Tetris Game Specification

Overview:

User will be able to play a tile matching puzzle game. The first scene they will be looking at when opening the program will be a simple menu page where they can either click a “Play” button to begin playing or an “Exit” button to quit the program. Once the “Play” button is selected, they will be sent to another scene where an assortment of different blocks will begin falling down one by one from the top of the program’s window. The goal of the game is to sort the falling blocks in such a way where a horizontal row of tiles is created and then cleared by the game. The user is able to manipulate the blocks by moving them left or right with the respective arrow keys and rotate them by pressing the space bar. The only way to properly lose in the game is by letting the blocks reach the top of the window, usually due to improper arrangement of the blocks. During gameplay the user also has the option to pause the game

TetrisApp

Tile\_size determines size of the block and allows us to move/draw on screen

Using int for the grid to make it easier to check is there are pieces there, 0 means no tile, 1 means a tile, value is greater than 1 = collision

Original pieces are prototypes

0 = center, 1 creates a tile immediately to the left/right/up/down, etc. etc.

Tetrimino

Code for entire block.

X & y center/position of the block

New arraylist bc we want to be able to modify the list, as list returns a fixed size list

Draw allows us to detach the tiles from the parent

Piece

The piece class represents a single tile out of the block.

Distance, distance from the piece to its center

setParent essentially entire block

x & y are the center coordinates of block

copy() allows the object properties to be copied, but not the object itself.

Direction

Direction enum allows a block be moved relevant to the center of the piece.