JavaFX Chess User Guide

By: Kent Woolner and Gianni Grosso

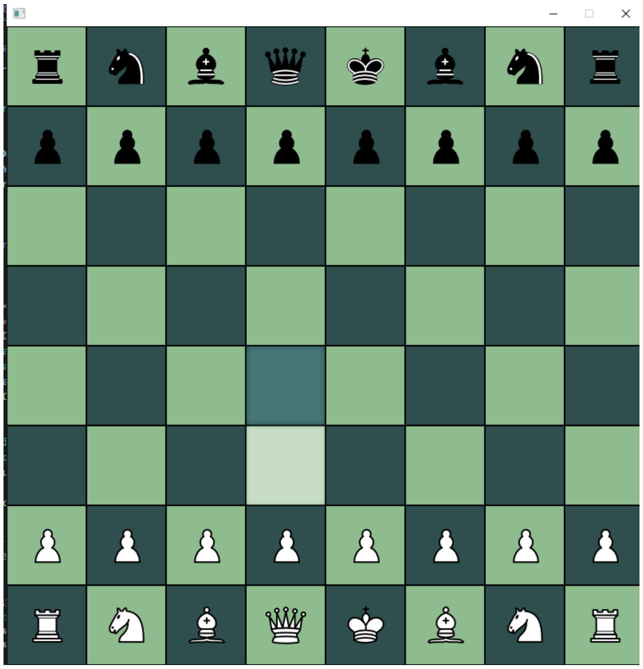
Description

The program when launched will display a full chessboard and its pieces on their corresponding squares. Each side can take turns moving one piece at a time and each of the chess pieces will move accordingly to what type of piece it is like how it is in the actual game of chess. Pieces are able to capture opposing pieces while the program is running. There is a work-in-progress version of check/checkmate logic, there is pawn promotion, and there is no castling. The game does not end when the king is captured nor when the king is placed in checkmate.

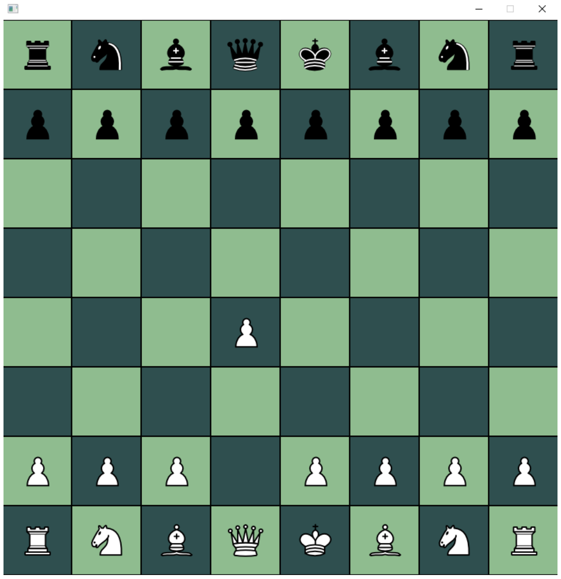
Notable design choices:

- Opted to make an abstract parent piece class since chess pieces are all the same except for their movement and there isn't a blank chess piece either all pieces have a name to them
- There are two sets of event handlers, one that's in piece.java and one in chessboard.java
    - Reasoning for this is that piece.java handles piece capturing while chessboard.java handles when the piece is placed on a square

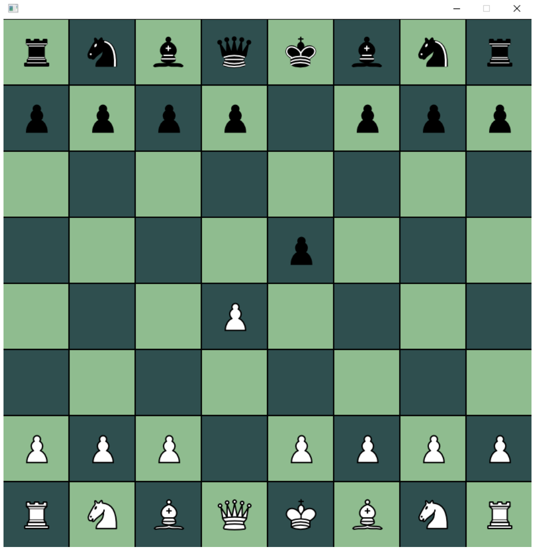
To run the program, run the App.java file and it will open up to a freshly set up chessboard.

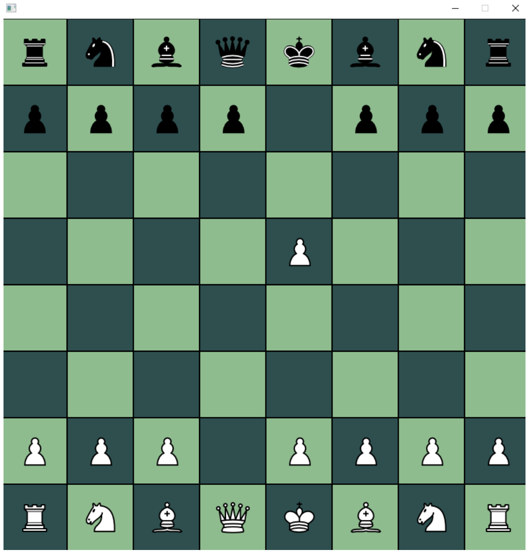


Above displays the squares that the pawn can move to when it is clicked on. The user then can click and drag the pawn to the square to make a move.

