

Problem Statement

Statement:

The purpose of this project is to implement a fully functional computer simulated Settlers of Catan board game. The game will be played on one computer and players will take turns making their moves. This game will provide entertainment for any user, and will be a great platform for demonstrating the use of test driven development. The game will be free to play and own for everyone.

Stakeholders:

Developers, Professor Hays, users, future developers

Rule/Feature User Stories:

- I want to be able to build settlements, cities, and roads.
- I want to be able to build roads
- I want to be able to roll the dice
- I want to earn cards when the rolled dice have the same number as one of the hexes bordering my settlement
- I want to be able to move the robber
- I want to be able to steal a card from another player when I move the robber
- I want my opponents to lose half of their cards if they have more than 7 cards when a 7 is rolled
- I want to be able to trade with the bank
- I want to receive reduced trade deals with the bank when I build a settlement on a port
- I want to be able to draw development cards
- I want to be able to play development cards
- I want to receive resources at the beginning based on where I place my second settlement
- I want to be able to place my settlements in the correct order at the beginning of the game
- I want to have the same chances of rolling a number as with real dice
- I want to automatically have cards deducted when I spend them
- I want to be able to see the prices of the different things I can buy/build
- I want to be able to keep track of my victory points
- I want to be able to keep track of how many of each resource I have
- I want to be able to keep track of how many total resources I have
- I want to be able to choose the number of players
- I want to be able to choose my color
- I want to be able to trade resources for development cards
- I want two victory points when I have the longest road that is at least 5 roads continuous roads long
- I want two victory points when I have at least three and the most knight cards

- I want to be able to trade four of one resource for any single resource.
- I want to be able to trade resource cards.
- I want to only be able to place settlements when they are separated by two edges.
- I want to be able to build settlements only on existing roads, aside from the first two settlements