UML Class Diagram

QMainWindow

QWidget

Main()

show();

Start
-ui:start *
-puzzlegame : puzzle *
+<<constructor>> start()
private slots: on_pushButton_clicked() : void

puzzle
-res:result *
-score:integer
-lab[16]:QLabel*
-n[1]:QLCDNumber*
-ui:puzzle *
-calculate[16]:integer
+<<constructor>> puzzle()
private slots: on_pushButton_2_clicked() : void
private slots: on_pushButton_clicked() : void
private slots: on_pushButton_3_clicked() : void
-keyPressEvent(event:QKeyEvent *): void
-gameover() : integer
-output() : void
-randomnum() : integer
-addright() : void
-addleft() : void
-addup() : void
-adddown() : void
-over() : void

result
-ui:result *
+<<constructor>> result()
private slots: on_pushButton_clicked() : void
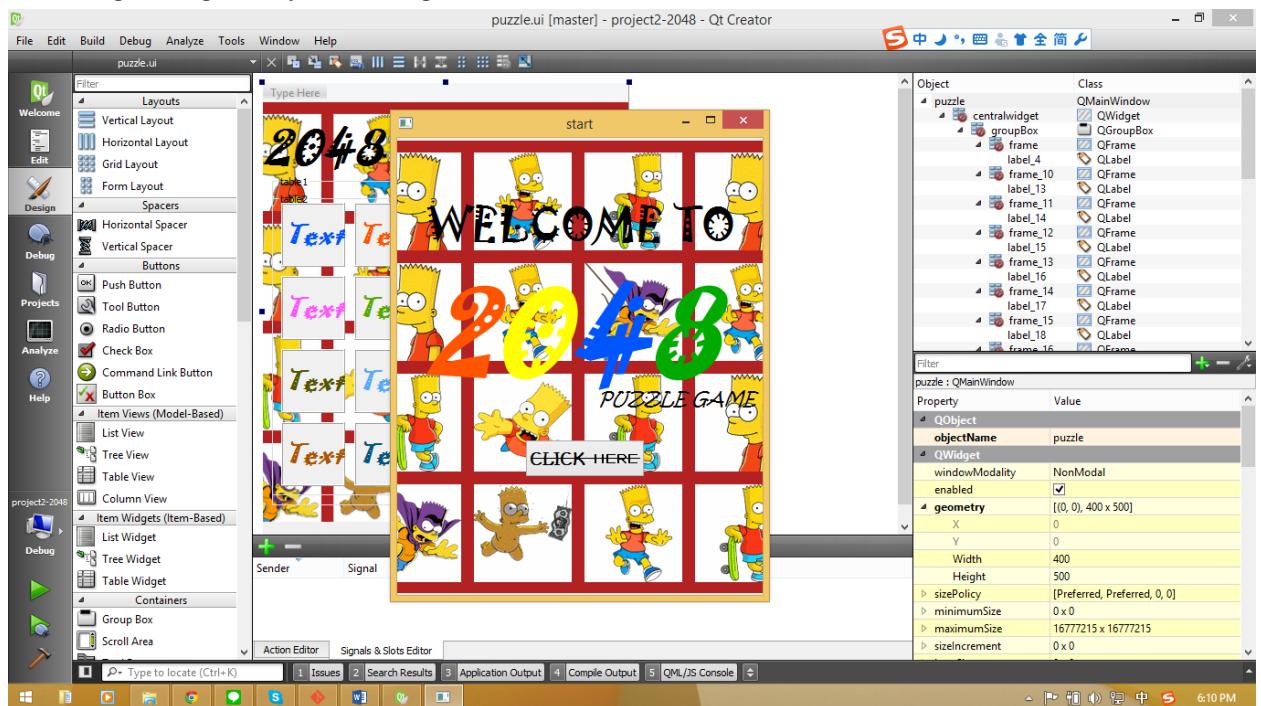private slots: on_pushButton_2_clicked() : void

Insights:

1. First, I am making a "start" QWidget form class, then make the ui file more elegant by setPixmap picture to a label, and it turns out to be a background. Then I make some label to welcoming the player, and put a push button to starting the game by clicking it.


