# COMP 345 Assignment 1 Grading Schema

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## Non-implementation Part (8 points)

## Knowledge/correctness of game rules (2 points)

During the presentation or if the code implements incorrect rules (accroding to the official game rules), remove marks.

### Modularity/simplicity/clarity of solution (2 points)

Data structures should be appropriate, simple, and clear. If have difficulties explaining it, it is unclear.

#### Proper use of language/libraries (2 points)

Should correctly use .h and .cpp files.

## Code readability (2 points)

Improper naming, messy code layout, commented-out code, etc. will result in mark deductions.

## **Implementation Part**

## Map (3 points)

- 1. using any kind of graph traversal algorithm to prove the graph you generate (including sub graph) is a connected graph (it means you should be able to traversal any continent or the whole world) [2 points];
- 2. each country should belong to one and ONLY one continent [1 point];

#### MapLoader (2.5 points)

1. can successfully parse any map file from the "Conquest" game web site, you are NOT allow to hard code the graph or using your map file format [1.5 points];

2. can report the map file is invliad if it is [1 point];

#### Dice (2.5 points)

- 1. the dice rolling facility should have a member function that receive an integer from 1 to 3 to decide how many dice are being rolled [1 point];
- 2. you should keep tracing the dice rolling history [1 point];
- 3. the return value of each dice should be in the range  $1 \sim 6$  [0.5 point];

#### Player (2 point = 4 \* 0.5)

- 1. each player owns a collection of countries;
- 2. each player owns a collection of Risk cards;
- 3. each player has their own dice facility;
- 4. each player has: reinforce(), attack(), fortify() interface;

# Card deck / hand (2 points = 0.5 point \* 4)

- 1. the deck card number should be equal to the number of countries in the map;
- 2. each card has a type from: infantry, artillery, cavalry;
- 3. has a draw() method can return the card you draw from the deck;
- 4. exchange() method in hand can exchange armies using the Risk card;