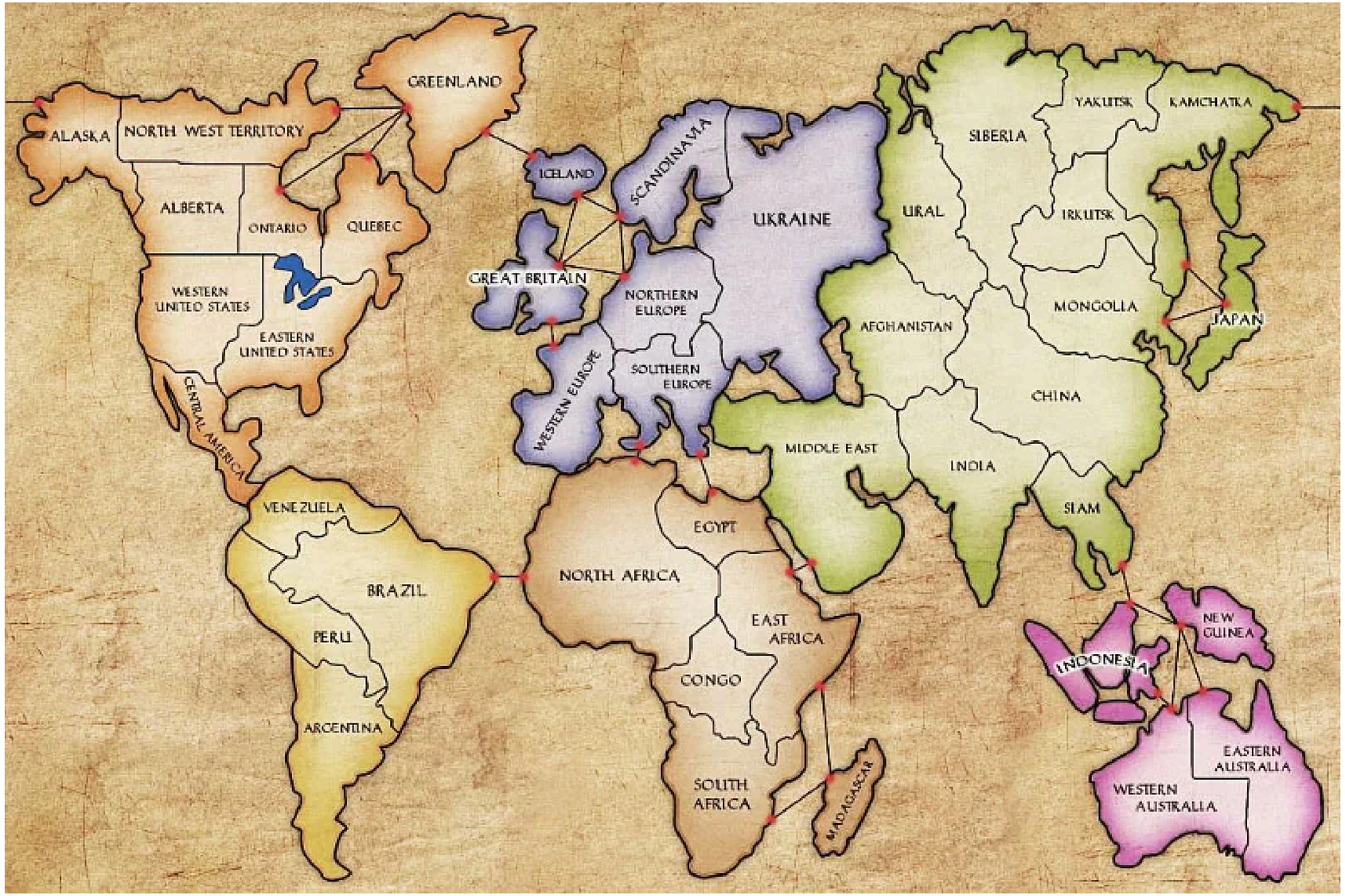
OOP 2024 Project

Risk

Nane Andreasyan

Risk Game Overview



- 6 Continents
- 42 Territories
- 5 Turns
- 4 Players
- Action Cards
- Army Cards

Game Play

The game starts with each player having 30 armies.

The order of players is decided by dice roll in descending order.

During the first turn each player needs to claim territories by placing armies in each territory. If one player places an army in the territory, another player can’t claim it during the first turn.

