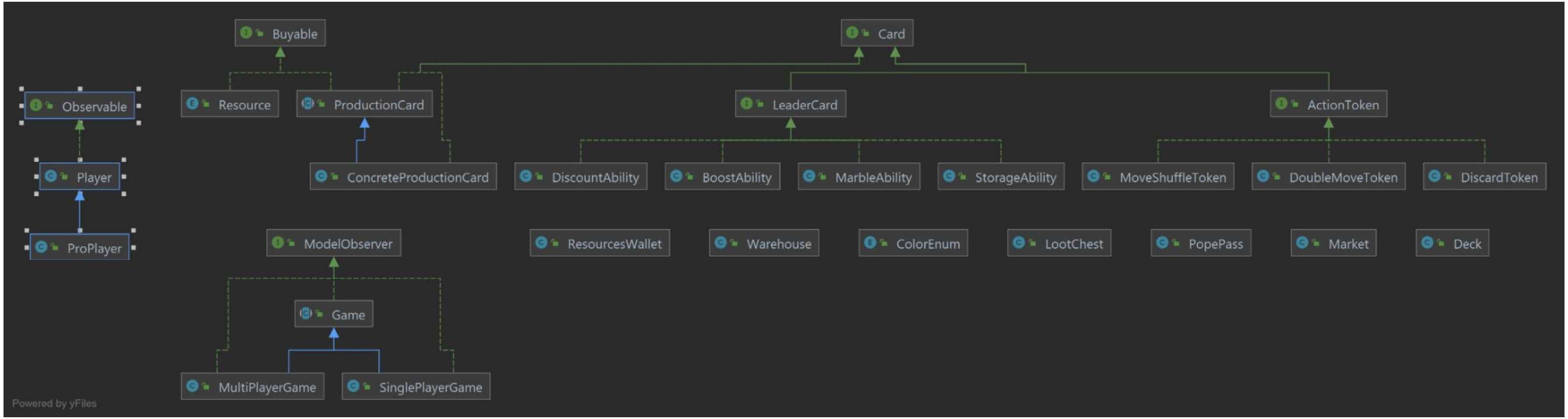
# Masters of Renaissance

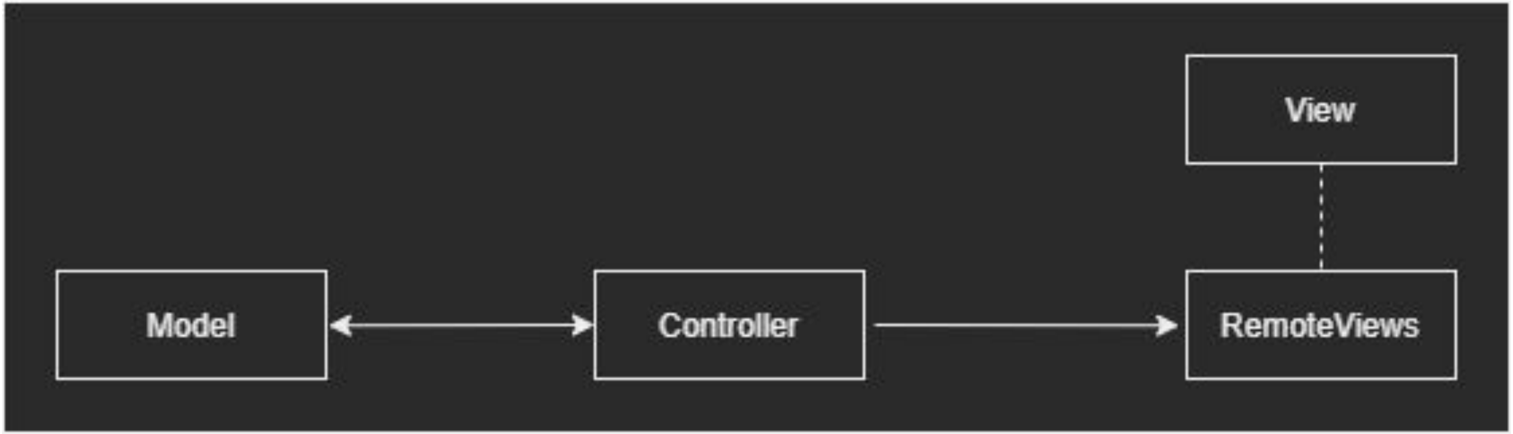
SOFTWARE ENGINEERING FINAL PROJECT – AM13

