

# Pandemic - Milestone 1

Steven Doolan, Davis Nygren, Daniel Lehman, Jackie Zhang

## Project Description

Pandemic is a cooperative board game which is based on a fictional medical disaster where four types of disease are spreading across the world. Players need to cooperate, rather than compete, to discover four cures in order to win the game. Each player chooses a specific role, which gives them a powerful special ability. The game has several expansions, each introduces new player roles, new game rules, etc.

As this course is concerned, the legacy code for Pandemic comes from the project of Steven's Software Quality Assurance (SQA) course. Its detailed test suite as well as its appropriate scale makes the refactoring process feasible and fairly straight-forward. Other project were considered, but we eventually choose Pandemic as our CSSE375 project because of these qualities.

## Potential Obstacles

The team last spring attempted the project without taking design patterns and skipped over some basic design patterns. The code style is closer to functional programming, as opposed to object oriented.

In addition, very little of the GUI is tested, and it has intricate game state knowledge. It could present challenges for condensing.

Finally, many functions are programmed not to the interface, but are case-specific.

## Project Goals for Next Week

We prioritized current feature list, and here are the features we would like to implement for Milestone 2.

- Organize the Game state into a singleton or other clumped structure
- Generalize collection objects
- Load cites from text files as opposed to hard code
- Clean up test cases
- Clean up infector code
- Identify Code Smells

## Currently Implemented Features

- Cure a city
- Build a research station
- Discover a cure
- Infect a city
- Remove a disease cube from a city (Treat Disease)
- Pass a card from one player to another if both players are in the same city (Share Knowledge)
- Move from city to neighboring city (Drive/Ferry)
- Move directly to a city of which the player holds the card by discarding the card (Direct Flight)
- Move to any city of the player's choosing if the player discards the card of the current city (Charter Flight)
- Move to a city containing a research station if the player's pawn is currently in a city with a research station (Shuttle Flight)
- Draw cards
- Discard cards
- Role-respective actions

## Current Structure:

- The current game state is stored in a collection of public static variables
- The current actions are determined by Enums and switch statements
- Cities are imputed and typed up in several areas
- Logic for different roles is separated out into different business logic classes
- All functions have detailed descriptions with text from the rule book describing what logic they are implementing

## Advisor Interaction

The project team will be meeting with the advisor during part of the CSSE375 lab time each Wednesday. The remaining time will be used for the team to meet and work on the project. Waffle.io will be used to track project status and as a reference during the advisor meetings.

## Resources

Below are the links to useful resources of this project, including GitHub and Waffle.io.

- **Waffle.io:** <https://waffle.io/Doolan/Pandemic-Windows/join>
- **GitHub:** <https://github.com/Doolan/Pandemic-Windows>