


# Software Engineering project 2019


Implementation of Adrenaline by Filip Neduk.


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# model

 Package board

 Package cards

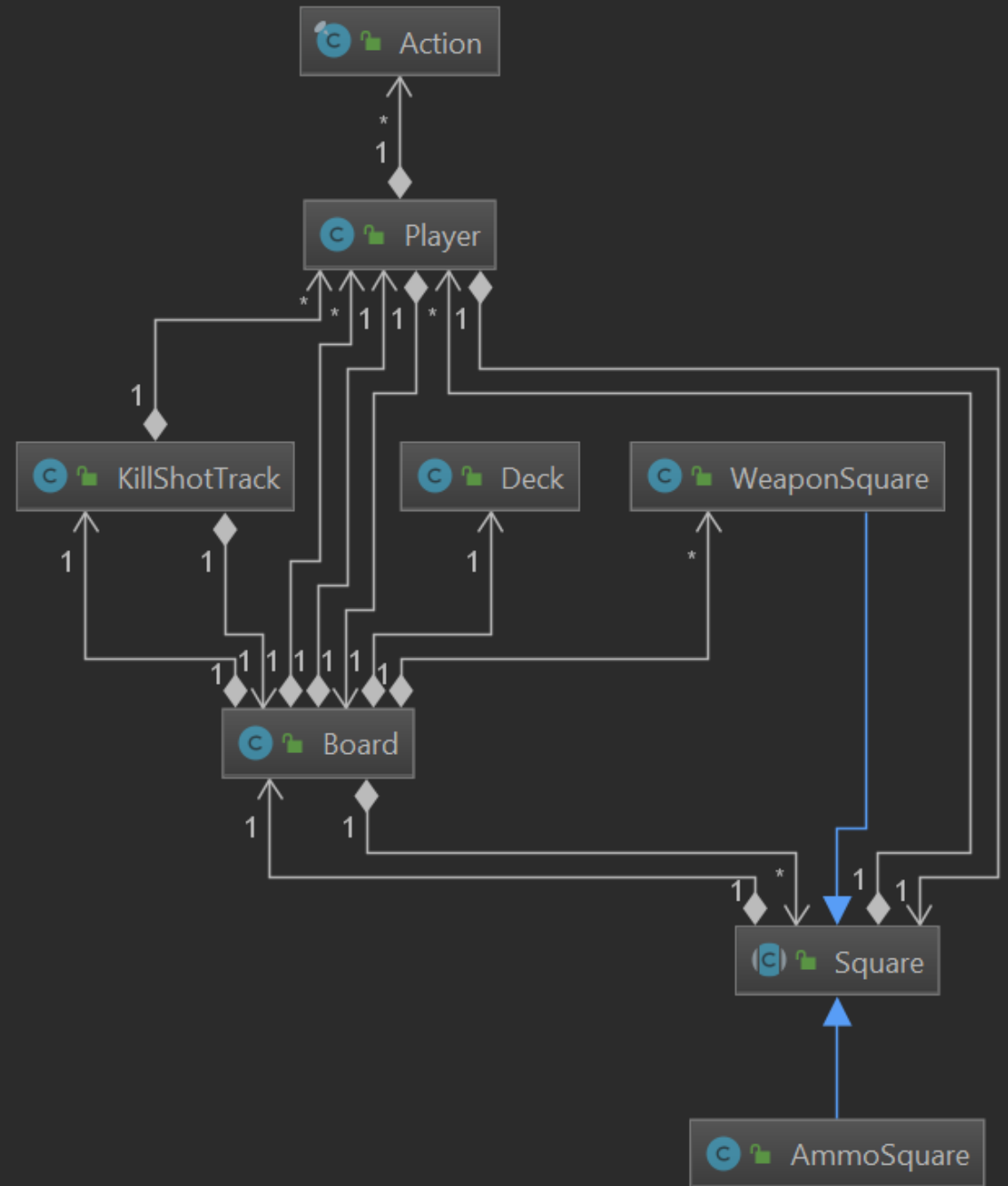
 Updater

 Package exceptions

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# model.board

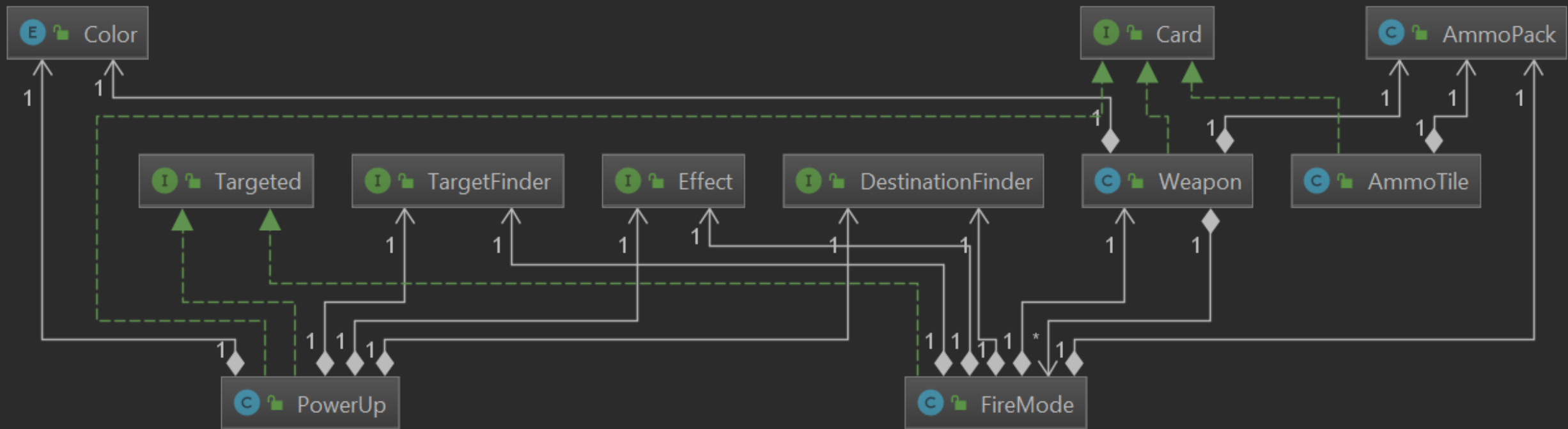
- Contains a class representing the Board and other classes representing the elements of the Board.
- A Board is made of Squares, that can be AmmoSquares or WeaponSquares.
- A Board contains a KillShotTrack, some Decks and the Players of the game.
- Every Player can do some Actions.



# model.cards

- Weapon, PowerUp and AmmoTile implement the interface Card.
- An AmmoTile contains an Ammopack. Weapons, PowerUps and FireModes have a cost in AmmoPack.
- FireMode and PowerUp implement the interface Targeted.
- TargetFinder, Effect and DestinationFinder are functional interfaces used by FireMode, PowerUp.
- Cards, as well as other components of the game, can have a Color. Namely, Weapons and PowerUp must have a Color while AmmoTile must not.

# model.cards

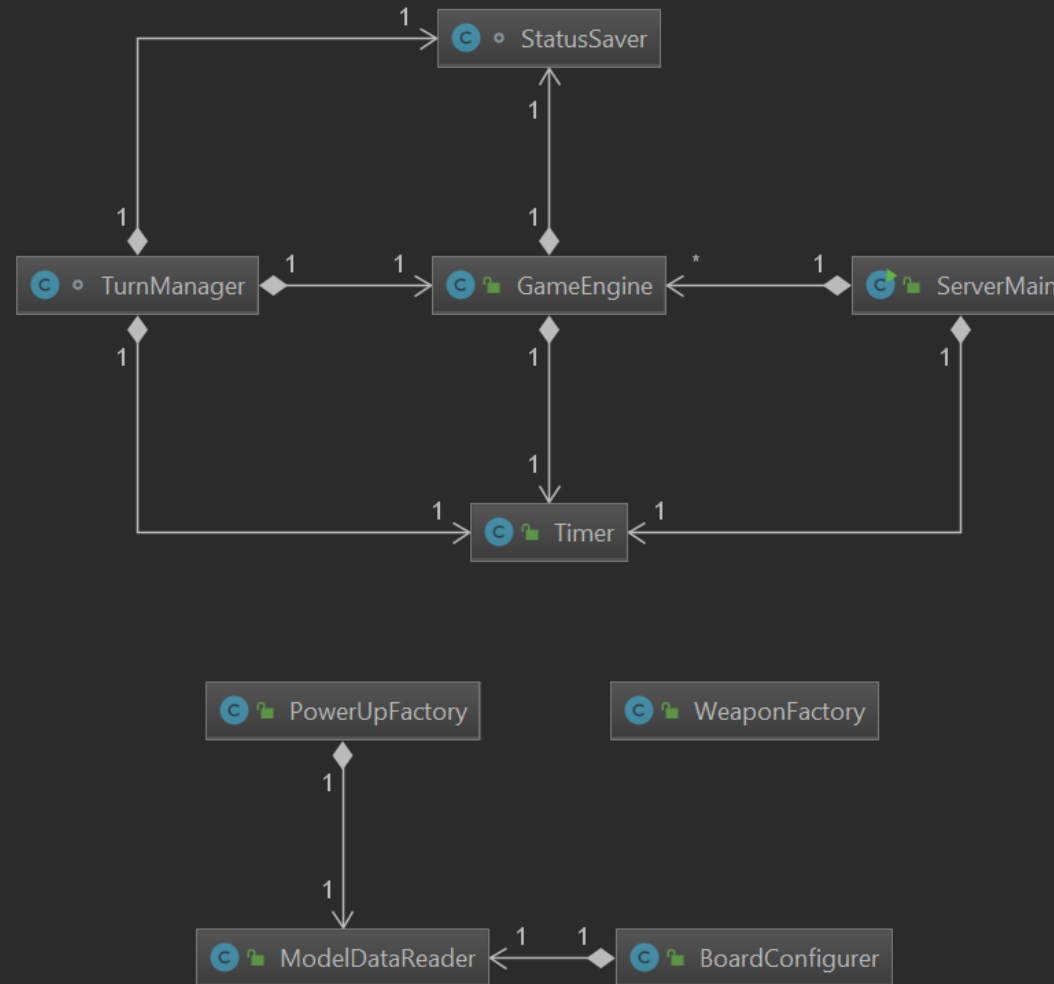


# model.Updater

- The class responsible for updating the ClientModel by copying the necessary values from the ServerModel.
- The ClientModel class will be presented later.



