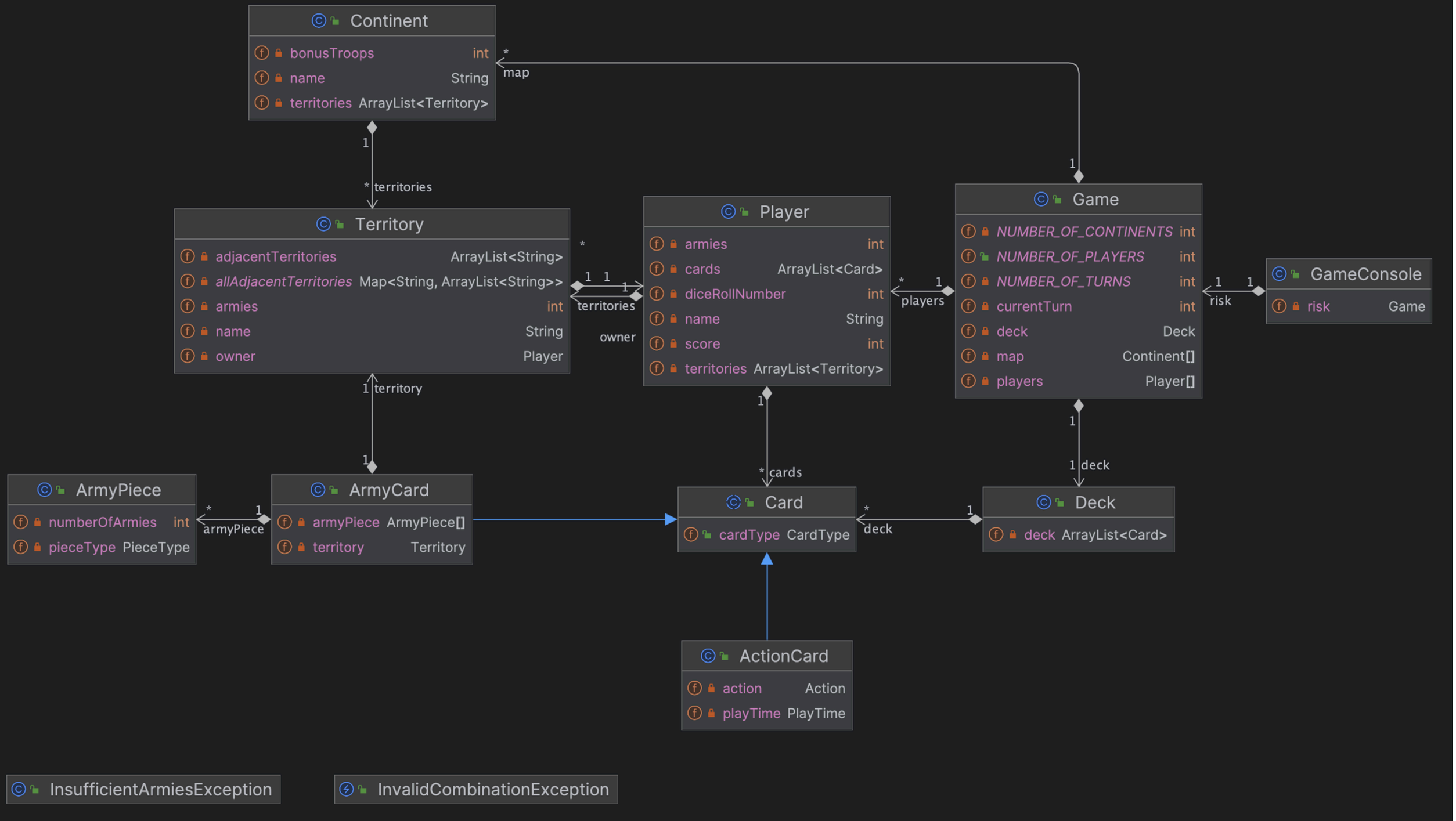
After all territories are claimed, players start their actual turn. During each turn, the player can:

- Get armies by trading cards
- Place armies
- Fortify territories.
- Attack. The attack continues untill all eligible armies are used or the territory is claimed.

