GROUP 26

C++ Group Project Report (Readme)

DOUBLE TROUBLE

(A 2048 inspired game using SDL)

TEAM MEMBERS –

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CONTRIBUTIONS OF TEAM MEMBERS –

- **Vamshi** – Responsible coding the Start window and for making the HELP MENU of the game which contains on instructions to play the game and how the game progresses ahead.
- **Dharmin and Shashank** – Responsible for selecting and adding the sound effects to the game which include the background track, Game Over music and the music when a tile moves; building and making the logic of the game which includes movement of tiles, appearance of new tiles and aggregation of score and the buttons in the game.
- **Asmita** – Responsible for the Graphical User Interface and the appearance of the game. Made the start screen, score boards, tiles, and the end screen.
- **Sreenivas** – Responsible for building and making the logic of the game which includes movement of tiles, appearance of new tiles and aggregation of score and the buttons in the game.

INSTRUCTIONS TO RUN THE GAME –

1. Make sure that the system on which the game needs to be run has the SDL library installed its path is already set.
2. Open the terminal and run the following commands once you have downloaded game the folder –

make all

./exe

INSTRUCTIONS / CONTROLS TO PLAY THE GAME –

1. The controls a player will use are upwards, downwards, left and, right arrow keys to move the tiles.
2. The player has to just move the tiles using the arrow keys and every time one tile is moved, another tile with the smallest number i.e. 2 will appear at a random position in the 4x4 grid.

3. Whenever there are two tiles with the same multiple of 2 in adjacent cells (not diagonally), they will be merged to form a new tile of two times that multiple if the collide after movement of the tiles though the arrow key.

   For example –

   _ _ _ _   _ _ _ _
   2 4 8 _   -> down key pressed -> _ * _ _ (* represents a new tile numbered 2/ 4^ at a random position)
   2 8 4 _   4 4 8 _
   _ _ _ _   _ 8 4 _

4. **^** - After the game progresses for some time, the random new tiles appearing would be either 2 or 4. There is no threshold of points involved here.

FEATURES OF THE GAME –

1. When you run the game, you will see a Start window which will have the START GAME button and the HELP BUTTON.
2. The HELP BUTTON will take you to the Help window where the instructions about how to play the game are displayed. To go back to the Start window, press q.
3. The START GAME will start a new game. When you press the arrow keys, the tiles would move, collide, and merge in the grid, adding points in the score board.
4. Press s to save the game. When you press s, you will be redirected to the Start window and the Start Game and Help buttons will be visible, along with a new RESUME GAME button, which will take you back to your old game.
5. Press q to quit. When you press q, you will be redirected to the Start window but with only the Start Game and Help buttons.
6. Press u to undo a move. Remember you will only be able to undo a single move after each move.
7. According the algo, when there are no more moves left, GAME OVER! will be displayed to show that the game has ended and you will be redirected to the Start window with the current HIGH SCORE, the Start Game, and the Help buttons.
8. If you accidently close the game window, your game and the score will automatically be saved, and you can access your old game using the Resume Game button when you open the game window again.
9. The entire Leader Board will be updated continuously in a separate file. You will be able to see the current High Score when ever you run the game (even after closing the game window).

SCREENSHOTS OF THE GAME –

1. **Start screen** (when no games have been played) -

2. **Help Menu** –
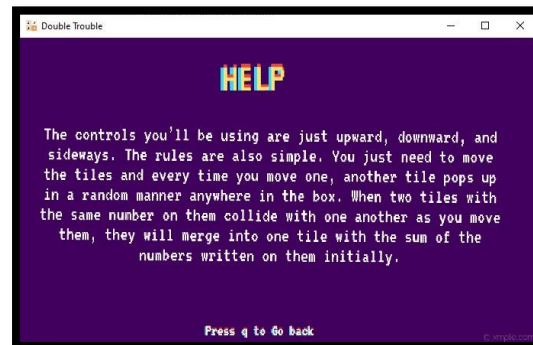
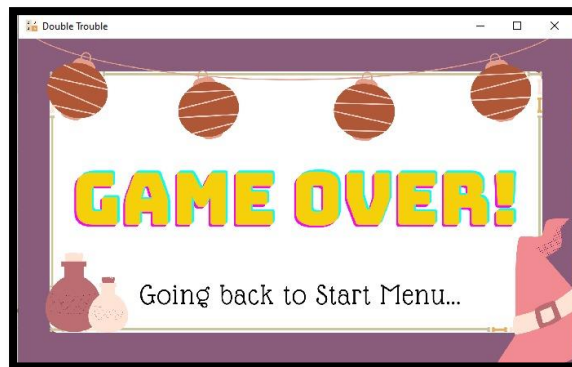3. **Beginning** of an entirely **new game** -

4. **Middle of the game** –

5. **Start screen after** some games are played and **a game is saved** (the window hasn't been closed) –

6. **Game over** screen (shown for approximately 2 seconds when no more moves are left and the game ends) –

7. **Start screen after** some games are played and the **game is either quit or no more moves are left** –