AN INTELLIGENT AGENT FOR RISK

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AGENDA

- Game Rules
- Object Model
- Agent
 - Paths
 - Army Distribution

RULES: GENERAL

- Turn based game
- Game board with 42 countries divided in 6 continents
- 2-6 players
- Countries are divided equally between players
- Aim: either complete mission stated on card or conquer the whole world

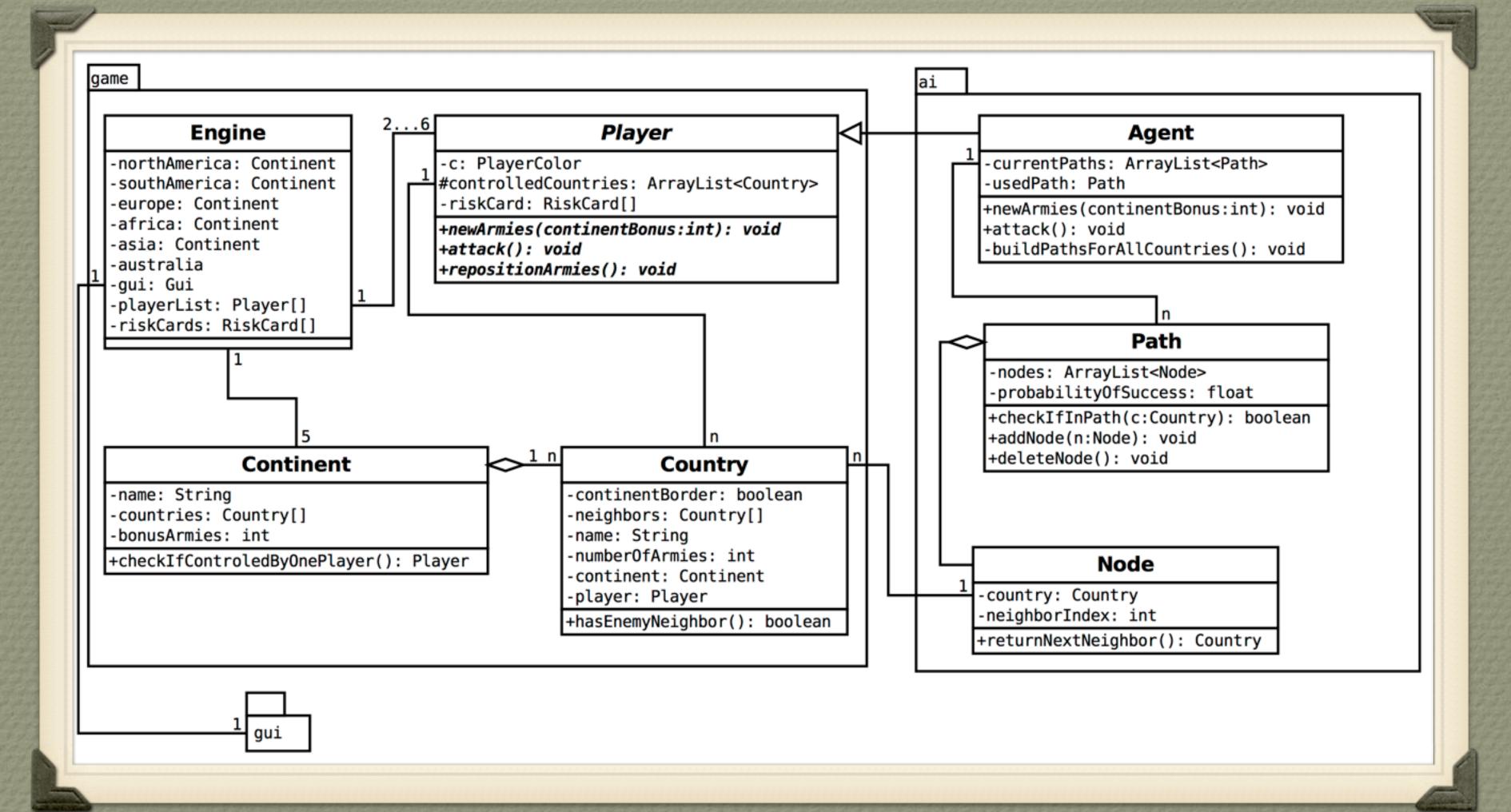
RULES: TURNS

- Turn has 3 phases
 - New Armies: the player receives new armies based on the number of controlled countries as well as possible bonus armies
 - Conquering other Countries: by using dices a player can try to conquer countries of his opponents
 - Reposition Armies: the player can reposition his armies taking into account some movement rules

