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CMPE 230 Third Assignment – QT – Pairs Game – 2020 Spring

In this project, We implemented a pair card game desktop app on Qt Creator. The logic of the game is to turn over pairs of matching cards. First of all, We read and understood correctly the project description. In order to work simultaneously, we created a repository on GitHub.

On the project, we started from Main.cpp by designing a game which consist of a timer, score, new button, quit button and card buttons. After that, we implemented mytimer.cpp and mytimer.h which was inherited from QTimer object. It updates timer for each one second and we showed it on the app. After timer, we added mynewgame.cpp and mynewgame.h to start a new game when the press new game button. It restart the main application. We connect quit button with quit() of the QT. This function terminates the application when the clicked quit button. We have to optimize the card button as text and background color so we implemented card.cpp and card.h which inheritance from QPushButton. We set all buttons' color as green. In addition to appearance, we added a variable to store the status of the buttons which are opened or closed. If

button is clicked, its status is closed so its background changes to gray, and its status is updated as closed.

Lastly, we added mygrid.cpp and mygrid.h files. We did all the logical processes of the game on these files. We checked texts of the buttons are equal or not. If it is, we increased the score variable. We checked that score is equal to 15 because the game board 6x5 and it has 30 cards. Therefore, there would be 15 pairs. If the score is equal to 15, we stopped the timer, hide all cards, and showed "You won!" message box. Also, we checked the timer limit on this file because the game should be solved within 180 seconds. If a gamer cannot solve within 180 seconds, we hide all cards and showed "You lose!" message box.

After the implementation of classes and functions, our project has done. We have learned Qt has a good library and functionalities to create beneficial programs.

Card Match Game

Time (secs): 97 Score : 7

?	?	cmpe	deniz	?	?
atmosphere	?	gun	230	boun	agency
trainer	boun	230	role	?	?
?	cmpe	?	gun	role	?
?	deniz	?	?	?	?

New Game Quit

Card Match Game

Time (secs): 159 Score : 15

New Game Quit

Pairs

You won!

OK

Card Match Game

Time (secs): 180 Score : 2

New Game Quit

Pairs

You lose!

OK