| Updater                           |  |              |
|-----------------------------------|--|--------------|
| get(String, Weapon, boolean)      |  | JsonObject   |
| get(String, int)                  |  | JsonObject   |
| get(String, int, Player, boolean) |  | JsonObject   |
| get(String, Player, PowerUp)      |  | JsonObject   |
| get(String, Player, Weapon)       |  | JsonObject   |
| get(String, Player, AmmoPack)     |  | JsonObject   |
| get(String, Player, Square)       |  | JsonObject   |
| get(String, Player)               |  | JsonObject   |
| get(String, Player, int)          |  | JsonObject   |
| get(String, Player, List<Player>) |  | JsonObject   |
| get(String, Square, Weapon)       |  | JsonObject   |
| get(String, Player, boolean)      |  | JsonObject   |
| get(String, Square)               |  | JsonObject   |
| getModel(Board, Player)           |  | JsonObject   |
| createSimplePlayer(Player, Board) |  | SimplePlayer |
| getFreshUpdate(String)            |  | JsonObject   |
| getRenderMessage()                |  | JsonObject   |
| toSimpleWeapon(Weapon)            |  | SimpleWeapon |
| toSimpleSquare(WeaponSquare)      |  | SimpleSquare |
| toSimpleSquare(AmmoSquare)        |  | SimpleSquare |

# controller



controller.ServerMain

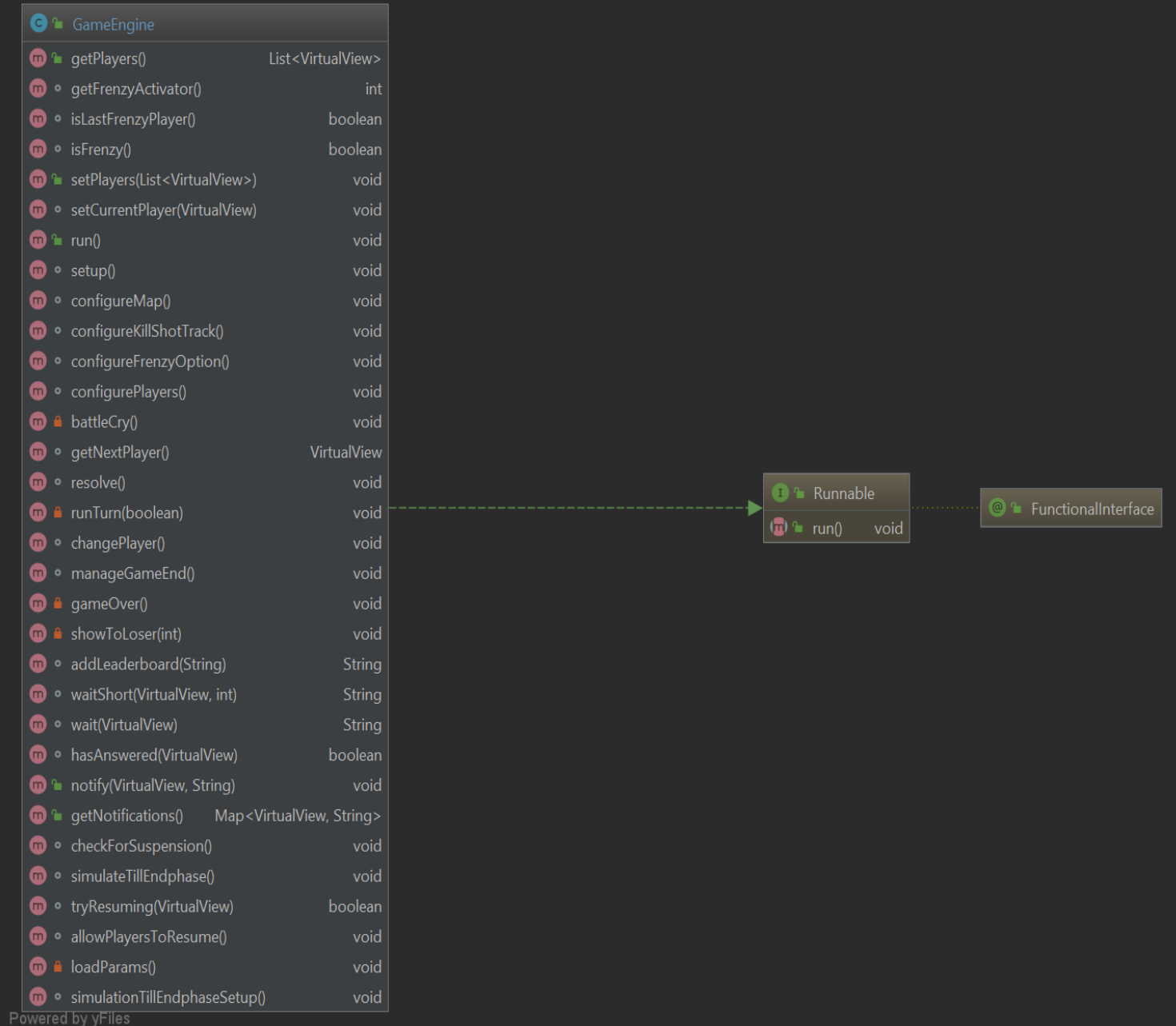
- The class containing the main() method of the Server.
- Manages connections and matchmaking.

| ServerMain  |  |                   |
|---|--|-------------------|
|    | getInstance()  | ServerMain        |
|    | main(String[])   | void              |
|    | ◦ setup()  | void              |
|    | ◦ untrackGame(GameEngine)  | void              |
|    | ◦ addPlayer(VirtualView)   | void              |
|    | login(VirtualView)   | boolean           |
|    | canResume(String)  | boolean           |
|    | resume(VirtualView)  | boolean           |
|    | ◦ removeSuspendedPlayers()   | void              |
|    | getPlayers()   | List<VirtualView> |
|    | ◦ initializeLogger()   | void              |
|  | ◦ loadConfig()   | Properties        |
|  |  manageInput()        | void              |
|  |  refreshConnections() | void              |
|  | ◦ matchmaking()  | void              |
|  | getAlreadyConnected()  | String            |



# controller.GameEngine

- The class responsible for running a game.
- Is instantiated and run by ServerMain.



# controller.TurnManager





- The class responsible for running a turn.
- Handles the exchange of messages with the user.

| TurnManager                                |  |               |
|--|--|---------------|
| runTurn()                                  |  | void          |
| joinBoard(Player, int, boolean)            |  | void          |
| executeAction()                            |  | boolean       |
| executeActualAction(Action)                |  | void          |
| handleUsingPowerUp()                       |  | boolean       |
| usePowerUp()                               |  | void          |
| handleMoving(Action)                       |  | void          |
| handleCollecting()                         |  | void          |
| handleShooting()                           |  | void          |
| applyFireMode(FireMode)                    |  | void          |
| reload(int)                                |  | boolean       |
| reloadMandatory()                          |  | void          |
| handleTargetingScope(Player, List<Player>) |  | boolean       |
| askTargetsForGrenade()                     |  | void          |
| handleTagbackGrenade(Player)               |  | boolean       |
| handleDeaths()                             |  | void          |
| replaceWeapons()                           |  | void          |
| replaceAmmoTiles()                         |  | void          |
| getDamagesList()                           |  | List<Integer> |
| updateDead()                               |  | void          |
| askConfirmation(String)                    |  | boolean       |
| askConfirmation(String, Player)            |  | boolean       |
| resetJoinBoard(Player, boolean)            |  | void          |
| resetPowerUp()                             |  | void          |
| resetAction()                              |  | void          |
| toStringList(List)                         |  | List<String>  |
| toUserStringList(List<List<Player>>)       |  | List<String>  |
| updateAndSendModel()                       |  | void          |
| updateAndNotifyAll()                       |  | void          |
| restoreAndNotify()                         |  | void          |
| getVirtualView(Player)                     |  | VirtualView   |
| getDead()                                  |  | List<Integer> |
| handlePayment(AmmoPack)                    |  | void          |
| mandatoryConversion(Color)                 |  | void          |
| setDead(List<Integer>)                     |  | void          |