RULES: RISK CARDS & BONUS ARMIES

- Risk Cards
 - A player gains one Risk Card per turn if conquers at least one country
 - Risk Cards can be exchanged for additional armies during phase one
- Bonus Armies per completely conquered continent

| Continent | Armies |
|---------------|--------|
| Africa | 3 |
| Asia | 7 |
| Australia | 2 |
| Europe | 5 |
| North America | 5 |
| South America | 2 |



OBJECT MODEL

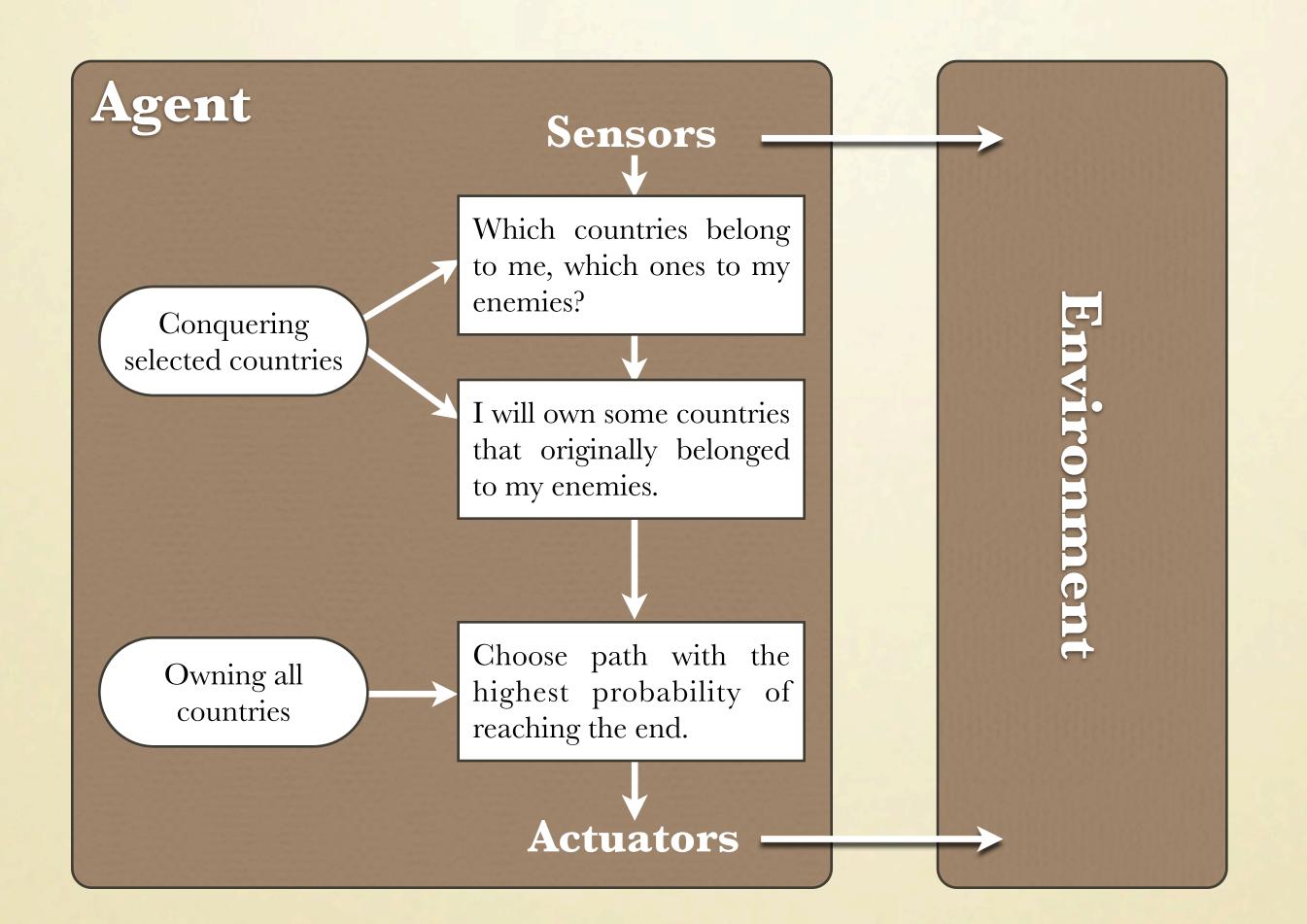
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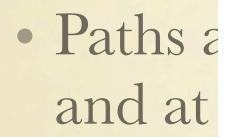
- Uses half of its received armies to defend continent borders
- Uses other half as an attack army
- Builds paths to decide on attack start country

