

Test task

Create a 15-puzzle game in [Qt](#) using QML.



*The **15 puzzle** is a [sliding puzzle](#) having 15 square tiles numbered 1–15 in a frame that is 4 tiles high and 4 tiles wide, leaving one unoccupied tile position. Tiles in the same row or column of the open position can be moved by sliding them horizontally or vertically, respectively. The goal of the puzzle is to place the tiles in numerical order.*

1. Use Qt and QML (Qt Quick)
2. Use QML only for UI, all logic must be in C++
3. App design is up to you
4. The app should show a message if the puzzle is solved
5. App should contain
 - a. “New game” button - generate a new random start position
 - b. “Reset” - reset the current puzzle to starting position

Optional:

- Ensure that generated start positions are solvable (half of all randomly generated positions is impossible to solve)
- Implement levels of difficulty

