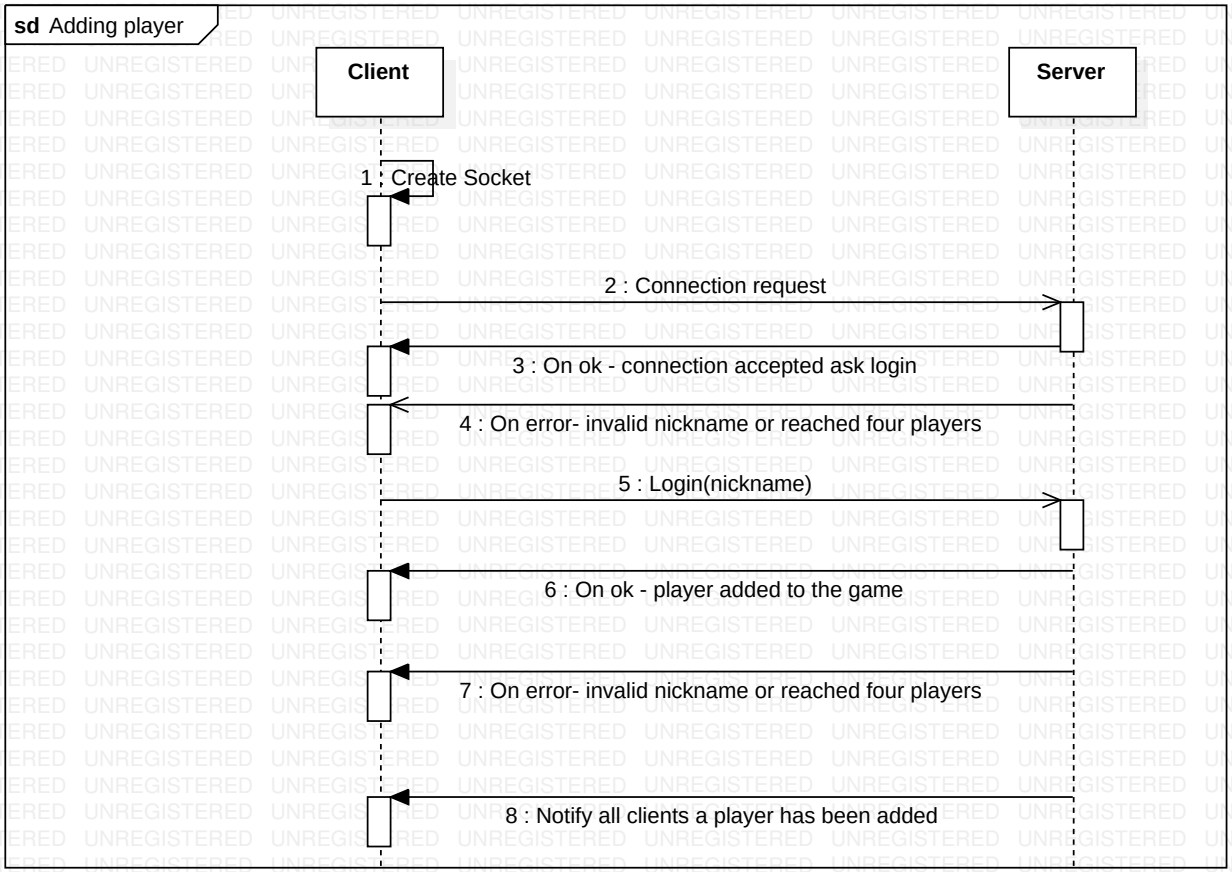
MessageClass:Message

Message

-messageType: String
-senderNickName: String
-messageContent: String
-warehouseConfiguration: Warehouse
-resourcesToDistribute: ResourceType[2]
-leaderCardPositions: int[2]
-choosableLeaderCards: LeaderCard[4]
-chosenLeaderCards: LeaderCard[2]
-actualCurrentPlayer: String
-levelsToSwitch: int[2]
-marketPosition: int[2]
-temporaryResources: HashMap <ResourceType,Integer>
-resourceToInsert: ResourceType
-quantityToInsert: int
-intoExtraDeposit: boolean
-newFaithPoints: int
-devolpmentCardConfiguration: DevelopmentCard [3]
-extraDepositConfiguration: ExtraDeposit[2]
-strongboxConfiguration: HashMap <ResourceType,Integer>
-payUsingExtraDeposit: int[2]
-remainingWhiteMarbles: int