# Model


Buyable
Card
Observable
Resource
ProductionCard
LeaderCard
ActionToken
Player
ConcreteProductionCard
DiscountAbility
BoostAbility
MarbleAbility
StorageAbility
MoveShuffleToken
DoubleMoveToken
DiscardToken
ProPlayer
ModelObserver
ResourcesWallet
Warehouse
ColorEnum
LootChest
PopePass
Market
Deck
Game
MultiPlayerGame
SinglePlayerGame
Powered by yFiles

# Controller and View

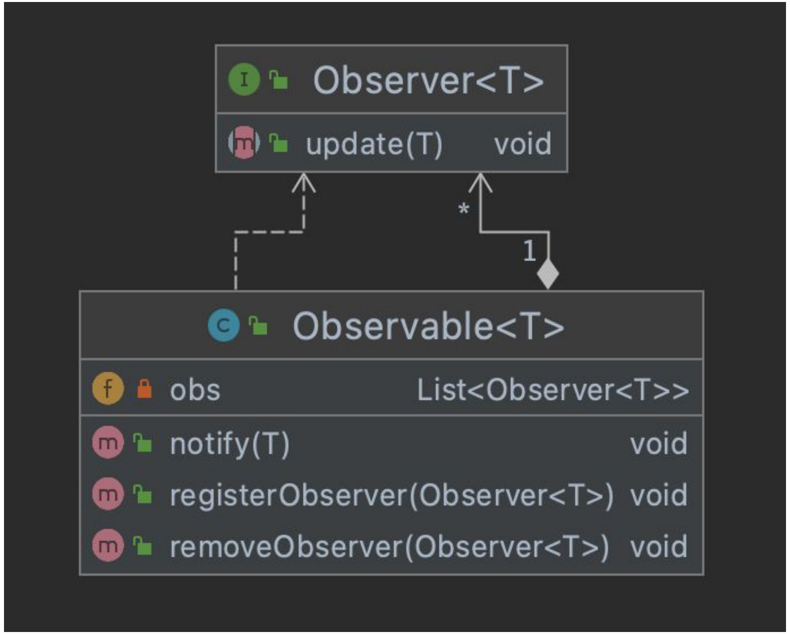
The communication between Controller and RemoteViews follows the Observer Pattern.



# Observer

Usage:

- Controller (Observer<MessageID>) and Game
- View (Observer<MessageEnvelope>) and Controller