## controller.StatusSaver

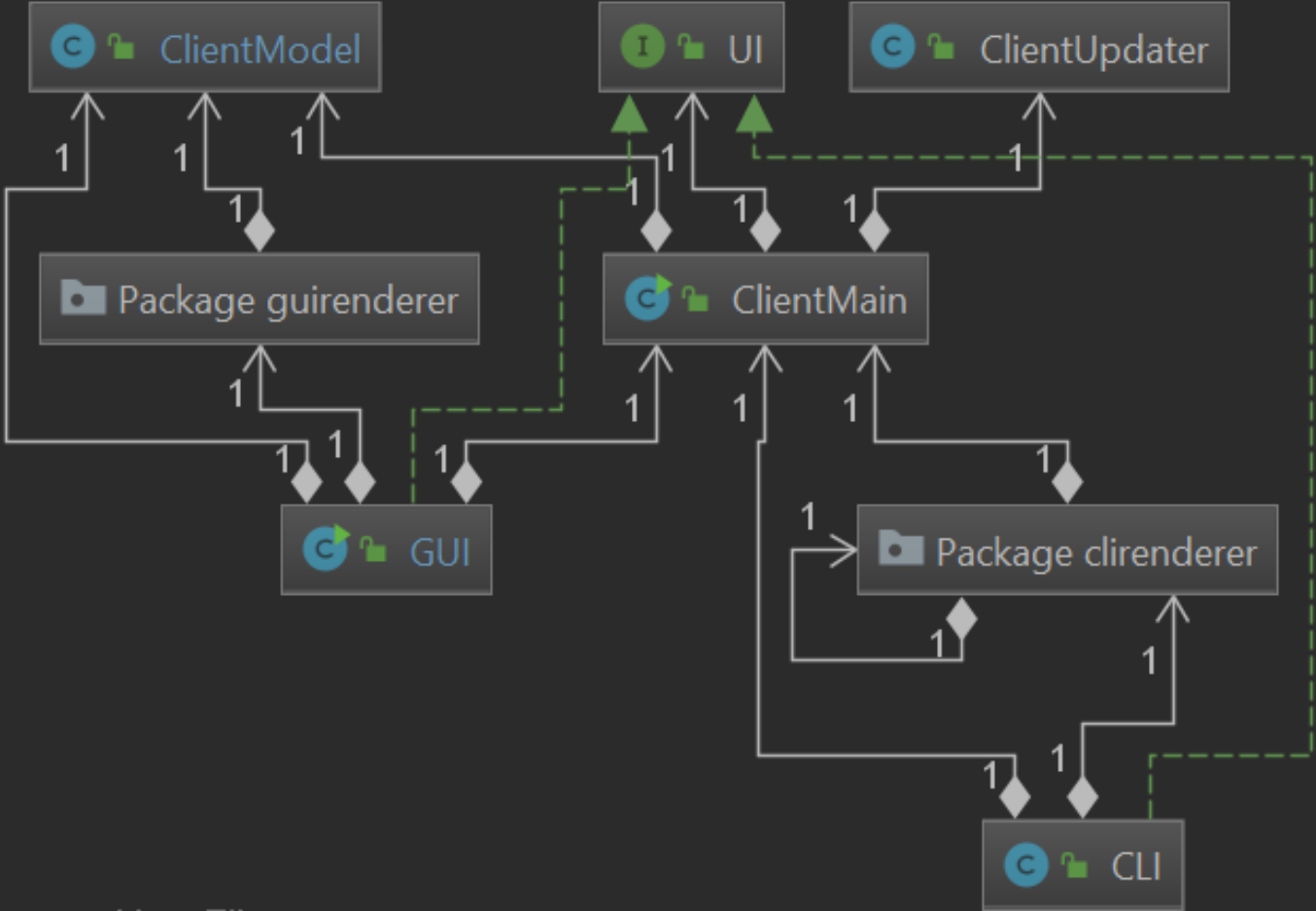
- Supports the TurnManager allowing it to save checkpoints in order to make possible for the player to reset his actions.

### StatusSaver

|   |                       |      |
|---|-----------------------|------|
|  | ◦ updateCheckpoint()  | void |
|  | ◦ updatePowerups()    | void |
|  | ◦ restoreCheckpoint() | void |
|  | ◦ restorePowerUps()   | void |



























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view



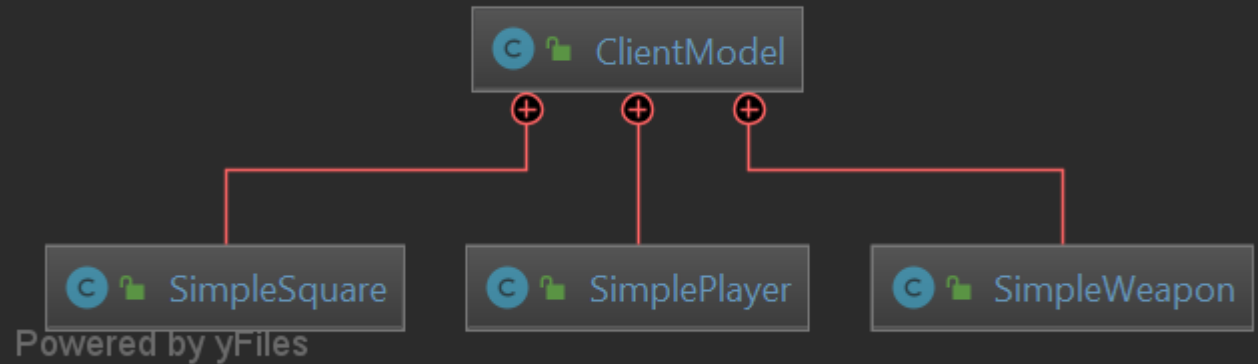
## view.ClientMain

- The class containing the main() method of the Server.

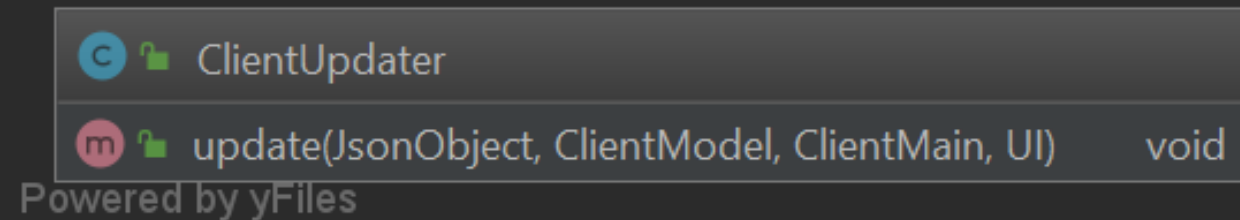
| ClientMain  |  |             |
|---|--|-------------|
|    |  main(String[])                       | void        |
|    |  initializeLogger()                   | void        |
|    |  loadConfig(String[])                 | Properties  |
|    |  setup(String[])                      | void        |
|    |  choose(String, String, List<String>) | int         |
|    |  display(String)                      | void        |
|    |  getInput(String, int)                | String      |
|    |  update(JsonObject)                   | void        |
|    |  getClientModel()                     | ClientModel |
|    |  setClientModel(ClientModel)          | void        |
|  |  showSuspension()                   | void        |
|  |  showDisconnection()                | void        |
|  |  showEnd(String)                    | void        |

# view.ClientModel & view.ClientUpdater

Contains a simplified version  
of the model.  
Contains three inner classes.

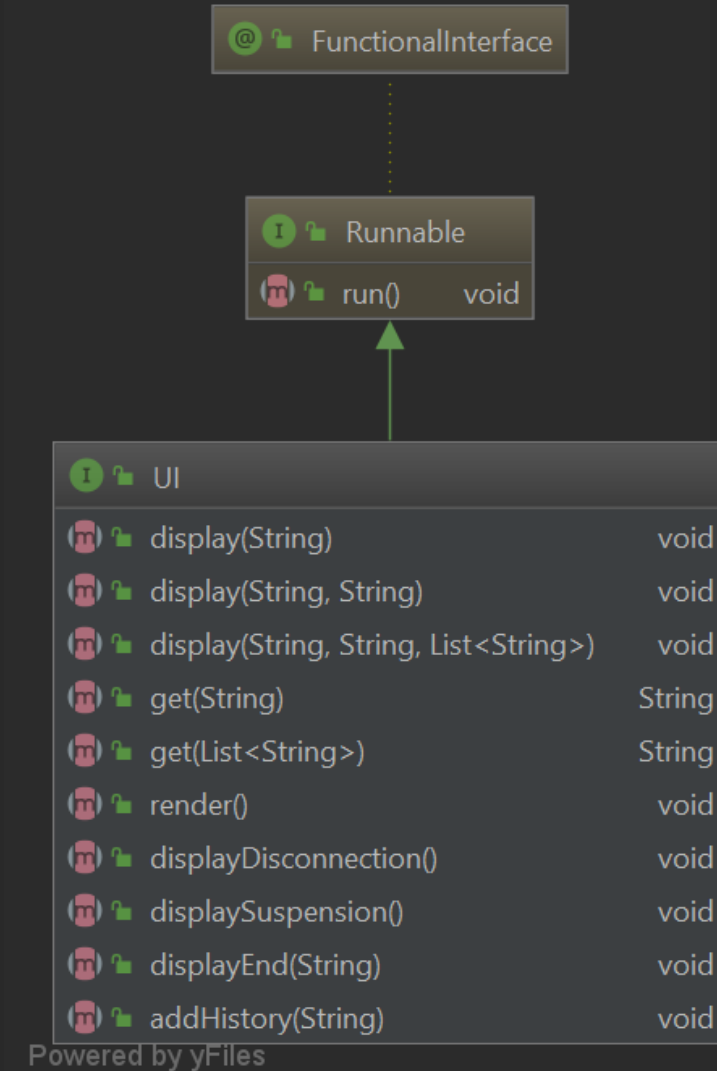


Updates the ClientModel,  
depending on the type of  
JsonObject it receives.



view.UI

- Interface for user interface and for managing client's input/output.
- Is implemented by CLI, GUI.