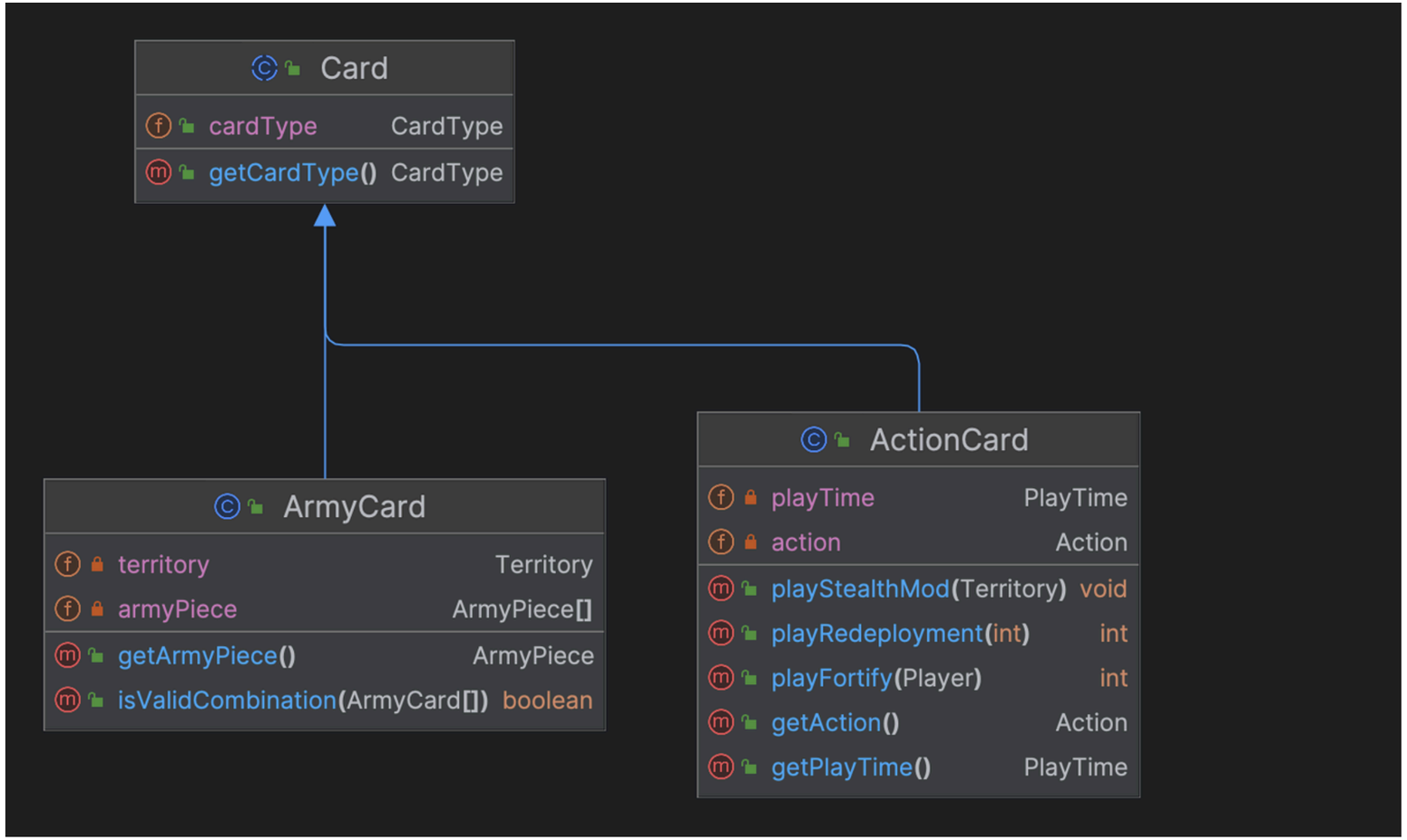
The game consists of 5 turns excluding the first turn. The game ends after 5 turns or if all 42 territories have been claimed by a single player.

Game Play - Not Covered Features

- Action Card game play.
- Card trade methods are not properly tested.
- Bonus Troops when conquering a continent.
- GUI.


Continent
bonusTroops int
name String
territories ArrayList<Territory>
map
territories
Territory
adjacentTerritories ArrayList<String>
allAdjacentTerritories Map<String, ArrayList<String>>
armies int
name String
owner Player
territories
owner
territory
Player
armies int
cards ArrayList<Card>
diceRollNumber int
name String
score int
territories ArrayList<Territory>
players
Game
NUMBER_OF_CONTINENTS int
NUMBER_OF_PLAYERS int
NUMBER_OF_TURNS int
currentTurn int
deck Deck
map Continent[]
players Player[]
risk
GameConsole
risk Game
cards
deck
ArmyPiece
numberOfArmies int
pieceType PieceType
armyPiece
ArmyCard
armyPiece ArmyPiece[]
territory Territory
Card
cardType CardType
deck
Deck
deck ArrayList<Card>
ActionCard
action Action
playTime PlayTime
InsufficientArmiesException
InvalidCombinationException