Observer<T>

update(T) void

*

1

Observable<T>

obs List<Observer<T>>

notify(T) void

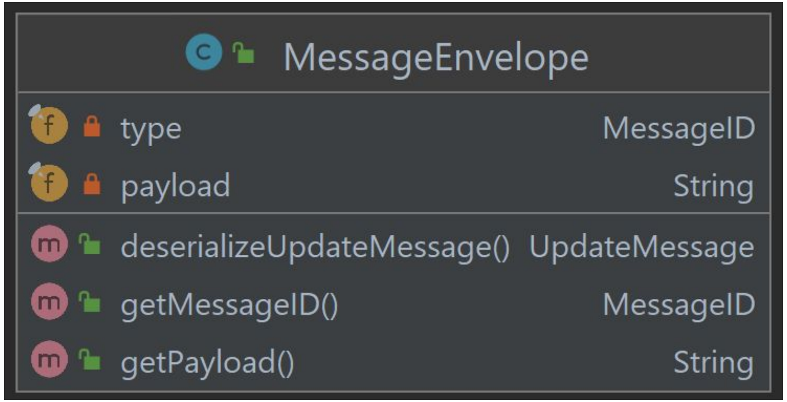
registerObserver(Observer<T>) void

removeObserver(Observer<T>) void

# Network Layer

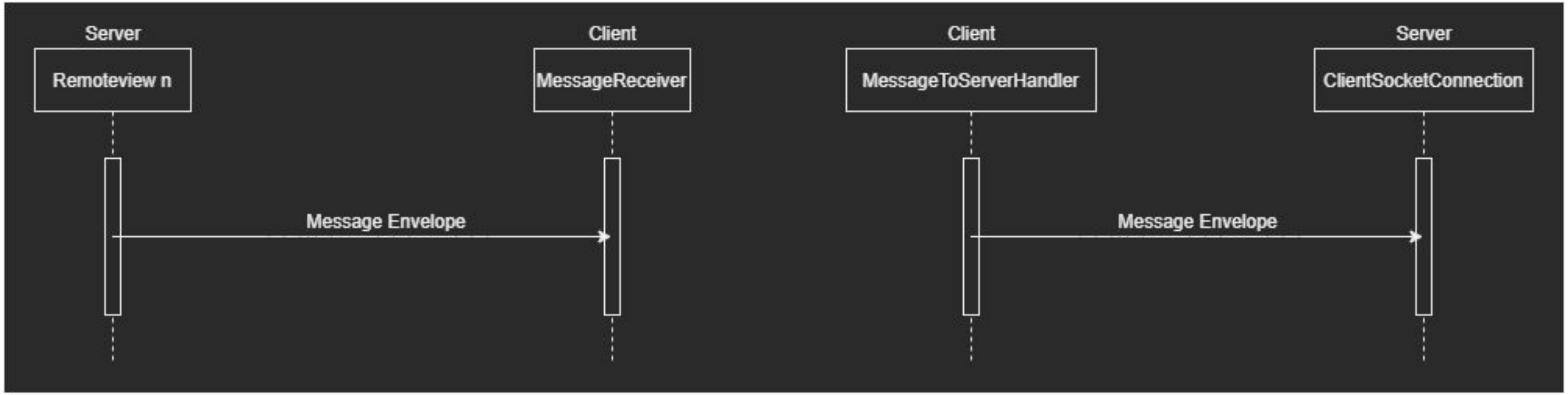
MessageEnvelopes carry the information and are serialized with the JSON format.

Each MessageEnvelope's payload is a stringified primitive type or a Message object serialized with JSON as well.



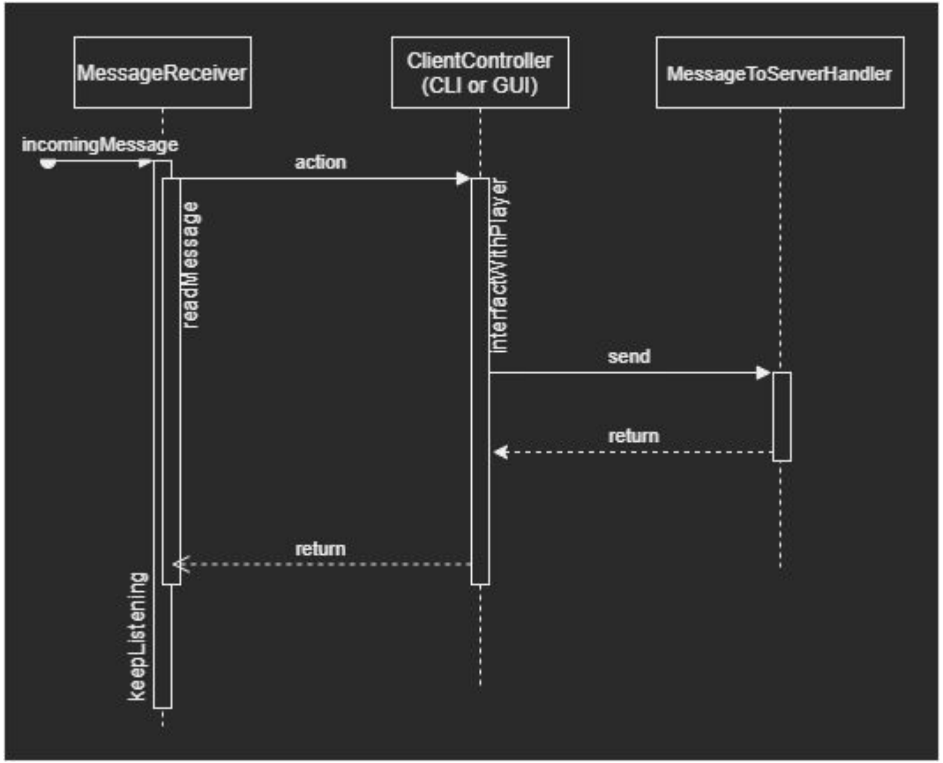
MessageEnvelope

| | |
|---|---|
| type | MessageID |
| payload | String |
| deserializeUpdateMessage() | UpdateMessage |
| getMessageID() | MessageID |
| getPayload() | String |



