

## **Introduction:**

With this program we set out to develop the board game Risk. We had to use Java and JavaFX to be able to do this. Our group had wanted to develop some kind of game for the computer, and as a consensus we decided to do Risk, because it takes aspects of card games and board games. Risk is itself a complicated game, and as such we had wanted to get as many of the aspects of the game as we could.

Risk is a board game that is about world domination. Each player controls an army and the goal of the game is to conquer the world. When looking at the game of Risk we had to break it down into its basic components. We saw the cards as one aspect, the territories/board as one, the dice as one and the players as the last aspect that we should work on. We wanted to build as much of these aspects as we could, and as such got to playing the actual board game of Risk to see what we could reasonably do and to get a better idea of the rules. The rules we set out with were that the player could place their armies and have the ability to continuously attack with the same army group, even after taking new territory. We also settled on the rules of the base game of Risk instead of Secret Mission Risk or Capital Risk.

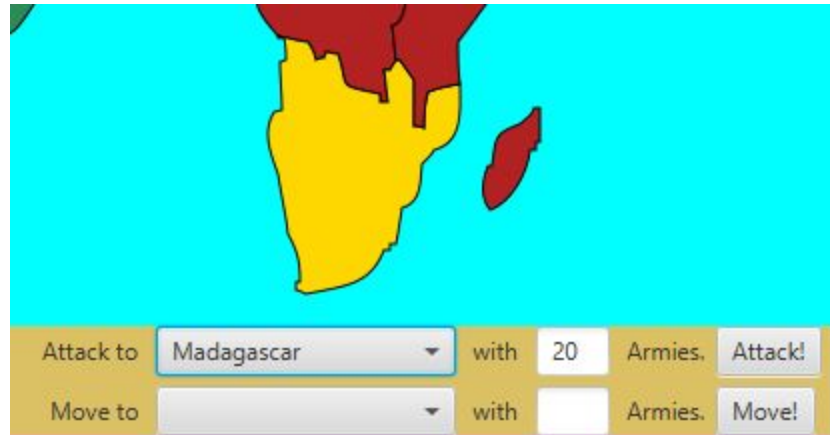
## Instructions:

The game starts with the players looking at the world map. They each are assigned 50 armies to start with. The game starts in the claim phase in which each player can claim a single territory at a time until all territories are claimed. After that the game goes into the setup phase in which the players then place armies on their newly claimed territories one at a time. After that the game then moves into the playing phase in which players are allowed in order to attack other territories and conquer them. These states are controlled by different buttons along the side and bottom of the UI:

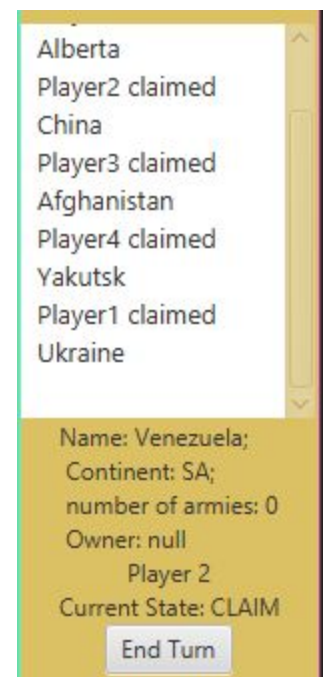


Attack to	<input type="text"/>	with	<input type="text"/>	Armies.	Attack!	Claim!
Move to	<input type="text"/>	with	<input type="text"/>	Armies.	Move!	Place!

With these, players can control all actions that are allowed in the game. They can place armies, claim territories and attack and move armies from and to other territories. When making an attack or move action they can select a territory and then choose the number of armies in which they want to move or attack another territory.



To see what is occurring as the game is being played there is the log. The log is a small text box on the right side of the screen which functions as a terminal/console that displays all taken actions. It states if a territory has been claimed, armies have been placed or if an attack has occurred and the result of said attack. The log also includes a small information text underneath it. This text details the current information of the game: the current phase and whose turn it is. It also states the details of each territory: who controls it, how many armies are on it, the name of the territory, and the continent it is a part of. It also includes an end turn button which passes the turn onto the next player.



To win the game a single player needs to control all territories. When this occurs the game gives a pop up that states which player has won.