# network



Package client



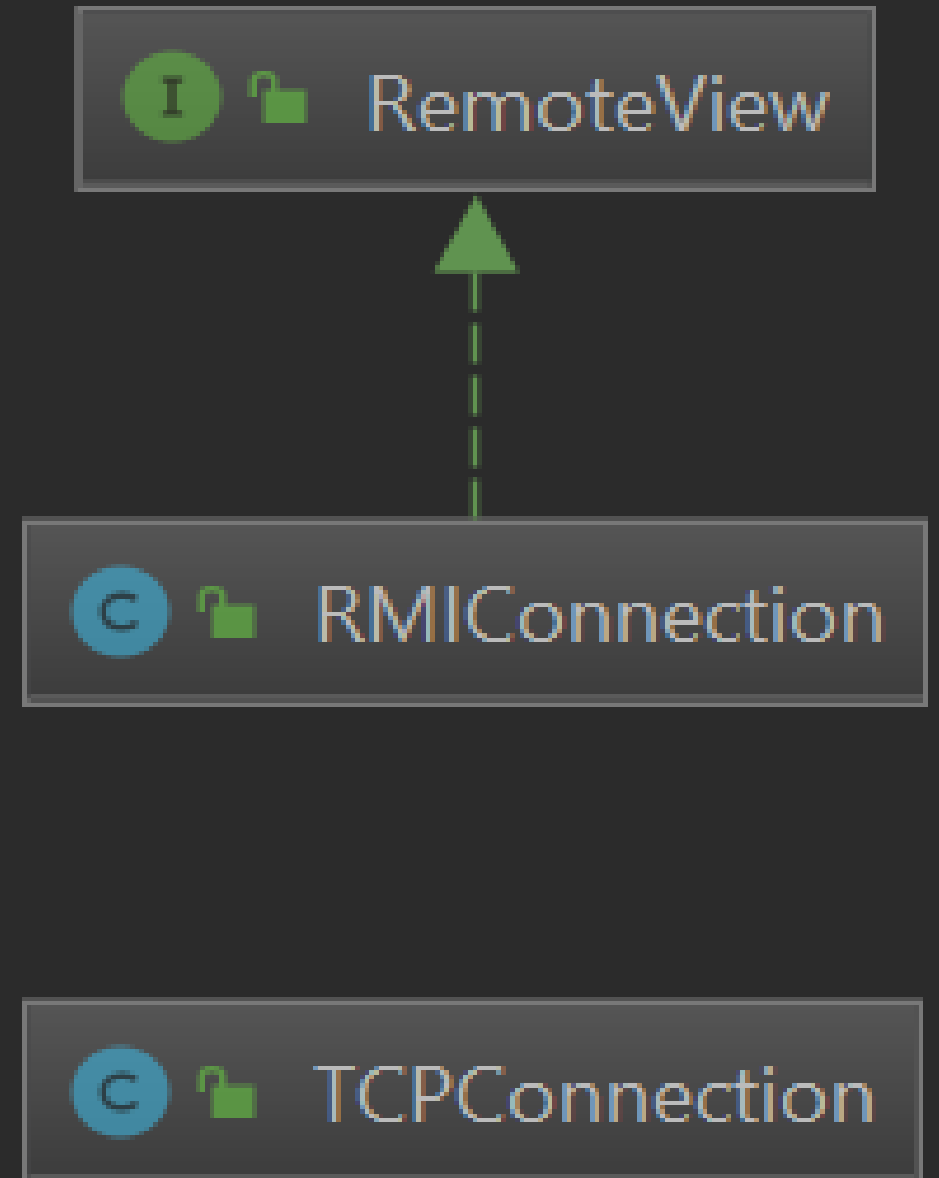
Package server

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# network.client

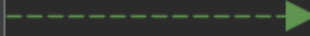
- Two classes for two different types of connection: RMI and TCP.
- RMIConnection implements the interface RemoteView.



# network.client

| C RMIConnection |                                      |        |
|-----------------|--------------------------------------|--------|
| m               | run()                                | void   |
| m               | choose(String, String, List<String>) | int    |
| m               | display(String)                      | void   |
| m               | getInput(String, int)                | String |
| m               | ping()                               | void   |
| m               | update(String)                       | void   |
| m               | shutdown()                           | void   |
| m               | showSuspension()                     | void   |
| m               | showEnd(String)                      | void   |

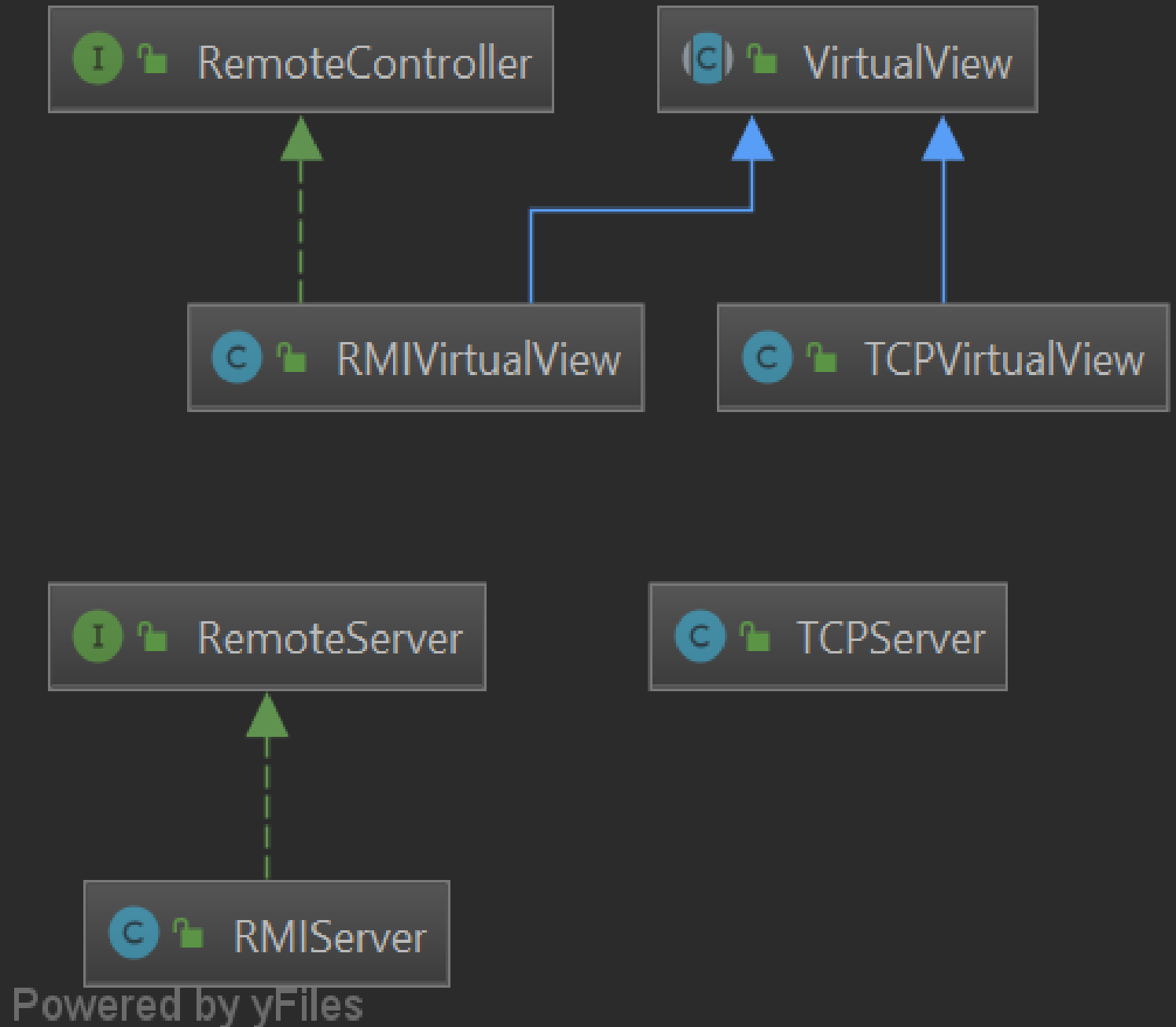
| I RemoteView |                                      |        |
|--------------|--------------------------------------|--------|
| m            | choose(String, String, List<String>) | int    |
| m            | display(String)                      | void   |
| m            | getInput(String, int)                | String |
| m            | ping()                               | void   |
| m            | update(String)                       | void   |
| m            | showSuspension()                     | void   |
| m            | showEnd(String)                      | void   |



| C TCPConnection |                           |        |
|-----------------|---------------------------|--------|
| m               | run()                     | void   |
| m               | handleRequest(JsonObject) | void   |
| m               | send(String)              | void   |
| m               | receive()                 | String |
| m               | shutdown()                | void   |

# network.server

- A VirtualView allows the Server to communicate with the Client.
- Depending on the user choice, for every connection the Server can implement a TCPVirtualView or an RMIVirtualView, taking advantage of a TCPServer class or of an RMIServer class.