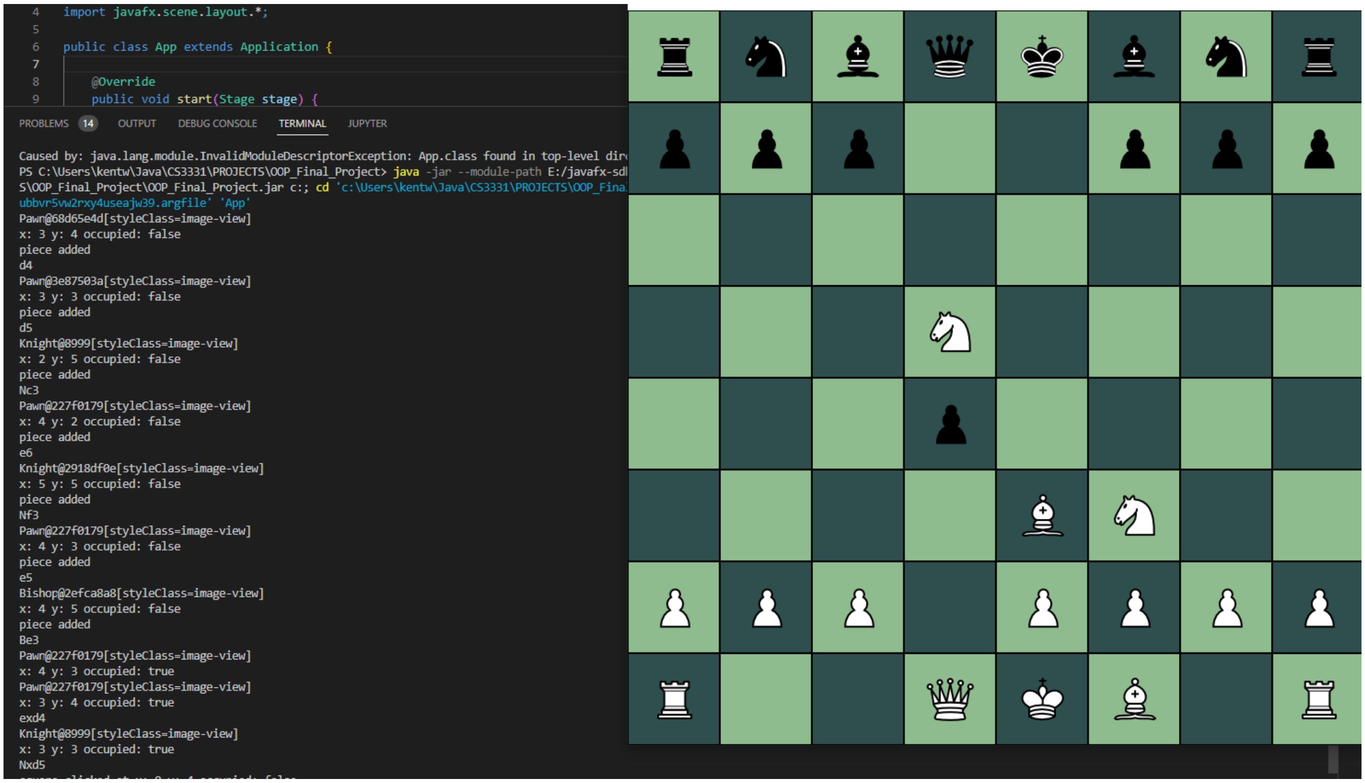


Then when it’s the black side’s turn, it is unable to move any of the white pieces, only pieces of their own. If the situation arises, pieces are able to capture opposing pieces like in actual chess.





All of the moves that are played are encoded into chess notation and are displayed to the console.



```
import javafx.scene.layout.*;

public class App extends Application {

    @Override
    public void start(Stage stage) {
```

```
Caused by: java.lang.module.InvalidModuleDescriptorException: App.class found in top-level dir
PS C:\Users\kentw\Java\CS3331\PROJECTS\OOP_Final_Project> java -jar --module-path E:/javafx-sdl
S\OOP_Final_Project\OOP_Final_Project.jar c:; cd 'c:\Users\kentw\Java\CS3331\PROJECTS\OOP_Final
ubbvr5vw2rxy4useajw39.argfile' 'App'
Pawn@68d65e4d[styleClass=image-view]
x: 3 y: 4 occupied: false
piece added
d4
Pawn@3e87503a[styleClass=image-view]
x: 3 y: 3 occupied: false
piece added
d5
Knight@8999[styleClass=image-view]
x: 2 y: 5 occupied: false
piece added
Nc3
Pawn@227f0179[styleClass=image-view]
x: 4 y: 2 occupied: false
piece added
e6
Knight@2918df0e[styleClass=image-view]
x: 5 y: 5 occupied: false
piece added
Nf3
Pawn@227f0179[styleClass=image-view]
x: 4 y: 3 occupied: false
piece added
e5
Bishop@2efca8a8[styleClass=image-view]
x: 4 y: 5 occupied: false
piece added
Be3
Pawn@227f0179[styleClass=image-view]
x: 4 y: 3 occupied: true
Pawn@227f0179[styleClass=image-view]
x: 3 y: 4 occupied: true
exd4
Knight@8999[styleClass=image-view]
x: 3 y: 3 occupied: true
Nxd5
```

Once a checkmate is achieved, it will display that move into the console. To play another game, restart the project.

Debugging Collaborators

Piece images were taken from google images

Approximate Hours Spent on Project: 45~