Final Project Outline - Ethan

Rules to Pandemic: <https://images-cdn.zmangames.com/us-east-1/filer_public/25/12/251252dd-1338-4f78-b90d-afe073c72363/zm7101_pandemic_rules.pdf>

Reason I chose this project:

Not only is this one of my favorite board games, but I believe it is fairly relevant to the class. It will allow me to incorporate some data structures we have used, such as stacks and queues. As well, it is similar to the Djikstra’s Algorithm in the fact that it is a geographical map, so I will use similar methods to incorporate connections between methods, even if I don’t need a breadth first search. Finally, this project will truly test my skills with java swing, as it will be my most ambitious yet to get a fully functional graphics interface for this game.

Outline:

1. Files important for game objects, methods, etc.
   1. Game
      1. Creates the cities, sets up game, and contains methods to play game
      2. Does not play game upon construction. This is on purpose.
   2. City
      1. Contains an x and y coordinate, a name, as well as the list of the cities it is connected to and other properties relevant to the game
      2. This is very similar to my intersection class from Djikstra’s Solver
   3. Player
      1. Contains the name, role, and current city, and cards in the hand of a player
   4. PlayerCard
      1. A card that can be held in a player’s hand
      2. Separated into city card, event card, and epidemic card via variable cardType
   5. InfectionCard
      1. A card that simply represents a city, created object just for differentiation purposes
2. Files for running the game, structuring turns, etc.
   1. Runner
      1. This compiles all of the objects and methods above and creates a sequential, playable game.
   2. GraphicsRunner
3. Files for graphics
   1. I intend to make the graphics for this project look as realistic/similar to the base game as possible, although I may use my own map and find away to create my own cards.
4. Data Structure Files
   1. Stack
   2. Queue
   3. LinkedList
   4. Node
5. Notes
   1. Colors
      1. 0 = blue
      2. 1 = yellow
      3. 2 = black
      4. 3 = red
   2. Types of Card
      1. 0 = city
      2. 1 = event
      3. 2 = epidemic