# network.server

| TCPVirtualView                       |  |        |
|--------------------------------------|--|--------|
| run()                                |  | void   |
| refresh()                            |  | void   |
| shutdown()                           |  | void   |
| showSuspension()                     |  | void   |
| showEnd(String)                      |  | void   |
| choose(String, String, List<?>)      |  | void   |
| choose(String, String, List<?>, int) |  | void   |
| chooseNow(String, String, List<?>)   |  | int    |
| display(String)                      |  | void   |
| getInputNow(String, int)             |  | String |
| update(JsonObject)                   |  | void   |
| receive()                            |  | String |
| send(JsonObject)                     |  | void   |

| TCPServer  |  |      |
|------------|--|------|
| run()      |  | void |
| getPort()  |  | int  |
| shutdown() |  | void |

| VirtualView                          |  |            |
|--------------------------------------|--|------------|
| run()                                |  | void       |
| getName()                            |  | String     |
| getBattlecry()                       |  | String     |
| getGame()                            |  | GameEngine |
| setGame(GameEngine)                  |  | void       |
| getModel()                           |  | Player     |
| isSuspended()                        |  | boolean    |
| setPlayer(Player)                    |  | void       |
| isJustSuspended()                    |  | boolean    |
| setJustSuspended(boolean)            |  | void       |
| setSuspended(boolean)                |  | void       |
| setName(String)                      |  | void       |
| refresh()                            |  | void       |
| shutdown()                           |  | void       |
| showSuspension()                     |  | void       |
| showEnd(String)                      |  | void       |
| suspend()                            |  | void       |
| choose(String, String, List<?>)      |  | void       |
| choose(String, String, List<?>, int) |  | void       |
| chooseNow(String, String, List<?>)   |  | int        |
| display(String)                      |  | void       |
| getInputNow(String, int)             |  | String     |
| update(JsonObject)                   |  | void       |
| notifyObservers(String)              |  | void       |
| toString()                           |  | String     |

| RMIVirtualView                       |  |        |
|--------------------------------------|--|--------|
| refresh()                            |  | void   |
| shutdown()                           |  | void   |
| ping()                               |  | void   |
| showSuspension()                     |  | void   |
| showEnd(String)                      |  | void   |
| choose(String, String, List<?>)      |  | void   |
| choose(String, String, List<?>, int) |  | void   |
| chooseNow(String, String, List<?>)   |  | int    |
| display(String)                      |  | void   |
| getInputNow(String, int)             |  | String |
| update(JsonObject)                   |  | void   |

| RemoteController |  |      |
|------------------|--|------|
| ping()           |  | void |

| RemoteServer               |  |        |
|----------------------------|--|--------|
| getVirtualView(RemoteView) |  | String |

| RMIServer                  |  |        |
|----------------------------|--|--------|
| setup()                    |  | void   |
| getVirtualView(RemoteView) |  | String |
| shutdown()                 |  | void   |

# COMPREHENSIVE DIAGRAM

# Methods summary: model.board

| Player                                |  |               |
|---------------------------------------|--|---------------|
| sufferDamage(int, Player)             |  | void          |
| sufferDamageNoMarksExtra(int, Player) |  | void          |
| addDamages(int, Player)               |  | void          |
| addMarks(int, Player)                 |  | void          |
| addWeapon(Weapon)                     |  | void          |
| addAmmoPack(AmmoPack)                 |  | void          |
| collect(Card)                         |  | boolean       |
| drawPowerUp()                         |  | void          |
| discardWeapon(Card)                   |  | void          |
| discardPowerUp(Card)                  |  | void          |
| hasUsableTeleporterOrNewton()         |  | boolean       |
| hasUsableTagbackGrenade()             |  | boolean       |
| hasUsableTargetingScope()             |  | boolean       |
| canPay(AmmoPack)                      |  | boolean       |
| useAmmo(AmmoPack)                     |  | void          |
| getReloadableWeapons()                |  | List<Weapon>  |
| getLoadedWeapons()                    |  | List<Weapon>  |
| getAvailableWeapons()                 |  | List<Weapon>  |
| getPowerUps(PowerUpName)              |  | List<PowerUp> |
| getPowerUps(Color)                    |  | List<PowerUp> |
| addMainTarget(Player)                 |  | void          |
| addMainTargets(List<Player>)          |  | void          |
| addOptionalTarget(Player)             |  | void          |
| addOptionalTargets(List<Player>)      |  | void          |
| updateAwards()                        |  | void          |
| rewardKillers()                       |  | void          |
| addPoints(int)                        |  | void          |
| refreshActionList()                   |  | void          |
| getShootingSquares(int, List<Weapon>) |  | List<Square>  |
| getAvailableActions()                 |  | List<Action>  |
| removeShootingAction(List<Action>)    |  | List<Action>  |
| removeCollectingAction(List<Action>)  |  | List<Action>  |
| getCollectibleWeapons(WeaponSquare)   |  | List<Weapon>  |
| getColor()                            |  | String        |
| toString()                            |  | String        |
| userToString()                        |  | String        |
| equals(Object)                        |  | boolean       |
| hashCode()                            |  | int           |

| Square                 |  |              |
|------------------------|--|--------------|
| getId()                |  | int          |
| getRoomId()            |  | int          |
| getRow()               |  | int          |
| getColumn()            |  | int          |
| getColor()             |  | Color        |
| getPlayers()           |  | List<Player> |
| getBoard()             |  | Board        |
| containsPlayer(Player) |  | boolean      |
| addPlayer(Player)      |  | void         |
| removePlayer(Player)   |  | void         |
| removeCard(Card)       |  | Card         |
| addAllCards()          |  | void         |
| isEmpty()              |  | boolean      |
| equals(Object)         |  | boolean      |
| hashCode()             |  | int          |
| toString()             |  | String       |

| AmmoSquare       |  |          |
|------------------|--|----------|
| isEmpty()        |  | boolean  |
| getAmmoTile()    |  | AmmoTile |
| removeCard(Card) |  | Card     |
| addAllCards()    |  | void     |
| hasAmmoTile()    |  | boolean  |
| equals(Object)   |  | boolean  |
| hashCode()       |  | int      |

| WeaponSquare             |  |              |
|--------------------------|--|--------------|
| setWeapons(List<Weapon>) |  | void         |
| isEmpty()                |  | boolean      |
| getWeapons()             |  | List<Weapon> |
| removeCard(Card)         |  | Card         |
| addAllCards()            |  | void         |
| addCard()                |  | void         |
| addCard(Weapon)          |  | void         |
| equals(Object)           |  | boolean      |
| hashCode()               |  | int          |

| Board  |  |                  |
|--|--|------------------|
| getPlayersInside(Square)                         |  | List<Player>     |
| getAdjacent(Square)                              |  | List<Square>     |
| getReachable(Square, int)                        |  | List<Square>     |
| getVisible(Square)                               |  | List<Square>     |
| getSquaresInRoom(int)                            |  | List<Square>     |
| getSquaresInLine(Square, Direction)              |  | List<Square>     |
| getSquaresInLineIgnoringWalls(Square, Direction) |  | List<Square>     |
| getDistance(Square, Square)                      |  | int              |
| inLineTop(int, int, int, int)                    |  | boolean          |
| inLineDown(int, int, int, int)                   |  | boolean          |
| inLineLeft(int, int, int, int)                   |  | boolean          |
| inLineRight(int, int, int, int)                  |  | boolean          |
| sort(List<Player>, List<Player>)                 |  | void             |
| getAmmoSquares()                                 |  | List<AmmoSquare> |
| registerObserver(VirtualView)                    |  | void             |
| notifyObservers()                                |  | void             |
| notifyObserver(VirtualView)                      |  | void             |
| addToUpdateQueue(JsonObject)                     |  | void             |
| addToUpdateQueue(JsonObject, VirtualView)        |  | void             |
| revertUpdates(VirtualView)                       |  | void             |

| KillShotTrack                         |  |              |
|---------------------------------------|--|--------------|
| getSkullsLeft()                       |  | int          |
| getKillers()                          |  | List<Player> |
| removeSkulls(int)                     |  | void         |
| registerKill(Player, Player, boolean) |  | void         |
| rewardKillers()                       |  | void         |

| Deck                   |  |            |
|------------------------|--|------------|
| getDrawable()          |  | List<Card> |
| getDiscarded()         |  | List<Card> |
| addCard(Card)          |  | void       |
| addDiscardedCard(Card) |  | void       |
| drawCard()             |  | Card       |
| shuffleDeck()          |  | void       |
| regenerate()           |  | void       |

# Attributes summary: model.board

| Player           |                 |
|------------------|-----------------|
| id               | int             |
| name             | HeroName        |
| username         | String          |
| status           | Status          |
| points           | int             |
| dead             | boolean         |
| flipped          | boolean         |
| damages          | List<Player>    |
| marks            | List<Player>    |
| position         | Square          |
| previousPosition | Square          |
| board            | Board           |
| weaponList       | List<Weapon>    |
| powerUpList      | List<PowerUp>   |
| ammoPack         | AmmoPack        |
| actionList       | List<Action>    |
| mainTargets      | List<Player>    |
| optionalTargets  | List<Player>    |
| deaths           | int             |
| pointsToGive     | int             |
| justDamaged      | boolean         |
| overkilled       | boolean         |
| inGame           | boolean         |
| j                | ModelDataReader |

| Action      |         |
|-------------|---------|
| steps       | int     |
| collect     | boolean |
| shoot       | boolean |
| reload      | boolean |
| MOVE_UP_TO  | String  |
| SQUARES     | String  |
| COLLECT_TAG | String  |
| RELOAD_TAG  | String  |
| SHOOT_TAG   | String  |

| Square                  |              |
|-------------------------|--------------|
| board                   | Board        |
| id                      | int          |
| roomId                  | int          |
| row                     | int          |
| column                  | int          |
| color                   | Color        |
| players                 | List<Player> |
| MIN_SQUARE_ID           | int          |
| MAX_SQUARE_ID           | int          |
| MAX_ROOM_ID             | int          |
| MIN_SQUARE_ROW_INDEX    | int          |
| MIN_SQUARE_COLUMN_INDEX | int          |

| AmmoSquare |          |
|------------|----------|
| ammoTile   | AmmoTile |
| LOGGER     | Logger   |

