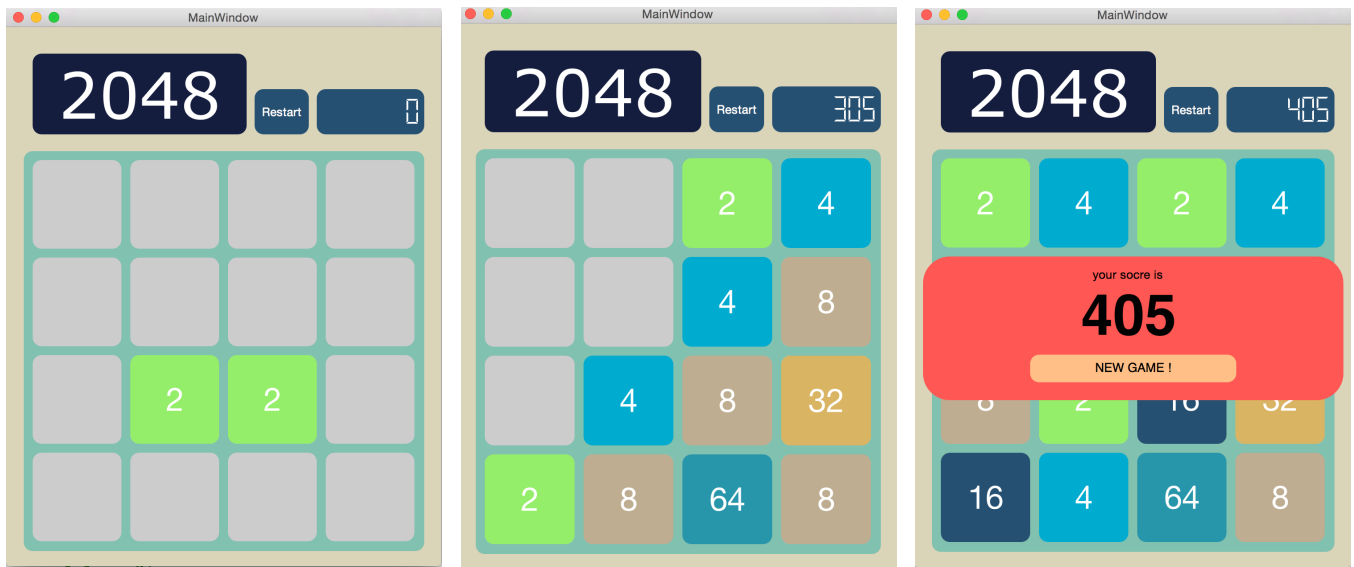# STUDENT ID : F74036467
REPORT of PROJECT 2 - 2048

Compile and Execute:

Build and Run in Qt creator, or execute the 2048.app.
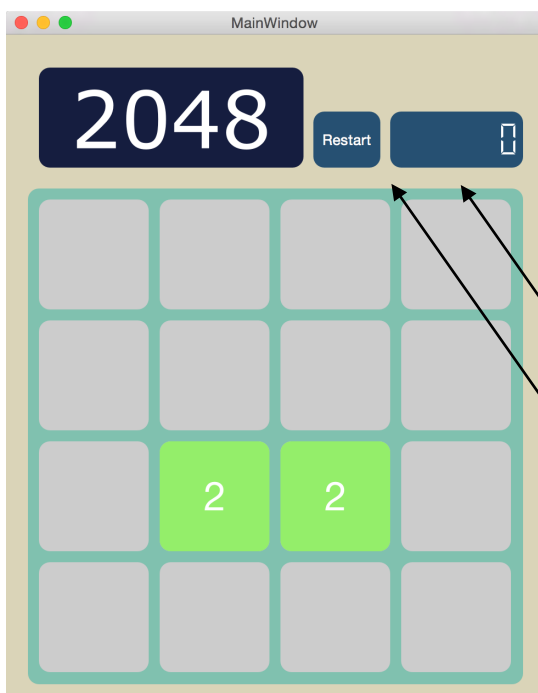
Screenshot:

⇧ produce 2 tiles when start

⇧ playing screen

⇧ end screen

Features of the program:

1.Control by the arrow key.

2.Goal is to combine tiles to make a 2048 tile.
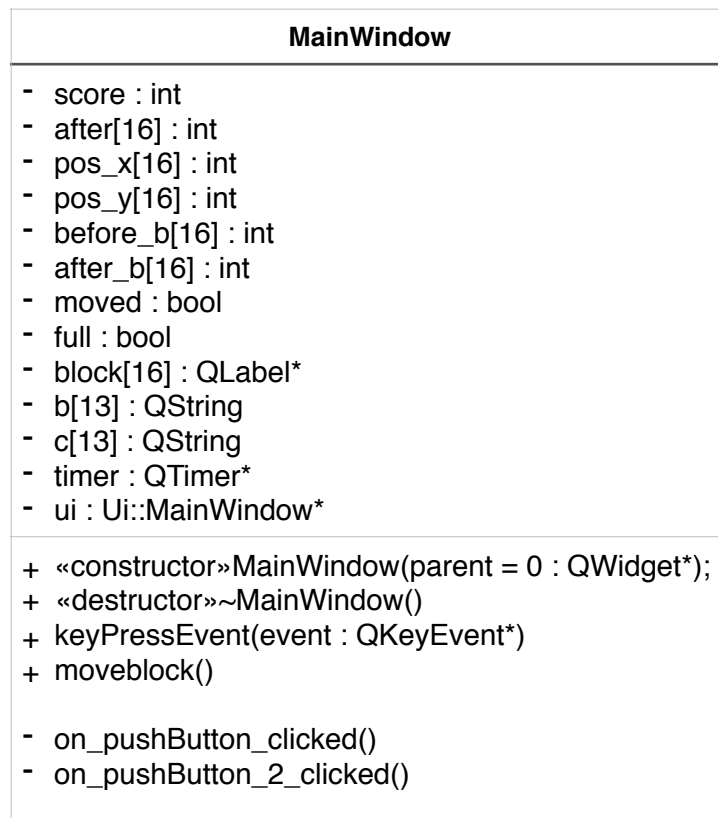
3.Pretty color on the tiles.

4.The tiles show the moving process indeed instead of disappear and appear. (Animation)

5.Add the score when any combine happens and displays on the screen.

6.There is a restart button.

7.The game ends when either a 2048 appears or the keypress can make no move, and it will appear a widget show the score with a "new game" button.

UML class diagram:

MainWindow
- score : int
- after[16] : int
- pos_x[16] : int
- pos_y[16] : int
- before_b[16] : int
- after_b[16] : int
- moved : bool
- full : bool
- block[16] : QLabel*
- b[13] : QString
- c[13] : QString
- timer : QTimer*
- ui : Ui::MainWindow*
+ «constructor»MainWindow(parent = 0 : QWidget*);
+ «destructor»~MainWindow()
+ keyPressEvent(event : QKeyEvent*)
+ moveblock()
- on_pushButton_clicked()
- on_pushButton_2_clicked()

Working process:

Tool : Qt creator in mac os

1. Arrange the necessary widgets, "Qlabels" for tiles and decoration, "QLCDnumber" for score board and "Qpushbotton" for restart, in the proper place.

2. Write the code to control the "Qlabels" for their text, background and appearance when keypress, by the function "KeyPressEvent". Then make the "LCDnumber" change and display when tiles combine.

3. Set the restart button slot.

4. Set the end condition. [after the step the game is roughly playable]

5. Make the animation when the tile moving, by setting the "Qtimer", send the "timeout" signal to the function "moveblock".