```java
package com.example.template;

import javafx.event.ActionEvent;
import javafx.event.EventHandler;
import javafx.fxml.FXML;
import javafx.scene.control.*;
import javafx.scene.image.Image;
import javafx.scene.image.ImageView;
import javafx.scene.layout.GridPane;
import javafx.scene.text.Font;

import javax.swing.JOptionPane;
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.FileReader;
import java.io.PrintWriter;
import java.lang.reflect.Array;
import java.util.ArrayList;
import java.util.Objects;
import java.util.Scanner;

public class HelloController {
    @FXML
    public GridPane mainGridPane;
    @FXML
    public Button startButton;
    @FXML
    public Label attacksLeftLabel;
    @FXML
    public Label MainDisplayLabel;
    @FXML
    public Button turnDisplayButton;
    @FXML
    public Label currentTurnLabel;
    @FXML
    public Label creditsLabel;
    @FXML
    public CheckBox possibleOptionsCheckBox;


    //    @FXML
```

```
42 //    public ImageView tempImageView;
43     Button[][] buttonArray = new Button[10][15];
44     Territory[][] territoryArray = new Territory[10][
   15];
45     private int numPlayers;
46     private int turn;
47     private ArrayList<Player> allPlayers = new
   ArrayList<>();
48     private boolean editingMode = false;
49     private int attacksLeft = 3;
50
51     public void start() {
52         mainGridPane.setVisible(true);
53         startButton.setVisible(false);
54         startButton.setDisable(true);
55 //         try{
56 //             FileInputStream input = new
   FileInputStream("src/main/resources/images/worldMap.
   jpg");
57 //             tempImageView.setImage(new Image(input
   ));
58 //         }catch (FileNotFoundException variable){
59 //             System.out.println("file not found");
60 //         }
61         for(int row =0;row<buttonArray.length;row
   ++) {
62             for(int column=0;column<buttonArray[0].
   length;column++) {
63                 territoryArray[row][column] = new
   Territory(row,column, new Player("-fx-background-
   color: LightBlue;"));
64                 buttonArray[row][column] = new Button
   ("");
65                 buttonArray[row][column].
   setPrefHeight(100);
66                 buttonArray[row][column].setPrefWidth
   (100);
67 //                 Font font = new Font(0);
68 //                 buttonArray[row][column].setFont(
   font);
69                 buttonArray[row][column].setStyle("-
```

```
 69 fx-background-radius: 0px; -fx-border-color:
    LightBlue; -fx-background-color: LightBlue;");
 70                 mainGridPane.add(buttonArray[row][
    column],column,row);
 71             }
 72         }
 73         askForAmountOfPlayers();
 74         setUpPlayers();
 75         turn = (int) (Math.random()*numPlayers);
 76         playTurn();
 77         //printWorldBorders();
 78         EventHandler z = new EventHandler<
    ActionEvent>() {
 79             @Override
 80             public void handle(ActionEvent event) {
 81                 int row = GridPane.getRowIndex((
    Button) event.getSource());
 82                 int column = GridPane.getColumnIndex
    ((Button) event.getSource());
 83             }
 84         };
 85         for(int row =0;row<buttonArray.length;row
    ++) {
 86             for(int column=0;column<buttonArray[0].
    length;column++) {
 87                 buttonArray[row][column].setOnAction
    (z);
 88             }
 89         }
 90     }
 91
 92     public void playTurn() {
 93         setUpEditingMode();
 94     }
 95
 96     public void setUpEditingMode() {
 97         MainDisplayLabel.setText("Editing Mode.
    Click on your territories to upgrade them.");
 98         currentTurnLabel.setText("Current Turn:");
 99         turnDisplayButton.setDisable(false);
100         turnDisplayButton.setVisible(true);
```

```
101         editingMode = true;
102         turnDisplayButton.setStyle("-fx-background-
    radius: 0px;");
103         turnDisplayButton.setStyle(allPlayers.get(
    turn%numPlayers).getColor());
104     }
105 
106     public void onClickEndEditingMode() {
107         setUpAttackingMode();
108     }
109 
110     public void setUpAttackingMode() {
111         editingMode = false;
112         attacksLeft = 3;
113         MainDisplayLabel.setText("Attack Mode. Click
     On The Surrounding Territories To Invade.");
114         currentTurnLabel.setText("Current Turn:");
115         turnDisplayButton.setDisable(false);
116         turnDisplayButton.setVisible(true);
117         turnDisplayButton.setStyle("-fx-background-
    radius: 0px;");
118         turnDisplayButton.setStyle(allPlayers.get(
    turn%numPlayers).getColor());
119         attacksLeftLabel.setText("Attacks Left: "+
    attacksLeft);
120     }
121 
122 
123     public void setUpPlayers() {
124         for (int i =0;i<numPlayers;i++) {
125             if (i==0) {
126                 allPlayers.add(new Player("temp",1,
    new Territory(0,0), "-fx-background-color: Blue;"));
127                 territoryArray[0][0].