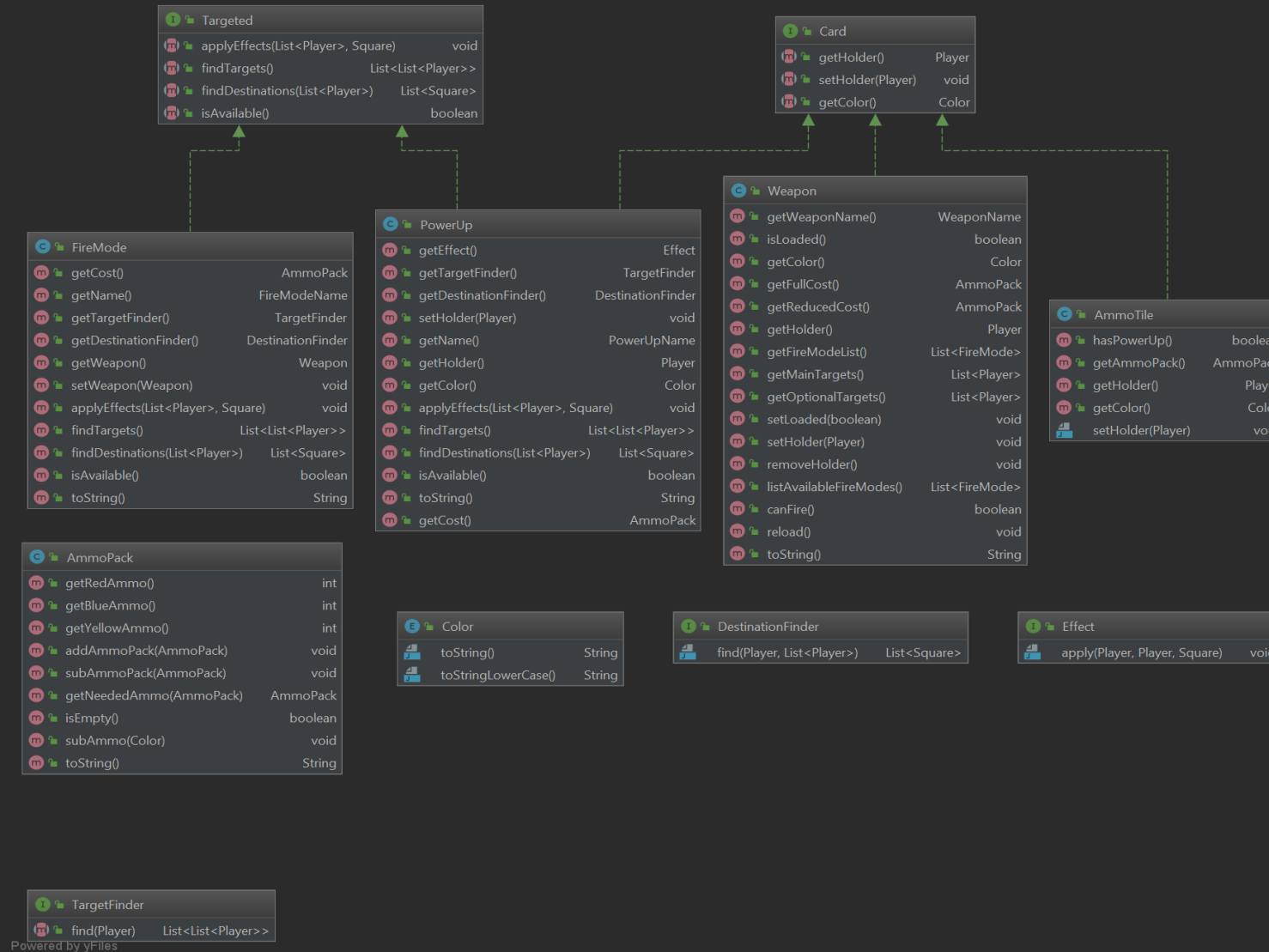
| WeaponSquare          |              |
|-----------------------|--------------|
| weapons               | List<Weapon> |
| MAX_WEAPONS_ON_SQUARE | int          |

| Deck             |            |
|------------------|------------|
| drawable         | List<Card> |
| discarded        | List<Card> |
| DRAWN_CARD_INDEX | int        |

| Board         |                                    |
|---------------|------------------------------------|
| id            | int                                |
| map           | List<Square>                       |
| leftWalls     | boolean[]                          |
| topWalls      | boolean[]                          |
| spawnPoints   | List<WeaponSquare>                 |
| players       | List<Player>                       |
| currentPlayer | Player                             |
| weaponDeck    | Deck                               |
| powerUpDeck   | Deck                               |
| ammoDeck      | Deck                               |
| killShotTrack | KillShotTrack                      |
| observers     | List<VirtualView>                  |
| updates       | Map<VirtualView, List<JsonObject>> |
| reset         | boolean                            |

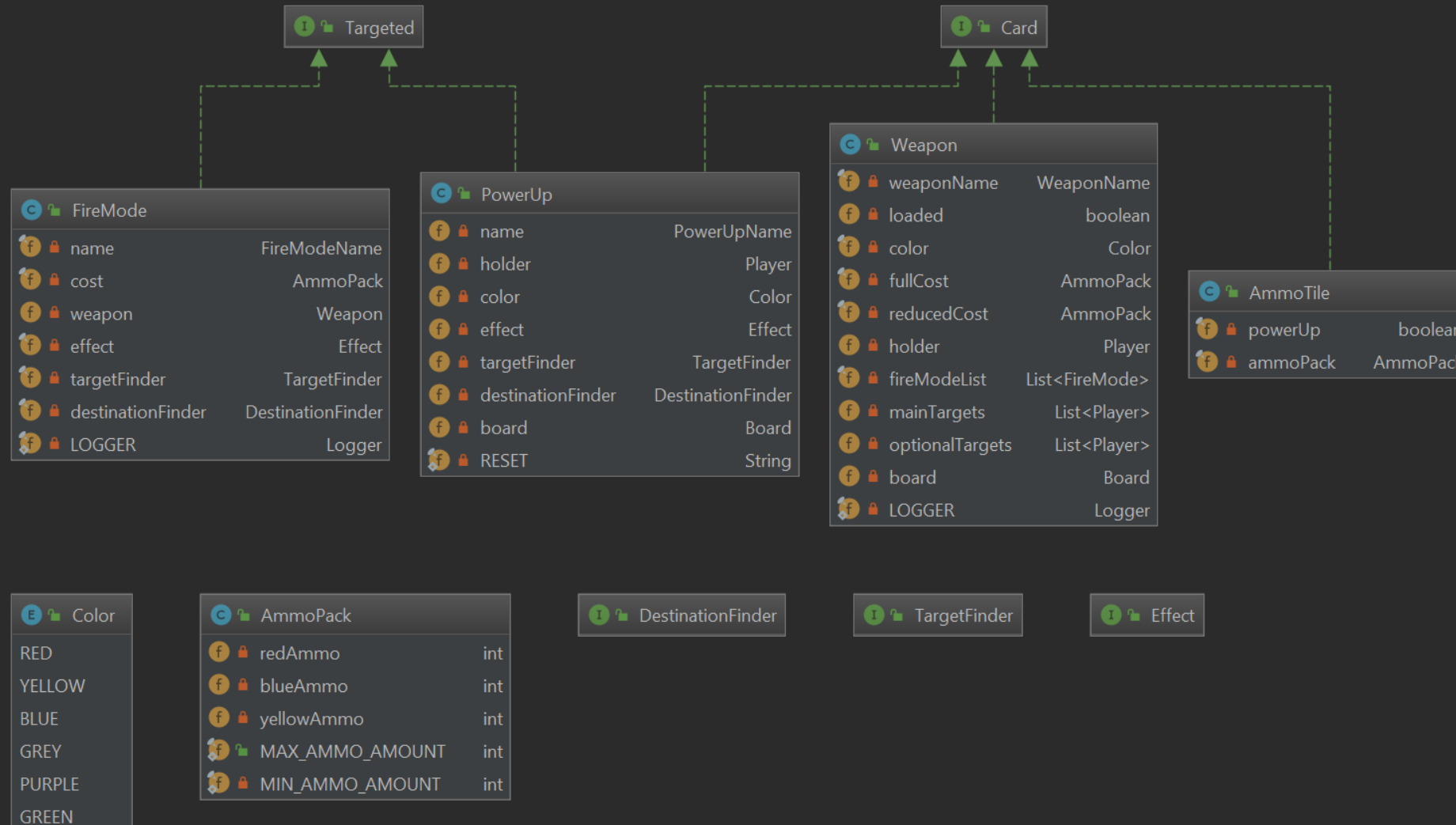
| KillShotTrack                     |              |
|-----------------------------------|--------------|
| skullsLeft                        | int          |
| killers                           | List<Player> |
| board                             | Board        |
| LOGGER                            | Logger       |
| MAX_POINTS_TO_GIVE_KILLSHOT_TRACK | int          |
| POINTS_TO_GIVE_STANDARD_DECREASE  | int          |
| POINTS_TO_GIVE_LAST_DECREASE      | int          |
| THRESHOLD_FOR_LAST_DECREASE       | int          |