Card Classes

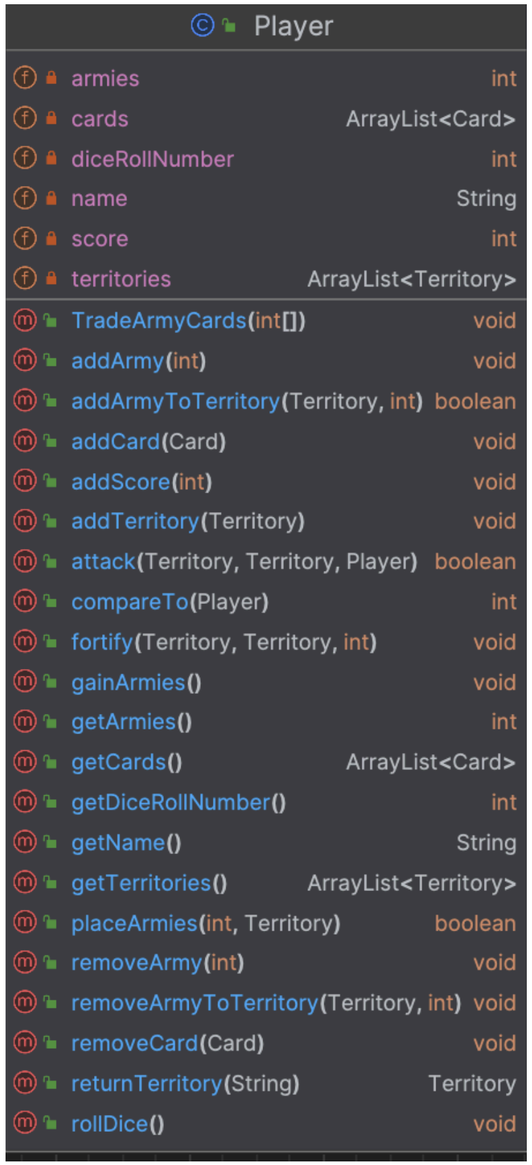


The Card class is responsible for cards in the Risk game.

The parent class is divided into:

- Action Cards
- Army Cards

Player Class

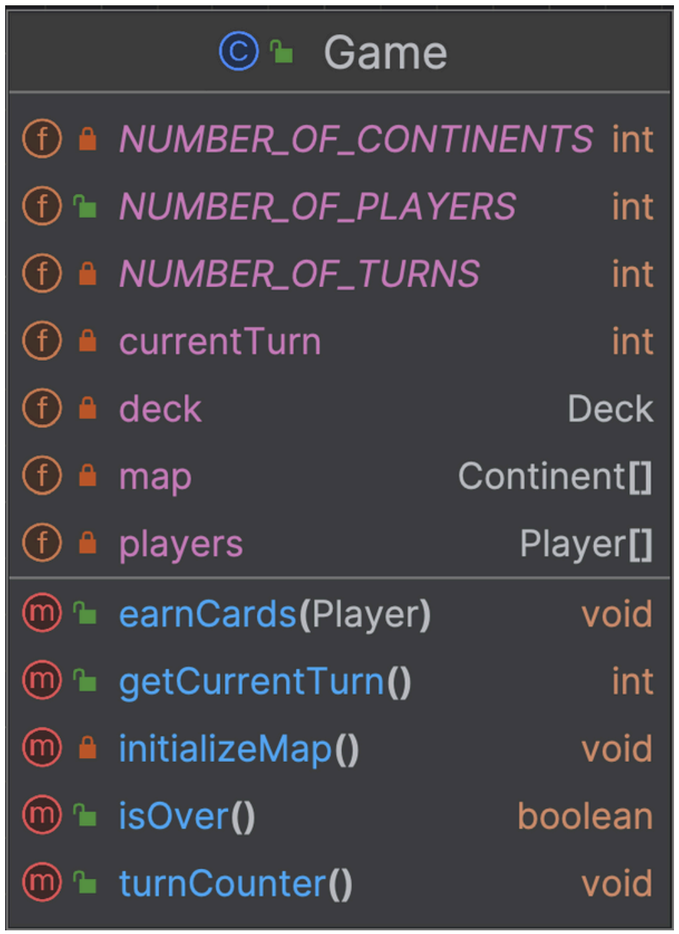


The Player class is the most extensive class of the project.

