Hi guys, this is a qt project that I did for a programming class.  
I thought this would serve as a good demonstration as to what QPainter could do. No openGL code was used.

Some of you may know from childhood a game called “pokemon puzzle league”, which is a newer version of the original TETRIS ATTACK. I used to play this game 8 hours a day. I was so addicted. The premise of the game is to connect more than three tiles either horizontally or vertically by moving tiles around.

In the official versions you can only move the tiles horizontally. In the original versions you can only swap two tiles at a time, but unlike candy crush the resulting tiles do not have to connect for the swap to stay. In newer versions with touch functionality such as with Planet Puzzle League of 3ds or the iOS analogue, the control becomes much easier.

But for me, I always feel helpless with the restriction seeing really good moves that can be made vertically, so here in my version I made vertical traversal possible.

When additional tiles connect after clearing the tiles, you get a combo. The addicting part is for you to try and predict far ahead if this tiles clear, would the resulting order connect?

A wonderful part of the game is when trying to create this combo, you can also try to swipe IN tiles before the tiles clear, and this will also result in a combo.

The board is set to add additional tiles from the bottom by a time determined with your level, but you can manually add tiles by swiping outside of the game region upwards.

I love this game in a versus mode but as it turns out just implementing the above logic is quite challenging, because if you really think about it, this is really hard to implement. The equivalent iOS version cause $3 a download. The main challenging components that I ran into was how to logically implement whether this clearing of tiles constitute a combo or was it the first in a series. A timer wouldn’t suffice. What is the best way to check whether or not there are connecting tiles on the board? How to implement inserting into the empty space before the cleared tile falls? And on top of that how to do the flickering animation, the glowing balls of different colors floating around, or the combo fading out animation with just QPainter?

The background and tiles is inspired by the anime “avatar: the last airbender”. Thank you.