# Methods summary: model.cards





# Attributes summary: model.cards



# Methods summary: controller

| TurnManager                                |               |
|--|---------------|
| runTurn()                                  | void          |
| joinBoard(Player, int, boolean)            | void          |
| executeAction()                            | boolean       |
| executeActualAction(Action)                | void          |
| handleUsingPowerUp()                       | boolean       |
| usePowerUp()                               | void          |
| handleMoving(Action)                       | void          |
| handleCollecting()                         | void          |
| handleShooting()                           | void          |
| applyFireMode(FireMode)                    | void          |
| reload(int)                                | boolean       |
| reloadMandatory()                          | void          |
| handleTargetingScope(Player, List<Player>) | boolean       |
| askTargetsForGrenade()                     | void          |
| handleTagbackGrenade(Player)               | boolean       |
| handleDeaths()                             | void          |
| replaceWeapons()                           | void          |
| replaceAmmoTiles()                         | void          |
| getDamagesList()                           | List<Integer> |
| updateDead()                               | void          |
| askConfirmation(String)                    | boolean       |
| askConfirmation(String, Player)            | boolean       |
| resetJoinBoard(Player, boolean)            | void          |
| resetPowerUp()                             | void          |
| resetAction()                              | void          |
| toStringList(List)                         | List<String>  |
| toUserStringList(List<List<Player>>)       | List<String>  |
| updateAndSendModel()                       | void          |
| updateAndNotifyAll()                       | void          |
| restoreAndNotify()                         | void          |
| getVirtualView(Player)                     | VirtualView   |
| getDead()                                  | List<Integer> |
| handlePayment(AmmoPack)                    | void          |
| mandatoryConversion(Color)                 | void          |
| setDead(List<Integer>)                     | void          |

| GameEngine                    |                          |
|-------------------------------|--------------------------|
| getPlayers()                  | List<VirtualView>        |
| getFrenzyActivator()          | int                      |
| isLastFrenzyPlayer()          | boolean                  |
| isFrenzy()                    | boolean                  |
| setPlayers(List<VirtualView>) | void                     |
| setCurrentPlayer(VirtualView) | void                     |
| run()                         | void                     |
| setup()                       | void                     |
| configureMap()                | void                     |
| configureKillShotTrack()      | void                     |
| configureFrenzyOption()       | void                     |
| configurePlayers()            | void                     |
| battleCry()                   | void                     |
| getNextPlayer()               | VirtualView              |
| resolve()                     | void                     |
| runTurn(boolean)              | void                     |
| changePlayer()                | void                     |
| manageGameEnd()               | void                     |
| gameOver()                    | void                     |
| showToLoser(int)              | void                     |
| addLeaderboard(String)        | String                   |
| waitShort(VirtualView, int)   | String                   |
| wait(VirtualView)             | String                   |
| hasAnswered(VirtualView)      | boolean                  |
| notify(VirtualView, String)   | void                     |
| getNotifications()            | Map<VirtualView, String> |
| checkForSuspension()          | void                     |
| simulateTillEndphase()        | void                     |
| tryResuming(VirtualView)      | boolean                  |
| allowPlayersToResume()        | void                     |
| loadParams()                  | void                     |
| simulationTillEndphaseSetup() | void                     |

| PowerUpFactory                    |         |
|-----------------------------------|---------|
| createPowerUp(PowerUpName, Color) | PowerUp |

| ServerMain               |                   |
|--------------------------|-------------------|
| getInstance()            | ServerMain        |
| main(String[])           | void              |
| setup()                  | void              |
| untrackGame(GameEngine)  | void              |
| addPlayer(VirtualView)   | void              |
| login(VirtualView)       | boolean           |
| canResume(String)        | boolean           |
| resume(VirtualView)      | boolean           |
| removeSuspendedPlayers() | void              |
| getPlayers()             | List<VirtualView> |
| initializeLogger()       | void              |
| loadConfig()             | Properties        |
| manageInput()            | void              |
| refreshConnections()     | void              |
| matchmaking()            | void              |
| getAlreadyConnected()    | String            |

| StatusSaver         |      |
|---------------------|------|
| updateCheckpoint()  | void |
| updatePowerups()    | void |
| restoreCheckpoint() | void |
| restorePowerUps()   | void |

| WeaponFactory                                     |                    |
|---|--------------------|
| createWeapon(WeaponName)                          | Weapon             |
| getWeaponTree(WeaponName)                         | JsonObject         |
| getColor(JsonObject)                              | Color              |
| getFullCost(JsonObject)                           | AmmoPack           |
| getReducedCost(AmmoPack, Color)                   | AmmoPack           |
| getFireModeName(String)                           | FireModeName       |
| getFireModeCost(JsonObject)                       | AmmoPack           |
| getTargetFinder(JsonObject)                       | TargetFinder       |
| getDestinationFinder(JsonObject)                  | DestinationFinder  |
| getEffect(JsonObject)                             | Effect             |
| createEffect(int, int)                            | Effect             |
| cartesian(List<List<Player>>, List<List<Player>>) | List<List<Player>> |

| ModelDataReader                   |            |
|-----------------------------------|------------|
| analyzer(String)                  | JsonObject |
| analyzer(String, String, int)     | JsonObject |
| getIntBC(String)                  | int        |
| getIntBC(String, String, int)     | int        |
| getBooleanBC(String, String, int) | boolean    |
| getInt(String)                    | int        |
| getInt(String, String, int)       | int        |
| getBoolean(String, String, int)   | boolean    |
| getColorBC(String, String, int)   | Color      |
| getColorBC(String)                | Color      |
| getInt(JsonObject, String)        | int        |
| getBoolean(JsonObject, String)    | boolean    |
| getColor(JsonObject, String)      | Color      |

| BoardConfigurer                    |       |
|------------------------------------|-------|
| configureMap(int)                  | Board |
| configurePlayerOptions(int, Board) | void  |
| configureDecks(Board)              | void  |
| setAmmoTilesAndWeapons(Board)      | void  |
| configureKillShotTrack(int, Board) | void  |
| simulateScenario()                 | Board |

| Timer         |         |
|---------------|---------|
| start()       | void    |
| stop()        | void    |
| reset()       | void    |
| update()      | void    |
| isRunning()   | boolean |
| isOver()      | boolean |
| pause()       | void    |
| resume()      | void    |
| getTimeLeft() | long    |

# Attributes summary: controller

| GameEngine         |                          |
|--------------------|--------------------------|
| players            | List<VirtualView>        |
| leaderboard        | List<VirtualView>        |
| currentPlayer      | VirtualView              |
| frenzyActivator    | int                      |
| board              | Board                    |
| killShotTrack      | KillShotTrack            |
| timer              | Timer                    |
| statusSaver        | StatusSaver              |
| gameOver           | boolean                  |
| frenzy             | boolean                  |
| lastFrenzyPlayer   | boolean                  |
| exitGame           | boolean                  |
| notifications      | Map<VirtualView, String> |
| resuming           | List<VirtualView>        |
| endphaseSimulation | boolean                  |
| turnDuration       | int                      |

| Timer    |         |
|----------|---------|
| over     | boolean |
| start    | long    |
| duration | long    |
| pausedAt | long    |
| running  | boolean |

| ServerMain          |                   |
|---------------------|-------------------|
| instance            | ServerMain        |
| players             | List<VirtualView> |
| waitingPlayers      | List<VirtualView> |
| currentGames        | List<GameEngine>  |
| tcpServer           | TCPServer         |
| rmiServer           | RMIServer         |
| timer               | Timer             |
| executor            | ExecutorService   |
| in                  | BufferedReader    |
| running             | boolean           |
| oldMessage          | String            |
| LOGGER              | Logger            |
| SLEEP_TIMEOUT       | int               |
| SERVER_LOG_FILENAME | String            |

| StatusSaver                |                     |
|----------------------------|---------------------|
| board                      | Board               |
| playersPositions           | List<Square>        |
| playersDamages             | List<List<Player>>  |
| playersMarks               | List<List<Player>>  |
| playersPowerups            | List<List<PowerUp>> |
| playersAmmoPacks           | List<AmmoPack>      |
| currentPlayerWeapons       | List<Weapon>        |
| currentPlayerLoadedWeapons | List<Boolean>       |
| squareWeapons              | List<List<Weapon>>  |
| LOGGER                     | Logger              |

| TurnManager             |                   |
|-------------------------|-------------------|
| board                   | Board             |
| statusSaver             | StatusSaver       |
| playerConnections       | List<VirtualView> |
| currentPlayerConnection | VirtualView       |
| currentPlayer           | Player            |
| dead                    | List<Integer>     |
| killShotTrack           | KillShotTrack     |
| gameEngine              | GameEngine        |
| timer                   | Timer             |
| frenzy                  | boolean           |
| actionsLeft             | int               |

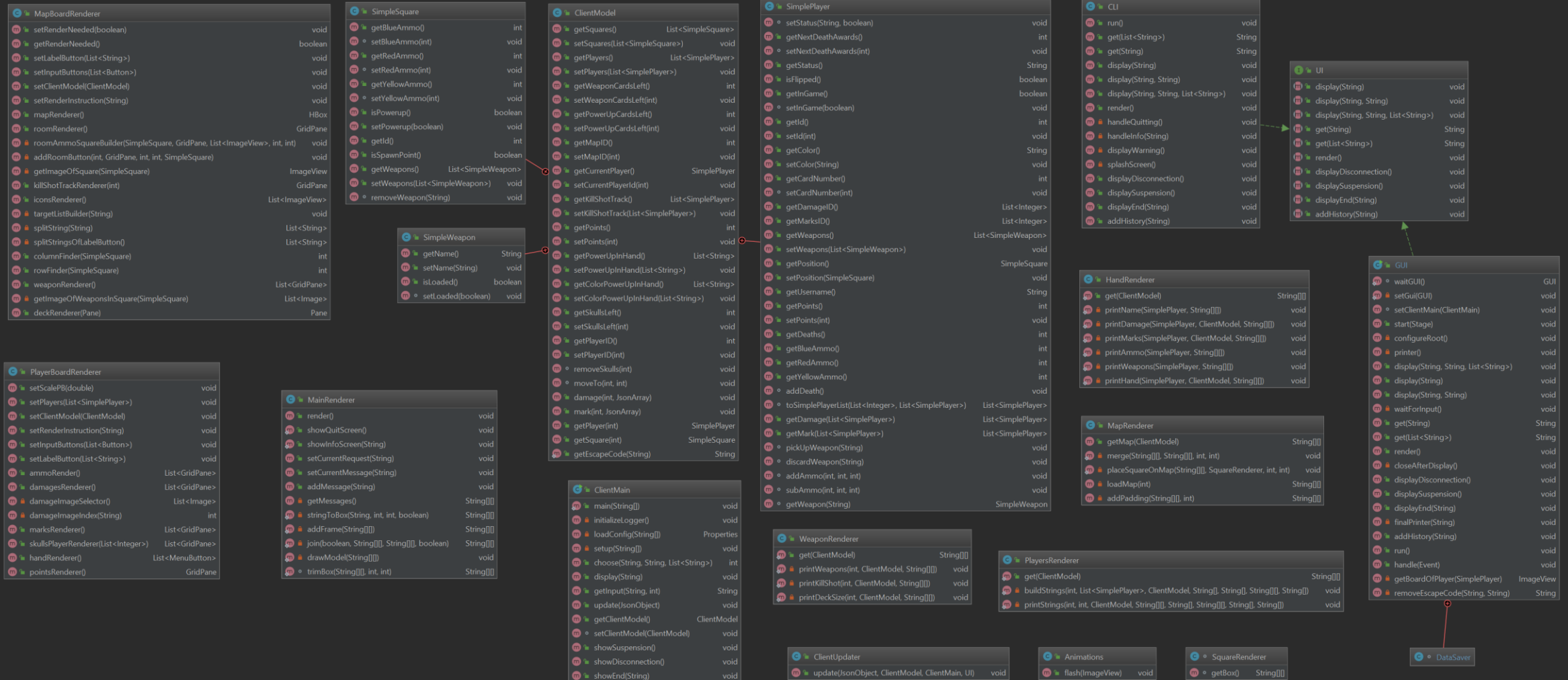
| ModelDataReader |            |
|-----------------|------------|
| LOGGER          | Logger     |
| parser          | JsonParser |
| boardConfFile   | String     |
| miscellaneous   | String     |
| DATA_NOT_FOUND  | String     |