-actionCardConfig: ActionCardStack
-deckgrid: Deckgid

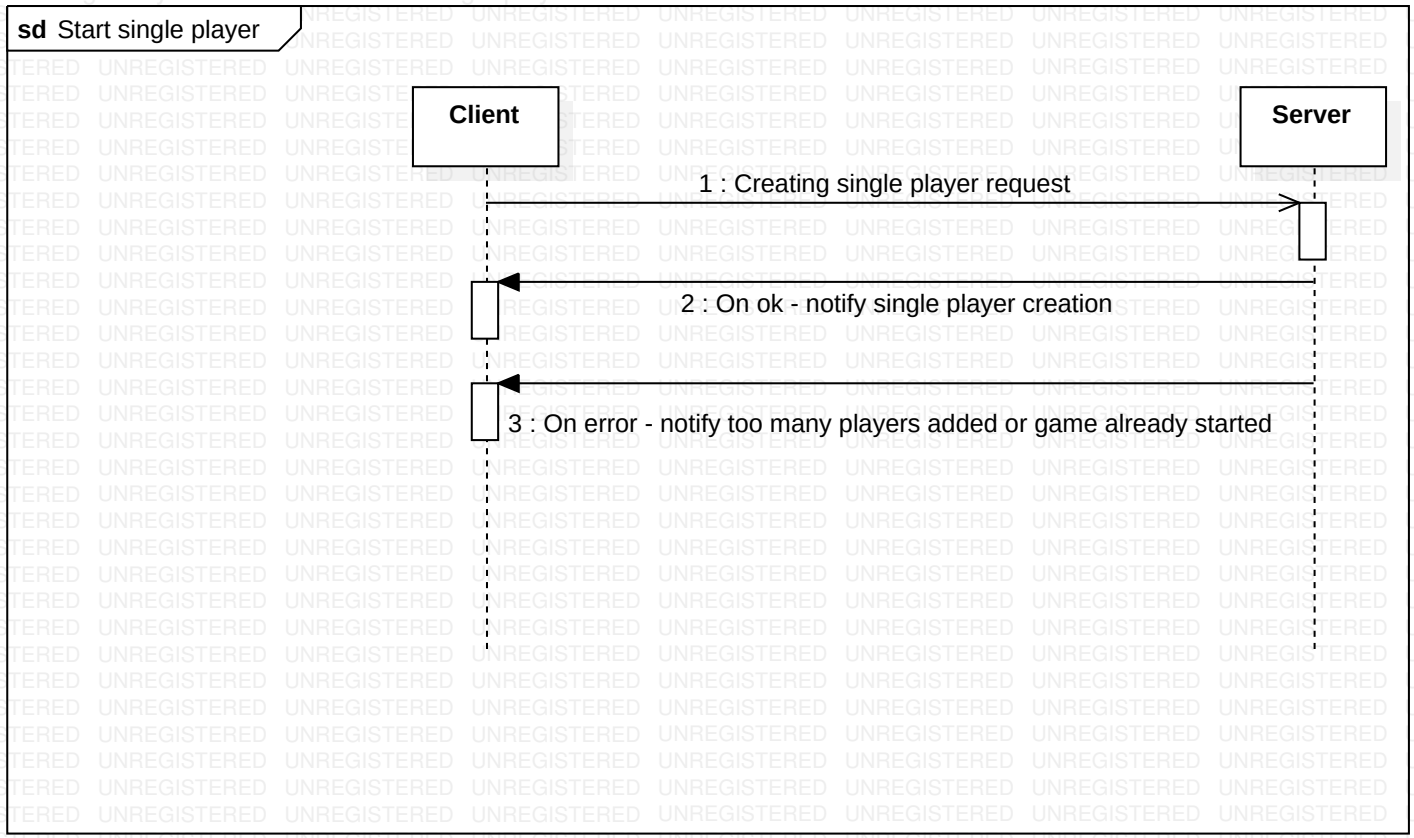
+getMessageType(): String
+getSenderNickname(): String
+getMessageContent(): String
+getWarehouseConfiguration(): Warehouse

NOTE GENERALI:
1: Prima di ogni interazioni ci sarà un "ping-pong" tra client e server per verificare che il client sia ancora connesso
2: Il protocollo si basa sulla classe Message dove ogni messaggio setterà solo alcuni attributi della classe. L'attributo fondamentale è il messageType, attraverso il quale il controller saprà leggere solo gli attributi necessari dell'oggetto Message e tradurlo in invocazioni sul model. Allo stesso modo la view tradurrà i messaggi che riceve in modifiche su quello che mostra all'utente.