It is responsible for:

- Creating players
- Assigning armies, gaining armies
- Gaining territories
- Trading cards
- Attacking, fortifying, placing armies
- Rolling the dice
- Implemets the Comparable interfece

Game Class



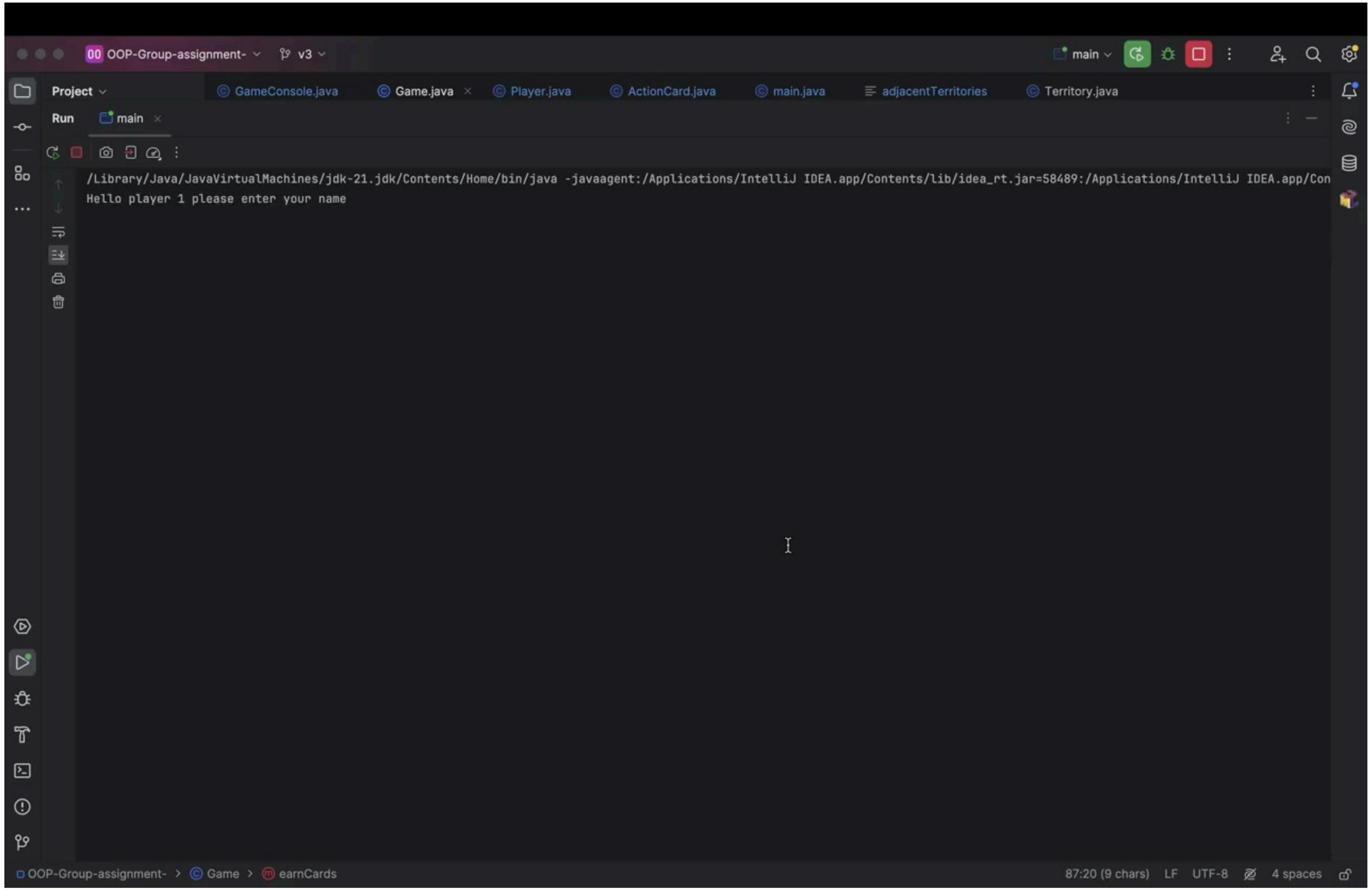
The Game class is responsible for initialising the RIsk game.

It is responsible for:

- Creating a map of the game.
- Creating the deck of cards.
- Counting turns.
- Checking the game status.
- Drawing cards from Deck.

Game Console

The game is played using command-line interface



Thank you