2. After "start" class have been created, I start to think about how to set the game. First I tried to set the "puzzle" class to QWidget too, but it can't appear a new window here so I end up by making it to QMainWindow class then it succeed. After thinking how to get into the game for so long, finally I given up and skipped it and going to the third class, the "result" class that I set into QMainWindow form class too then just like the start class let it be

an elegant window.
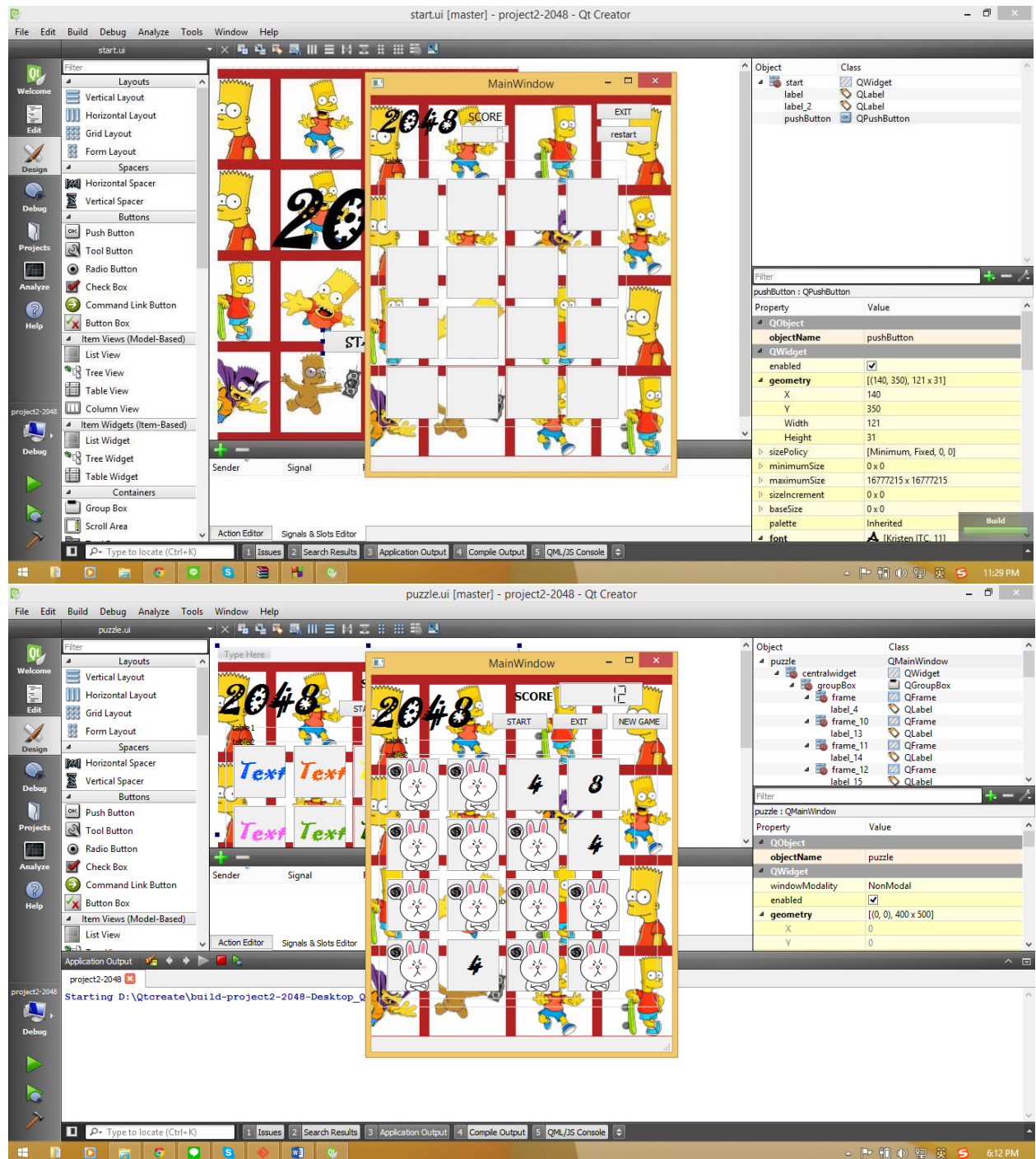
3. Then I started to think over the "puzzle" class and same as the other class, I firstly opened the ui file then design into it. And I think I make it

