CS 319

Object- Oriented Software Engineering

Final Report

IQ Puzzler Pro

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1. Introduction

We don’t complete our game implementation. For the first iteration, we implement basic functionalities of the game for demo purposes. This includes creating board object, creating pieces and add them basic movements of the piece object. We can rotate, drag and flip piece. We also able to put pieces on the board and can detect the areas of full and empty places on the board. So we can detect whether the game is over or not, which means the board is full or not.

2. Implementation

Our implementation process began thanks to that step of the first iteration. We started to conduct our project thanks to using Netbeans 8.2 platforms and then upload our code pieces to group private folder. Its advantage of using Gmail is straight connection online to our group works via drive extension link which we created at beginning of course. This access provides all group members ease of work in the design and analysis stages. Whenever we progressed our code implementation or report changes related to its content, we re-uploaded our works online or pushed new ones to old file.

3. Design Changes

At first, we wanted to put images as pieces but we realized that it was going to be harder to handle coordinates of these pieces. Then, we have decided to create each piece as its own as a Shape object. It means we had to write twelve subclasses to create every piece under piece class and we built inheritance relation for them. As to the board of the game, the same issue occurs. we turned the image into shape object to create it as “shape” in JavaFX. It is 11 x 5 board, so it includes 55 squares to deal with the coordinates of the put pieces.

Our another changing is about the gameplay of the game. First, we thought that user will drag the piece and drop it on board but the piece will stay where it is

dropped, however, it is more convenient to play that when the player put the piece on board, it is automatically centered on the cropped area.

4. Lessons learnt

First of all, we didn't know to use JavaFX before, so we started with learning JavaFX and its libraries. When we were implementing our code, we realized that getting familiar to important libraries is important. We gained experience with the team working and we met on our free times and discuss our project basics. We investigated other puzzle games and their basics. During implementation, we changed some parts continuously according to our different ideas. Therefore, our diagrams changed, too.

5. User's Guide

5.1 System requirements & installation

Since we are on the implementation stage and our game is not complete, we don't have an executable file of the game. We implement the project on the NetBeans, the project can be installed and executed in here. We use NetBeans IDE 8.2, and jdk 8 to implement the project, so they must installed before executing the project.

5.2 How to use

Our game is not completed yet, but we complete basic functionalities about game objects. In our game, the user plays the game with his mouse. In the game, when the user wants to move a piece, he should click that piece and drag it then drop the place he wants. If the piece is dropped on the board, the program will place it in the center of the area of the board. To rotate a piece, the user should select a piece and scroll down. So the piece is rotated 90 degrees to right for each scrolling. Also, he can use the mouse to flip a piece. When the user scrolls down, the selected piece is going to flip.