Risk Game – User’s and Developer’s Guide

Gabriel I. Sean P. Miranda Z.

**User’s Guide**

Background

Risk is one of the most popular board games still played today. It was first released in 1957 and was later produced by Parker Brothers, who also produced Monopoly and Clue. Two to six players can play at a time. The goal of Risk is to control all the territories through multiple turns. This is done through manipulating armies strategically to capture territories and defend already controlled territories. The original version involves a realistic map of the world, but this version will involve a highly modified map of a similarly shaped Earth, but with completely different boundaries and names.

Getting Started

This modified version of the classic Risk is coded using Eclipse. The main file is named “Risk” and includes two other packages named “game” and “lib”. Run the file named Risk.jar. This game requires a minimum of three players and can be played by up to six players. The goal of Risk is to gain control of all the territories. This is done through capturing other countries by invading them. To maximize the success of an invasion, invaders often attack with a larger army. In the event of an invasion with equally sized armies, the defender has a slightly higher chance of winning. Additionally, bonuses are given for successfully controlling all the territories of a region, which are indicated through colours. Peace treaties are permitted, but are not enforced through rules, thereby allowing them to be broken at any moment. During a player’s turn, they may attack, defend, or fortify their territories. This game only requires the mouse to be playable as all actions can be selected using the mouse.

Limitations and Bugs of the Program

Many of the small countries have relatively small click areas. This can be troublesome when placing troops, especially since there are numerous troops that need to be placed and when fortifying territories, it is required that the first country and second country are clicked consecutively. Another problem is displaying the troop numbers on each territory. This is again a particular problem for smaller territories but occurs on larger territories too. One solution to this is to display the icon of the unit and the number of that unit beside it. Alternatively, a plain number can be used as a replacement, although this would appear rather bland.

Features of the Program

The program includes one main file called Risk and two packages called game and lib. The game package includes many of the physical parts and main items such as Country and Map. The lib package includes many functions, such as Button and Drawable. Additionally, there is a folder named “resources” which includes icons such as the soldier and jet and pictures such as the map.

**Developer’s Guide**

AI Class and BasicAI Class

This class and the BasicAI Class are located in the risk.ai package. At the moment, these classes have no function, but in due course, it should allow the computer to play the game as an additional opponent.

Army Class

This class in the package risk.game represents the army on a territory. The size of an army on the specific territory is calculated, as well as any bonus that may be applied from controlling all other countries sharing the same colour. The visual representation of the army is also indicated in this class, appearing as attacking or defending in the event of an invasion. This class also covers the functionality of Risk cards and the usage of them as well as counting and adding.

Card Class

This class displays the card as an image. The output considers the card type, whether it’s a soldier, a tank, or a jet. The colour of the card can be edited in this section, as well as the location of the image to be shown on the card.

Country Class

This class deals with the location of the countries on the board, as well as the countries that are connected to it. Arraylists are used to manipulate the countries. Included in the class is the image of the outline of the country, the units in the country, the name, and colour. The location of the units when they are deployed is also affected in this class but does not actually place the units.

Game Class

This class is the bulk of the program. It affects the game play and all the methods involved. Examples of methods included are methods involving the dice such as the dice rolled in battle as well as the nullClicked method which checks if the user clicked on a white part of the map, thereby deselecting the country currently selected. This class can affect what happens when the program runs a method, but specific properties such as the image to be loaded along with the method are adjusted through a corresponding class elsewhere.

Map Class

This class loads the image of the map and the territories on it. ???????????????????????????????????????????????????????????????? **not sure if I understand what this class does**

Unit Class

The units are the troops deployed on the territories. This class deals with the sprites, as well as the drawing and finds the location of it, which was determined in the country class as it is easier for each country to have its own data concerning the location of each of its units.

Suggestions for Improvements

Some of the territories are extremely small. This makes clicking them particularly difficult. One alternative to this is to change the map entirely by either deleting these territories completely ot blowing them up to allow a larger clicking area. Another change can be to change the way troops are deployed. Including a JSpinner makes the number of deployed troops clearer and faster when the numbers become large.