3: Abbiamo deciso di comunicare tra client e server attraverso messaggi di tipo JSON, quindi sia controller che view avranno un parser che deserializzerà i messaggi JSON in un oggetto Message. Allo stesso modo avranno un metodo che serializzerà in messaggi JSON (per esempio per tradurre sulla view i click dell'utente).

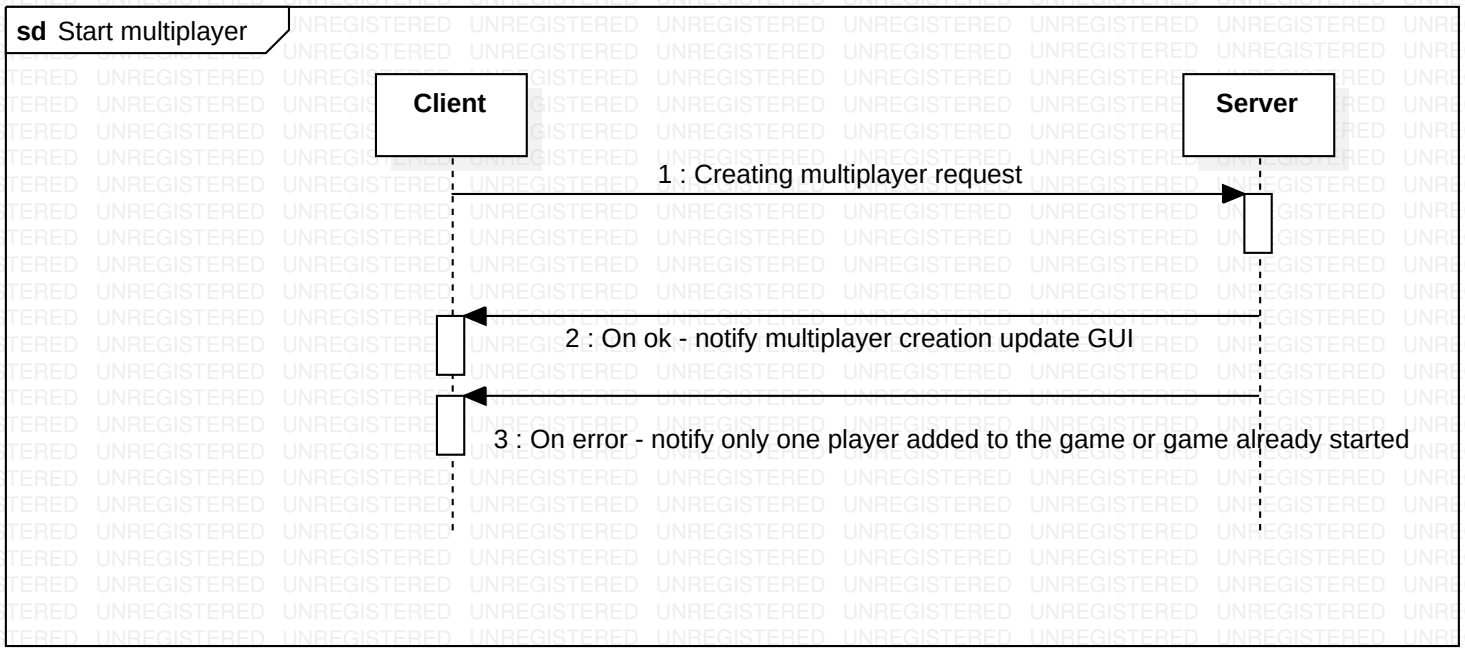


2: ["hostName", "portNumber"]
CONNECTION REPLY(SERVER)
3: {"messageType":"Simple message", "messageContent":"Connection accepted, please login with the nickname \n"}
