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HW3-QT PROJECT REPORT

1. Introduction

This project is a similar implementation of the popular game find-the-pair. It is done by using QT Creator and written in C++. Basically, game has 24 buttons and there are 12 pairs, you are trying to match the same letters with each other and game counts how many times you tried and how many pairs you find so far. You can restart the game by reset game button.

2. Implementation

The design is made using Qt's design. We keep the qbuttons in an array. We use a timer and use that timer's timeout() signal for the function timeoutOccured() to update the game and set the selected buttons etc. and stop the timer. We also connected the qbutton's release() with buttonPressed() method to change the values accordingly. This method remembers the first button pressed to evaluate the values (pairs found or tried) according to second value. We start the game with resetGame() method and create the buttons and set their texts randomly with necessary methods, and then we hide the buttons values and wait for user input. When user presses one of the buttons, we remember this button and wait for second input. We understand whether a button is first or second by a Boolean and holding the prevButton if it exists. We reset them when it's necessary. When second input comes, we compare their values and increase the found if they match. Also, pairs tried is increased every time a pair is chosen. After that, timer starts and when it ends, we reset the values. When a match is found, matched buttons color change and they get disabled.

3. Summary

We used Qt for our advantage while designing and connecting functions with one another. We created an interactive find_the_pair game that doesn't end unless user closes it or all pairs are found.