

HOMEWORK 3 REPORT

CMPE 230

Bekir YILDIRIM - 2014400054

Alkim Ece Toprak - 2017400294

- **BASICS**

In this project, we were required to implement one-person 'Find the Pair' game. In order to implement this, we started out by learning about C++ Qt Library syntax and how to use for our purpose. We learned basics of Qt Library and to make template of the game we examine URL as "<http://mypuzzle.org/find-the-pair>".

- **IMPROVING**

After grasping the main idea, we started implementing different functions to help initialize buttons, connect signals with slots. Our code consist of one header file, two .cpp file and one .pro file

- initializeButton(int , int)
- checkPairs()
- chooseLetter()

slots:

- slotRestartClicked()
- slotCloseCards()
- slotPairFound()
- slotButtonClicked(int)
- slotWrongCards()
- slotCongratulate()
- slotStartTimer()

signal:

- finished()

slot Functions serve to connect the signal to the slots we do the necessary actions if the signal comes to do something. First 3 functions are general basic functions that alter a given button to initialize and become its text as a real text. checkPairs() controls 2 opened cards is pair or not. finished() signal to be activated by if all pair are found and send respond slotCongratulate().

- **PROBLEMS**

After implementing the first version of the code, we realized that there are many difficulties to make better game. Firstly, our design enables user to show cards when clicked 'restart' or 'OK' buttons. But when writing this task, when the game was first turned on, we noticed that the user had less time to see the cards. To fix this, we have created a home screen and after click 'OK' button, the game is opened.

```
QObject::connect(ok, SIGNAL(clicked()), &start, SLOT(close()));
QObject::connect(ok, SIGNAL(clicked()), &window, SLOT(show()));
QObject::connect(ok, SIGNAL(clicked()), &window, SLOT(slotStartTimer()));
```

Three lines codes which is above provide above mentioned method of solution. Other difficulty is to make process slotPairFound or slotWrongCards since while doing process third button is received and there happened a conflict. To overcome it, we set timer with singleShot and by with it, two process method become the primary priority. Additionally, our major problem is to make other button unclickable when two cards are open. To fix this, create deactivate() method. In this method, all pushButtons is made not checkable and after the singleShot time, to continue the game we make they checkable again.