worst :(but ya I think its fine la. Cos I don't really good at this..
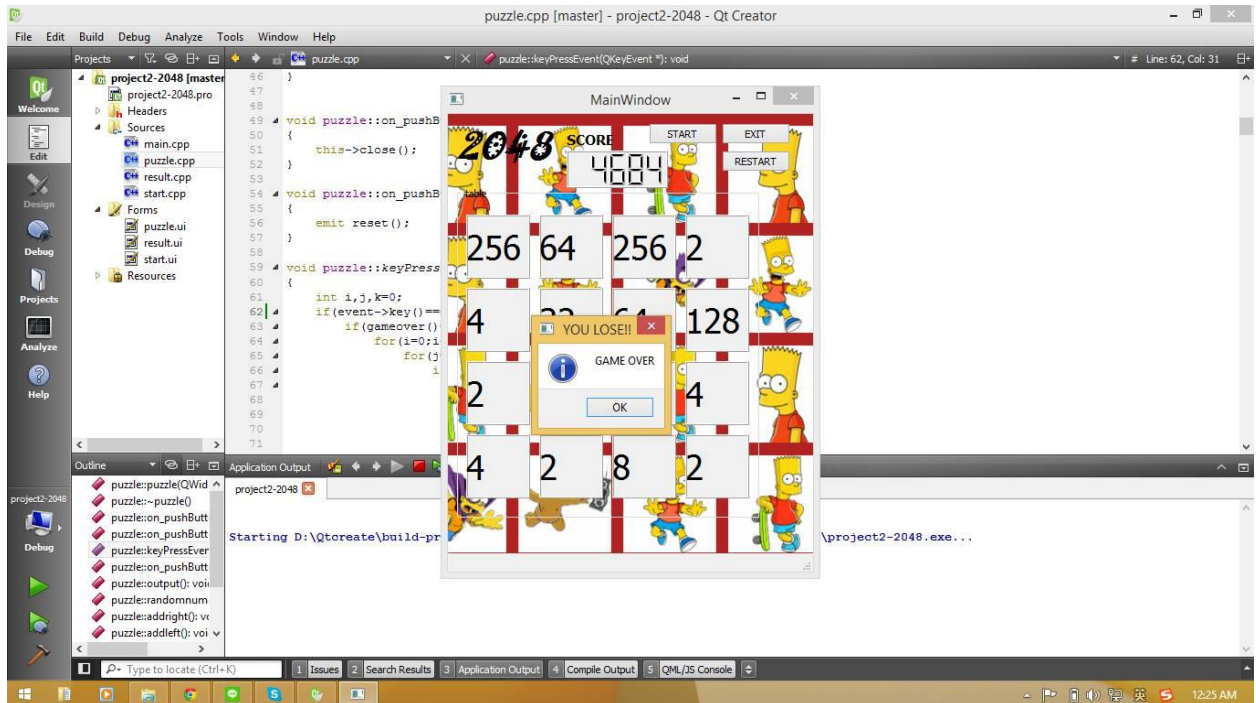
4. After done designing it, then I go to the source code and trying and still trying to making it. And finally I have set it to 16 label and first that appear in the board is 2 numbers in randomly places and try to combine it if there are the same number in four directions: right, left, up and down. Then combine it until 2048 and appear the "result" class!! That's all my idea..
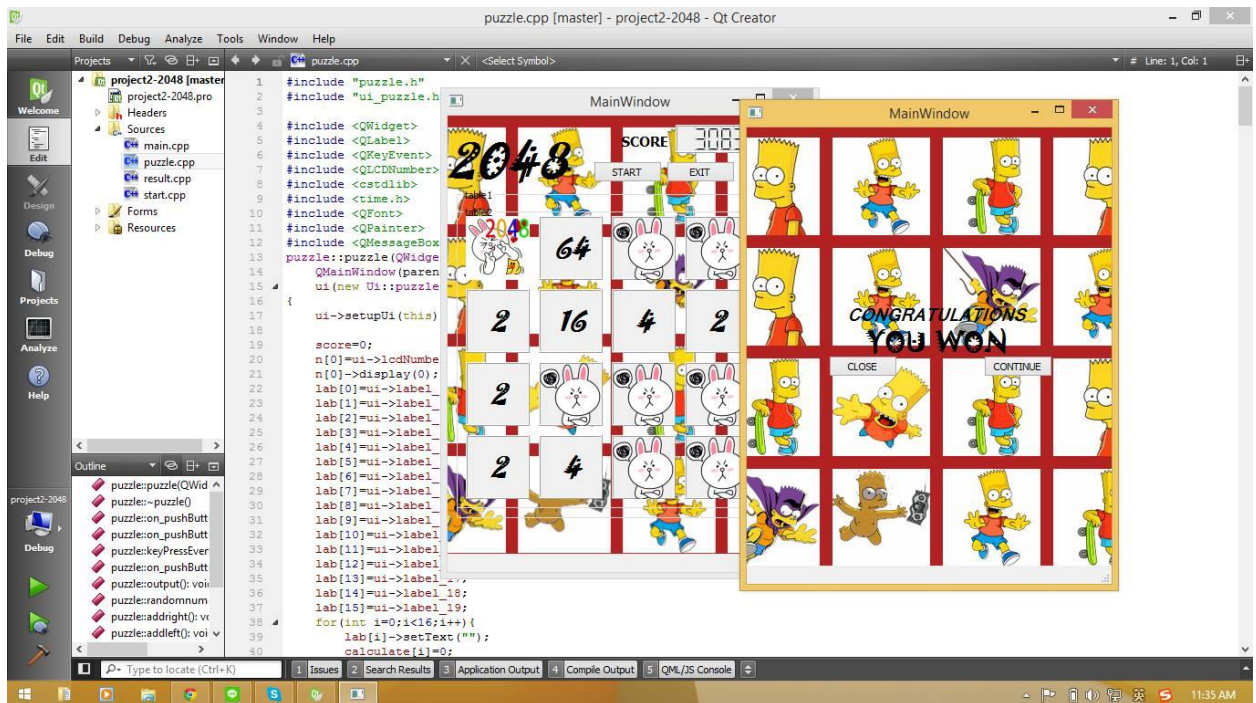
5. Ups! I have to say that I haven't done one part, that is in the "result" class, the continue push button, I have no idea how to continue the game. I have tried to set the puzzle class type to there but it cause compiled error "doesn't have puzzle type". It really makes me confusing, so I decides to delete it.

6. Through this project, I have learned how to use QtCreator. Besides that, I have learned to use keypressevent(arrowkey to control) and set the focus of the windows,etc.

7. In the bg.qrc file, I have made pictures that include numbers, but I feel it not too match with my windows, cause it is not so clear and difficult to play with those pictures. So I ended up making it numbers only.

8. In the "puzzle" class, I set the push button "START" and push button "NEW GAME", actually they are the same one, but ya I just wanna make it like that XD

PS: I have changed a little bit of the design part, the screenshots were taken before I designed it more haha XD