    setControllingPlayer(allPlayers.get(allPlayers.size
    ()-1));
128             }
129             else if (i==1) {
130                 allPlayers.add(new Player("temp",1,
    new Territory(0,14), "-fx-background-color: Red;"));
131                 territoryArray[0][14].
```

```
131 setControllingPlayer(allPlayers.get(allPlayers.size
    ()-1));
132             }
133             else if (i==2) {
134                 allPlayers.add(new Player("temp",1,
    new Territory(9,0), "-fx-background-color: Yellow;"
    ));
135                 territoryArray[9][0].
    setControllingPlayer(allPlayers.get(allPlayers.size
    ()-1));
136             }
137             else {
138                 allPlayers.add(new Player("temp",1,
    new Territory(9,14), "-fx-background-color: Green;"
    ));
139                 territoryArray[9][14].
    setControllingPlayer(allPlayers.get(allPlayers.size
    ()-1));
140             }
141         }
142         updateMap();
143     }
144
145     public void updateMap() {
146         for(int row =0;row<territoryArray.length;row
    ++) {
147             for(int column=0;column<territoryArray[0
    ].length;column++) {
148                 buttonArray[row][column].setStyle(
    territoryArray[row][column].getControllingPlayer().
    getColor());
149             }
150         }
151     }
152
153     public void askForAmountOfPlayers() {
154         boolean enteredProperly = false;
155         while (!enteredProperly) {
156             numPlayers = Integer.parseInt(
    JOptionPane.showInputDialog("how many people will be
     playing (2-4)"));
```

```
157             if (numPlayers>1 && numPlayers<5) {
158                 enteredProperly = true;
159             }
160         }
161     }
162 
163     public void printWorldBorders() {
164         try{
165             FileReader reader = new FileReader("src/
    main/resources/tempCoordinates.txt");
166             Scanner in = new Scanner(reader);
167             ArrayList<String> allCords = new
    ArrayList<>();
168             while (in.hasNext()) {
169                 allCords.add(in.nextLine());
170             }
171             for (int i =0;i<allCords.size();i++) {
172                 int spot = 0;
173                 StringBuilder num = new
    StringBuilder();
174                 while (allCords.get(i).charAt(spot
    ) != ',') {
175                     num.append(allCords.get(i).
    charAt(spot));
176                     spot++;
177                 }
178                 StringBuilder num1 = new
    StringBuilder();
179                 for (int j = spot+1;j<allCords.get(i
    ).length();j++) {
180                     num1.append(allCords.get(i).
    charAt(j));
181                 }
182                 buttonArray[Integer.parseInt(String.
    valueOf(num))][Integer.parseInt(String.valueOf(num1
    ))].setStyle("-fx-border-color: Blue; -fx-background
    -color: Blue;");
183             }
184         }catch (FileNotFoundException variable){
185             System.out.println("file not found");
186         }
```

```
187     }
188 
189     public void addCoordinatesToTXT(int rowOfClick,
    int columnOfClick) {
190         String outFile = "src/main/resources/
    tempCoordinates.txt";
191         try{
192             FileReader reader = new FileReader("src/
    main/resources/tempCoordinates.txt");
193             Scanner in = new Scanner(reader);
194             ArrayList<String> allCords = new
    ArrayList<>();
195             while (in.hasNext()) {
196                 allCords.add(in.nextLine());
197             }
198             PrintWriter out = new PrintWriter(
    outFile);
199             for (int i = 0;i<allCords.size();i++) {
200                 out.println(allCords.get(i));
201             }
202             out.println(rowOfClick +","+
    columnOfClick);
203             out.close();
204         }catch (FileNotFoundException variable){
205             System.out.println("file not found");
206         }
207     }
208 }
```