Defining and Understanding the Problem

# Defining the Problem

The problem being defined is the problem that will be solved with the software solution to be developed. Overall, the problem is that a turn-based strategy game is to be developed. Broken down, the problems needing to be solved include:

* The game has a top-view/plan view of a world map. The map is broken up into a grid.
* There are two players, each representing a country. The players are able to name their country before starting the game.
* The main objective is to become the most civilised country by either having the most points or taking over the other player’s country.
* More gameplay rule requirements in the Rules.docx document.

# Design Specifications

## Data Dictionary

See Data Dictionary.docx

## Criteria

* **Graphical**
  + Users must be able to use all controls using the GUI
  + GUI must be well organised and constant.
  + GUI elements must function as intended.
* **Gameplay**
  + **Map:**
    - The map must be subdivided into a two-dimensional array of locations, similar to a grid.
  + **Unit Soldiers:**
    - Unit soldiers must be able to move in any unoccupied area.
    - Unit soldiers must not be able to move into spaces occupied by other units, or blocked areas.
    - Unit soldiers must not be able to exit the battlefield.
    - Unit soldiers must have a power/health system.
    - Unit soldiers must be able to attack nearby enemy unit soldiers (1 square grid away).
    - Unit soldiers must be able to capture control points if they are on it.
    - Moving and upgrading units will cost 1 move each.
  + **General:**
    - Moves can only be gained by “rolling a dice” that returns a random integer between 1 and 6.
  + **Control points**
    - If all control points are controlled by one player, the game ends and that player wins the game.
    - There will be 3 or 5 control points (will be decided later).
    - In order to capture a control point, a unit must be standing in it and click on the capture button. If the player click on capture button if the selected unit is not in a control point, no capture will be done.