4: {"messageType":"Simple message", "messageContent":"Connection refused, too many clients connected\n"}
LOGIN REQUEST(CLIENT)
5: {"messageType":"AddPlayer", "senderNickname":"Player's nickname"}
LOGIN REPLY(SERVER)
6: {"messageType":"Simple message", "messageContent":"Player added to the game\n"}
7: {"messageType":"Simple message", "messageContent":"Error: Your nickname is invalid or too many players have logged to the game\n"}

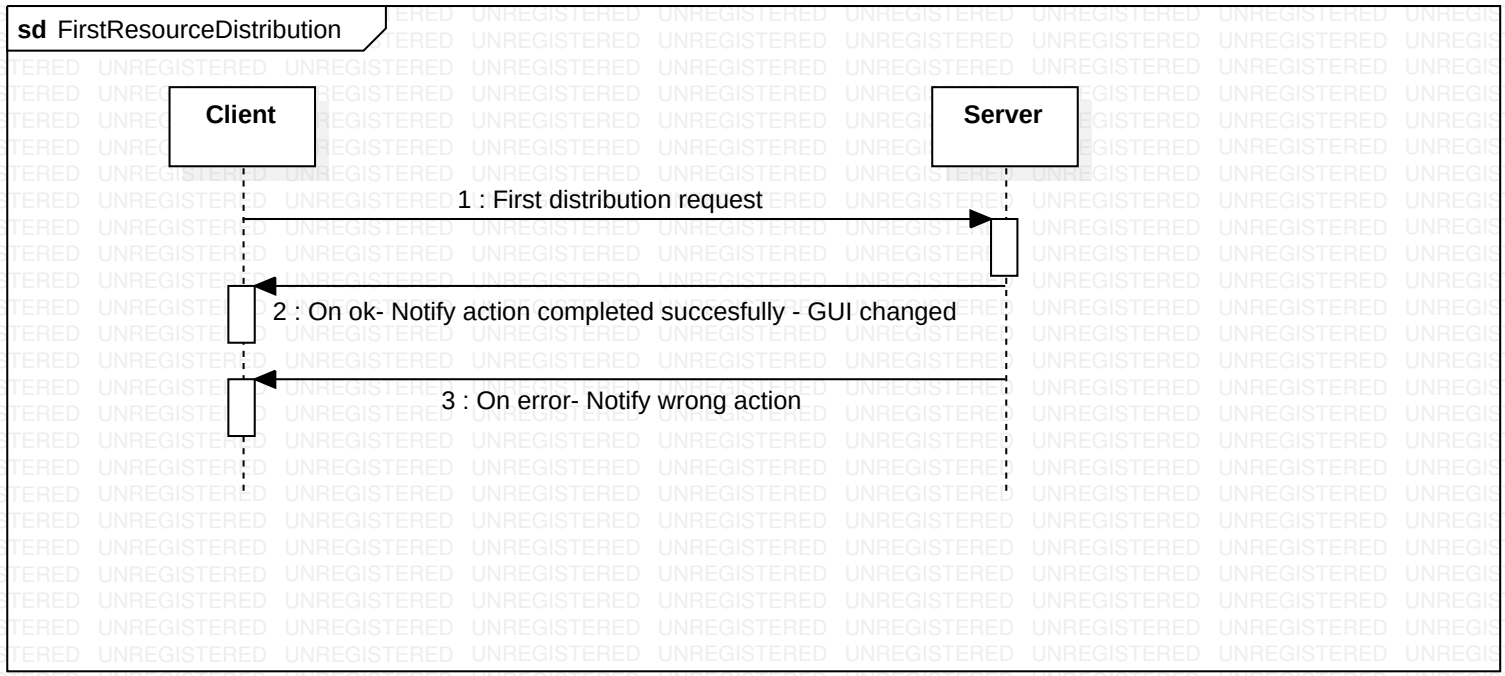
8:{"messageType":"AddPlayer", "senderNickname":"Player's nickname"}



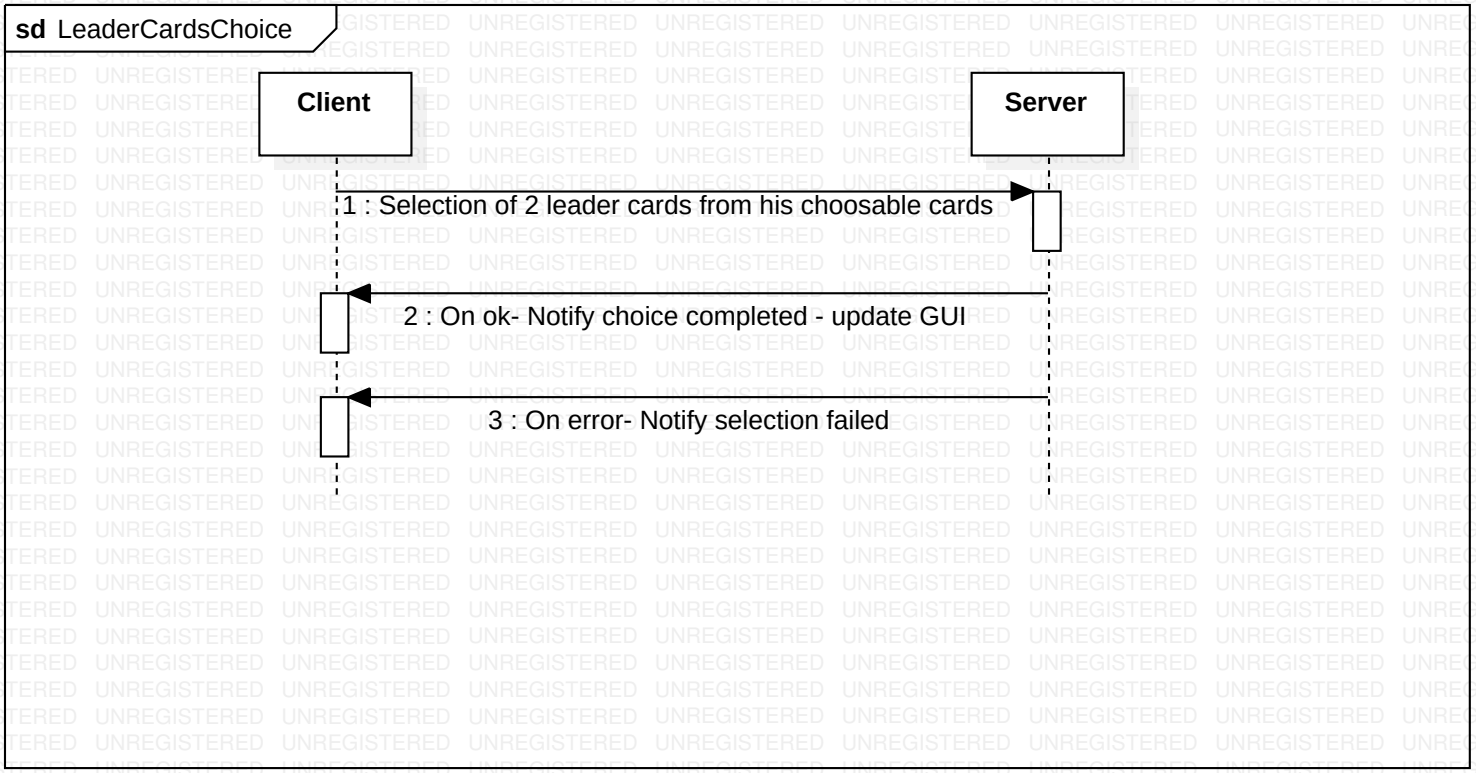
SINGLE PLAYER CREATION(CLIENT)