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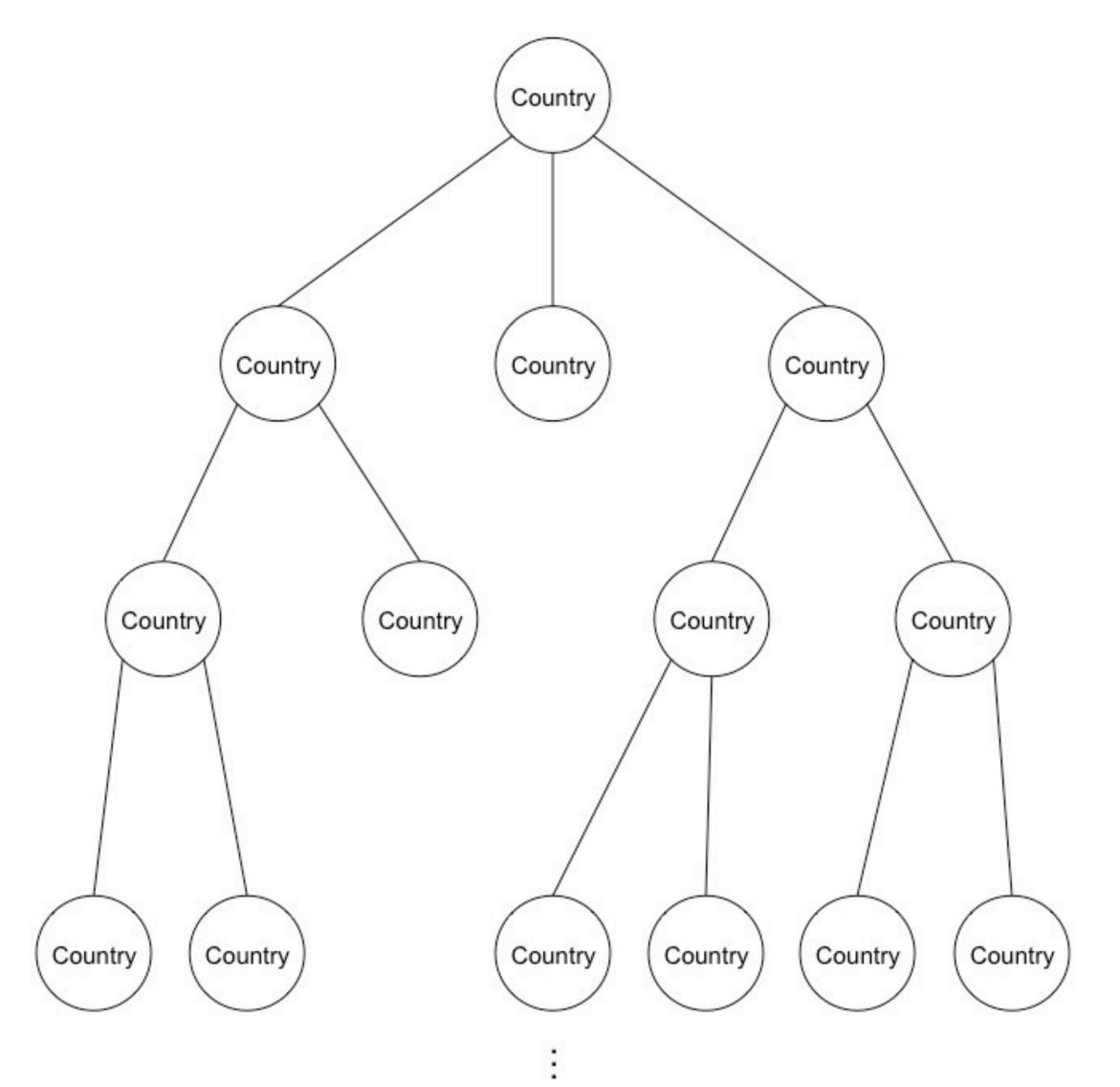
- Uses paths as game map representation
- Decides which path to use based on
 - Enemy armies (combined with dice probability)
 - Path length
 - Favorite: Path with highest probability to reach the end

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- Path is
- Agent
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