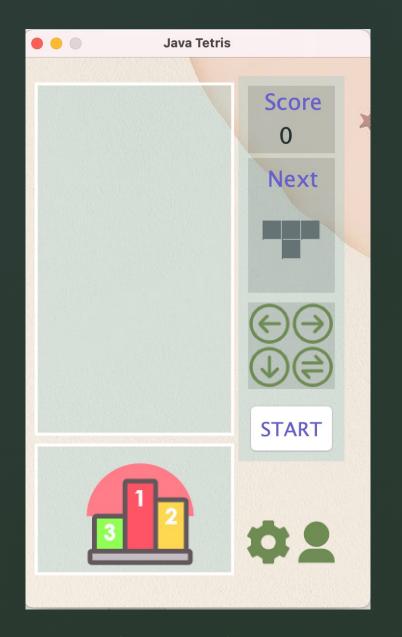
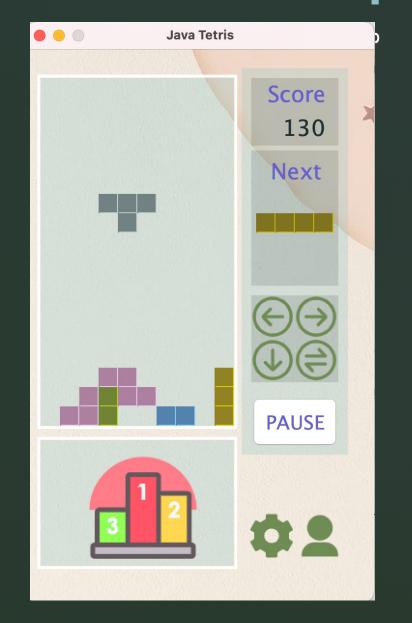
CS5004 Final Project - Java Tetris

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Static panel

Game running...



Java Tetris Score 130 Next **RST**

Q. Program structure? A. MVC Architecture

- ✓ ► Model

 ☐ GameState

 ☐ GameStateImpl

 ☐ Tetris
- View

 © Button

 © GamePanel

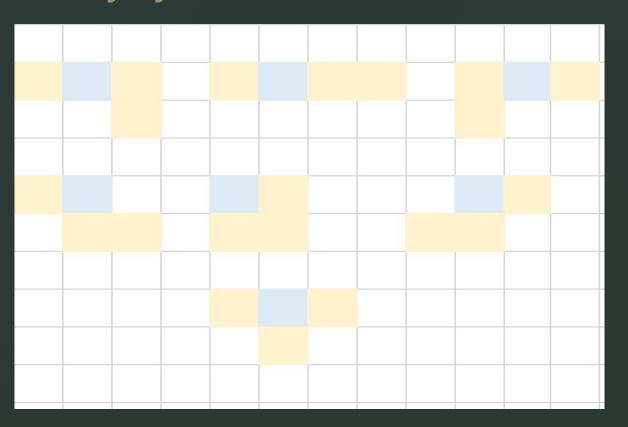
 © MainWin

 © MyPanel

 © ShowNext
- Controller
 AutoDrop
 ButtonControl
 Main
 Operation

Q. How to rotate the Tetris?

A. x = -y; y = x;



Q. Determine when and how to delete lines? Calculate score?

 A_{\circ}

```
@Override
public void removeLines(){
    for(int j = 19; j>=2 ; j--){
        for(int i =0; i<10; i++ ){
            totalBlocks[i][j+ linesToRemove[j]] = totalBlocks[i][j];
        }
    }
    //Delete one line get 10 points
    score += linesToRemove[2]*10;
}</pre>
```

Q. How to switch among different game states?

public String[] stateText = new String[]{"START","PAUSE","CONT","RST"};

```
start = new JButton( text: "START");
start.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        //If the game is running, we can only switch to "PAUSE" state
        if (GameStateImpl.state == 1) {
            GameStateImpl.state = 2;
        //In other cases, we can only switch it to 1.
        else {
            GameStateImpl.state = 1;
        //show different text reminder under different states.
        start.setText(gameStateImpl.stateText[GameStateImpl.state]);
});
```

Q. The Tetris blocks are automatically dropping down when the game starts. How to handle this?

public class AutoDrop extends Thread { private final GameStateImpl gameStateImpl; private final MainWin mainWin; /** * A constructor takes in an object from the game model and game view as its two parameters * @param gameStateImpl an object of GameStateImpl class. * @param mainWin an object of MainWin class. */ public AutoDrop(GameStateImpl gameStateImpl, MainWin mainWin) { this.gameStateImpl = gameStateImpl; this.mainWin = mainWin;

Q. Any potential Improvement?

A.

- 1. Some JButton functions have not been activated due to time restraint.
 (Ranking, User, Settings functions)
- 2. I set the game panel 10*18, and the player cannot resize the panel. Maybe I can make it more flexible and dynamic to improve the user experience.
- 3. I draw most graphics using Java.awt, which is not elegant enough for actual game design. Incorporating more graphic design and image editing will make the game more professional.

References

https://www.bilibili.com/video/BV1RW411N7mS?p=4 https://www.youtube.com/watch?v=boAJUSN8fOU https://www.youtube.com/watch?v=KGaixc-ExXA

Image icon all from--



- Thank you!