

Project Plan for Riskier

Risk (Soldier & Dice) is a classic in Board Game industry and is still popular today. In this simulation work, we chose to omit the aspects of territory control and troop movement, and only focus on the tactical combat, which is the core of the game.

The simplified Risk game applies a dice-driven combat system. The human player will be asked to choose his troop size and the robot player will automatically have the same size of army. Each unit is represented by a dice. A typical round of the combat is like this: after rolling all the dice, the two players compare their highest dice roll, then the second highest one, and so on. The unit with a lower dice value is eliminated (in case of being equal, the attacker's unit is eliminated). The players continue combatting for infinite rounds until all units of one player are eliminated, which signifies the victory of his adversary.

In our team, three of us each has her or his focus. Katrina focused on coding. Hye Jin did online research to gather resources before shifting to make the flowcharts. Yuchen explained the rule system of the game and then directed the planning of different versions of the simulation.

We established two prototypes which iterated one upon another towards the final version. The first prototype limited the combat to only one round. The second developed the rules to two rounds, which demanded us to calculate the remaining units after the combat of the first round and reuse them for the second round. The final version has unlimited rounds, the game simulation continuing until one of the players lost all of her or his units.