# Client

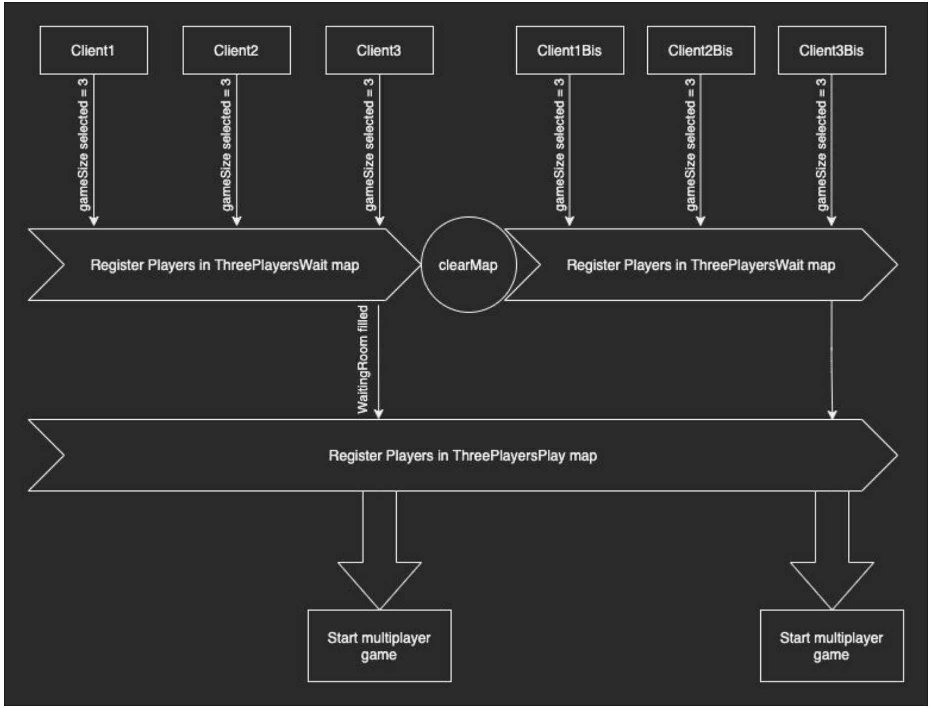
- CLI or GUI
- Local mode or Distributed mode
- ClientController is specialized as CLIController or GUIController



# Advanced Functionalities

## Multiple Games

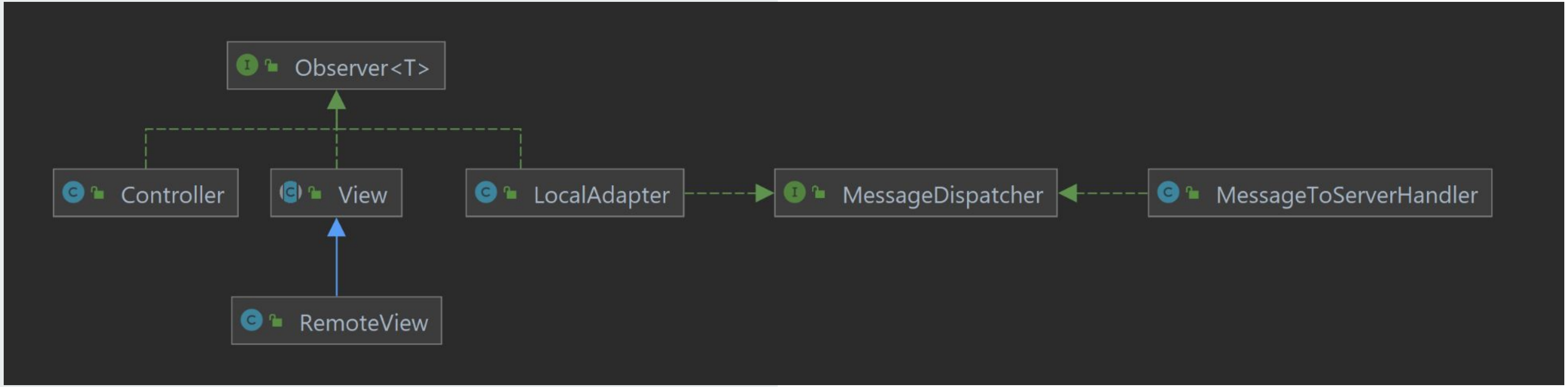
- The server generate a new ConnectionSocket for each player connecting to it, then it  assigns the ConnectionSocket to a new Thread.
- Upon the receiving of nickname and gameSize, the player who is identified by its ConnectionSocket is put into a *waiting room* which consists in a Map of fixed size representing the gameSize.
- Once the waiting room is filled, all the ConnectionSockets inside it are moved to a *playing lobby* (represented by another Map) for that size. This Map holds all the players currently in a game of that size, allowing multiple instances.



# Advanced Functionalities

## Local Adapter

Network is replaced by the Local Adapter which creates a bridge between Controller and ClientController.



## Overcome Challenges

- Update Message Serialization and Deserialization
- Drag&Drop