CS 1530 – Software Engineering

Andrew Dodel, Andrew Jia, Sundar Sampath, Brendan Campbell, and Yuxin Zhang

1/24/2019

**Slide Puzzle Game**

**The What** The goal of our group is to produce an interactive puzzle game where the goal is to complete a picture that has been fractured into parts by sliding pieces around.

**The Why** The inspiration for the game came from my experience playing a game called RuneScape as a kid. Notable for being a hugely popular game that was written in Java, the purpose of this project is to recreate one type puzzle that is frequently encountered in this game: the sliding box puzzle. The purpose of this game is for entertainment purposes, but like all puzzle games it requires the user to think about the puzzle itself and engages their problem-solving skills.

**The How** To make a singular puzzle style into a standalone game that is worthy of being played, we will design our game to encourage competitive gameplay and creativity. The game will consist of a web client that uses JavaScript, html, CSS along a Java/Python/Ruby backend server that uses SQL. On the technical side, many details of the game will have unique coding demands, such as:

Display – The user should interact with the game entirely through a GUI. This GUI will allow them to do everything from starting a game to viewing the high scores of all users.

Difficulty – The game difficulty will be adjusted by increasing the grid size for a given picture, meaning that more moves will be required to complete a picture and the pieces will be less recognizable.

Creativity – Users should be allowed to upload their own pictures to play the game with. Our software will check to make sure that the given picture is capable of supporting a game (i.e. correct dimensions).

Competitiveness – To facilitate this aspect of the game, users can compete against each other’s times for the default pictures supported by the game. The game will interact with a server that hosts and organizes both a given user’s best times and the best times of all accounts, which will be viewable through the user GUI or online.