| BoardConfigurer |                 |
|-----------------|-----------------|
| j               | ModelDataReader |
| BOARDS          | String          |
| AMMO_TILES      | String          |
| AMMO_SQUARE     | String          |
| WEAPON_SQUARE   | String          |
| ID              | String          |

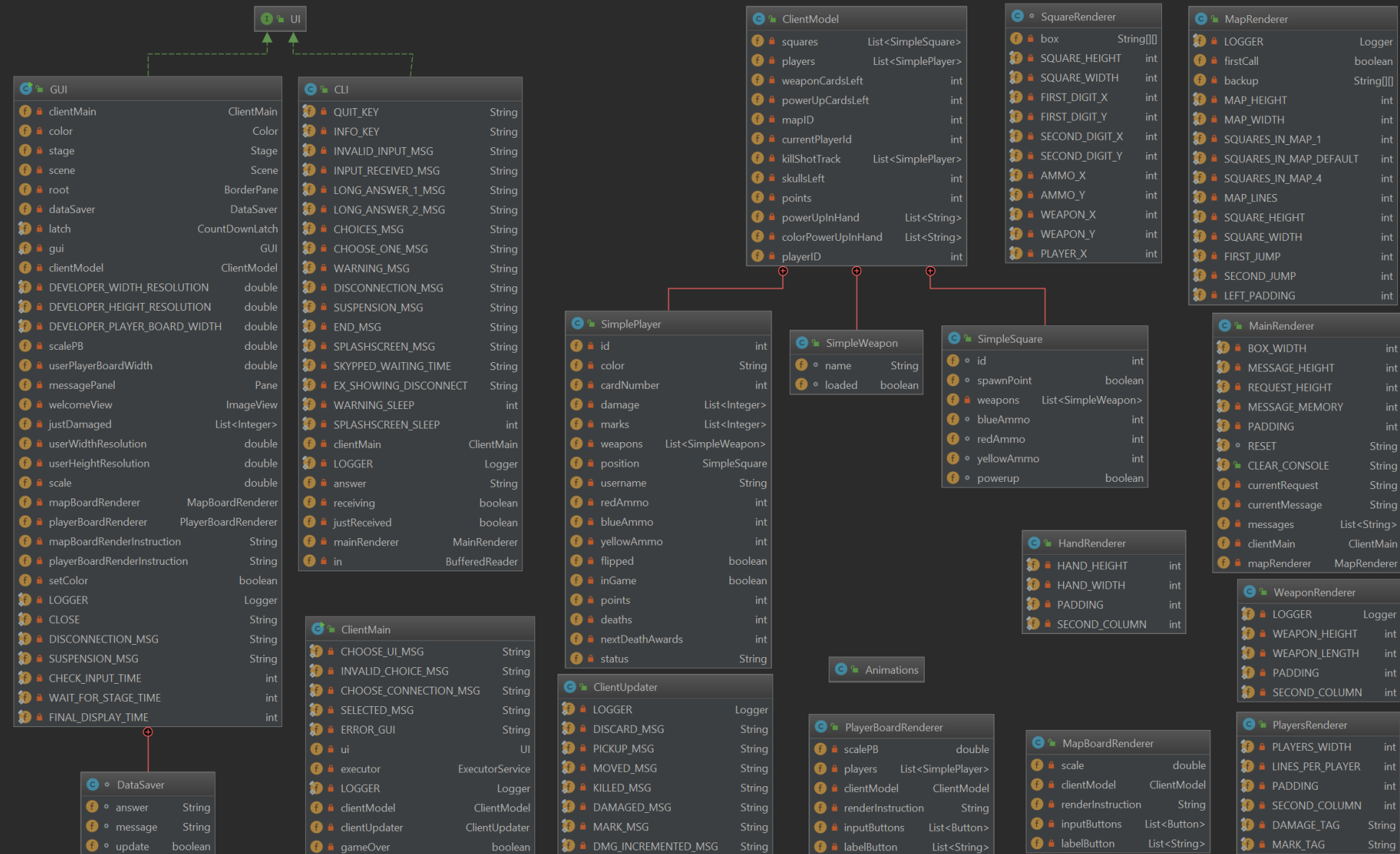
| PowerUpFactory        |                 |
|-----------------------|-----------------|
| board                 | Board           |
| j                     | ModelDataReader |
| TARGETING_SCOPE_DMG   | String          |
| NEWTON_MAX_DISTANCE   | String          |
| TAGBACK_GRENADE_MARKS | String          |

| WeaponFactory |       |
|---------------|-------|
| board         | Board |

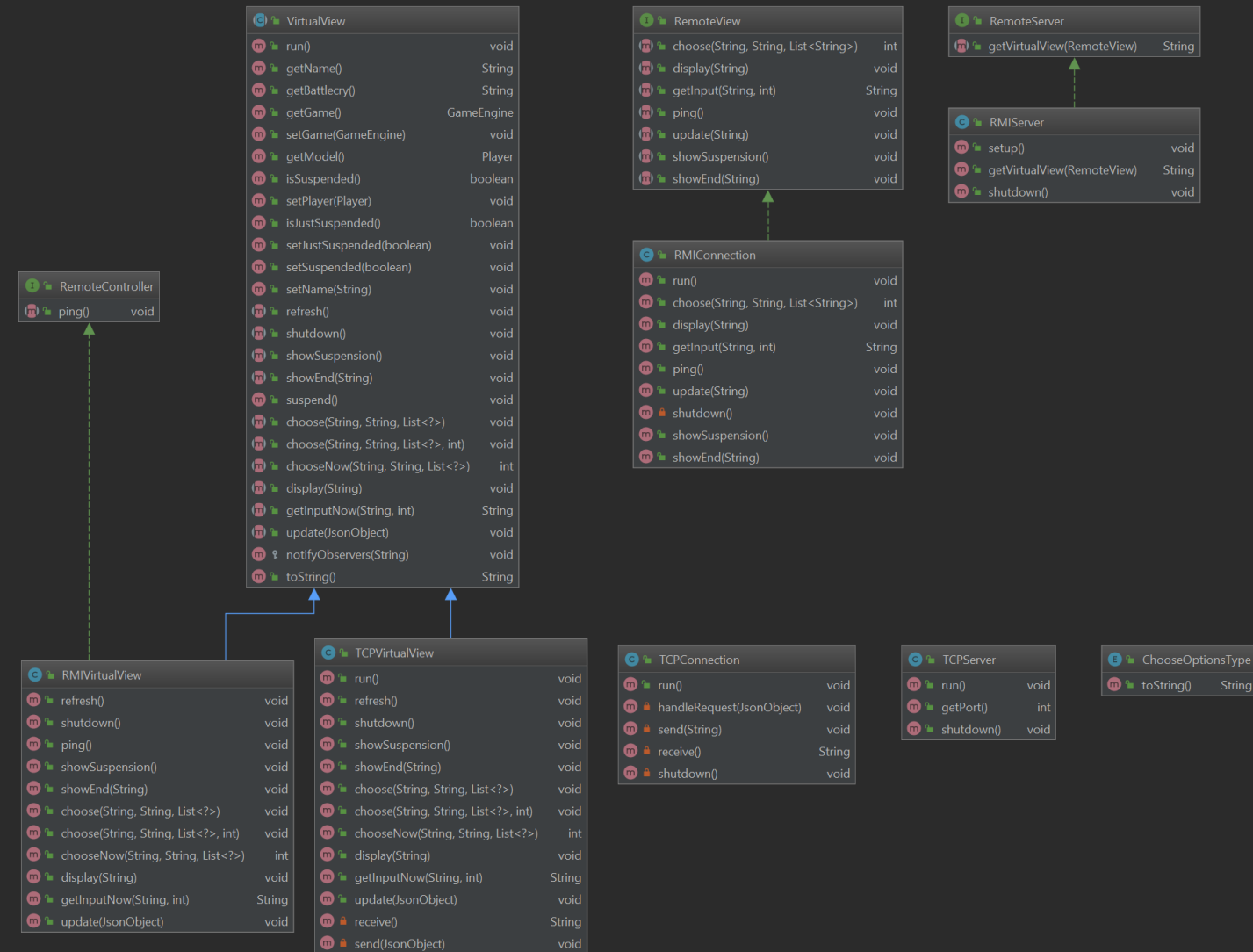
# Methods summary: view



# Attributes summary: view



# Methods summary: network



# Attributes summary: network

