objects. Additionally, the game uses OpenGL text to display score information. Finally, the game uses a math library function to calculate scores for each play.