1: {"messageType" : "Start single player"}
SINGLE PLAYER CREATION REPLY(SERVER)
2: {"messageType":"Simple message", "messageContent":"Single player game started succesfully\n"}
3:{"messageType":"Simple message", "messageContent":"Error: Too many players added to the game or a game has already started\n"}



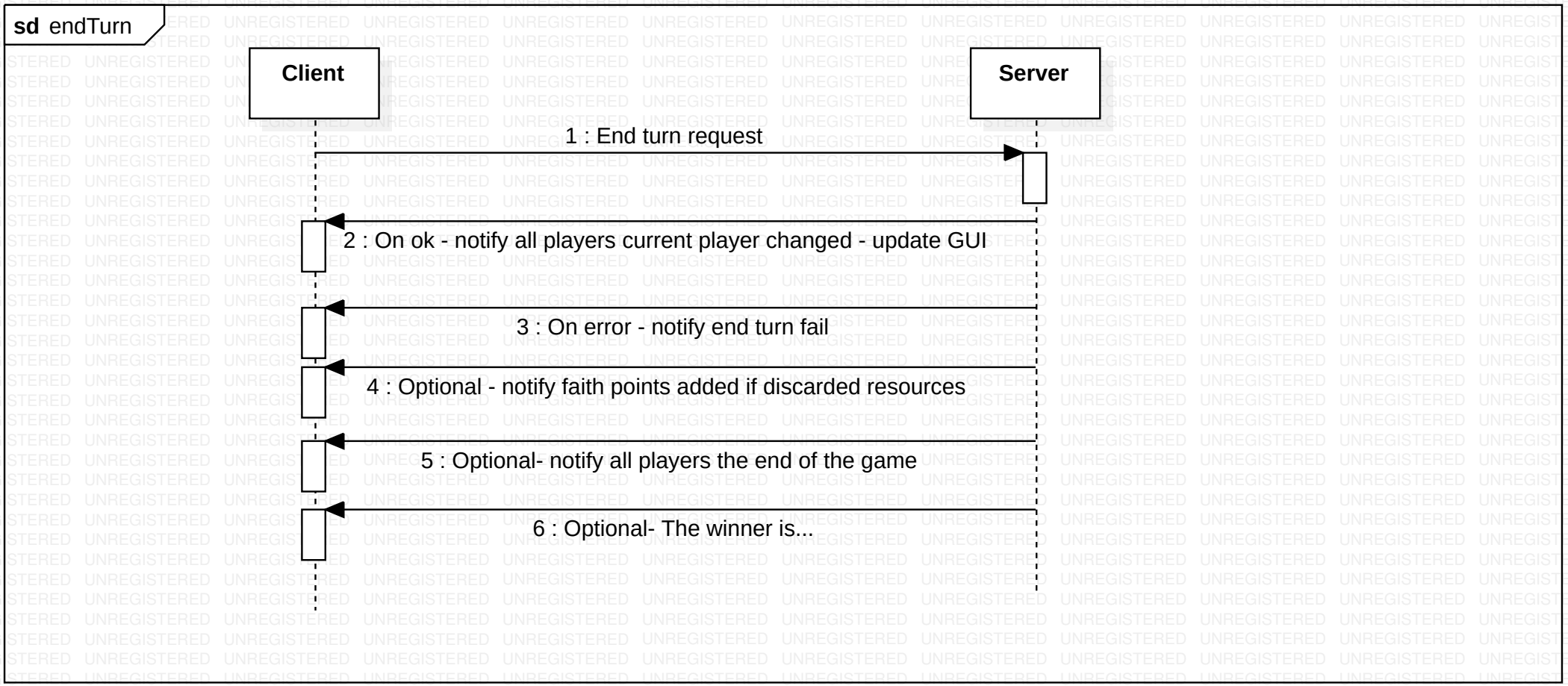
MULTI PLAYER CREATION(CLIENT)
1:{"messageType" : "Start multiplayer"}
MULTI PLAYER CREATION REPLY(SERVER)
2: {"messageType" : "multiplayerCreation", "messageContent":"Multi player game started succesfully\n", playerNumber: int, "choosableLeaderCards":LeaderCards[4]}
3: {"messageType" : "Simple message", "messageContent":"Error: Not enough players added to the game or a game has already started\n"}



1: {"messageType":"distributionSecondThird", "senderNickname":"Player's nickname", "ResourceToDistribute":"ResourceType"}
**{"messageType":"distributionFourth", "senderNickname":"Player's
nickname","ResourceToDistribute":"ResourceType","SecondResourceToDistribute":"ResourceType"} //The fourth player has to choose 2 resources
2: {"messageType": "notifyWareHouseChange", "warehouseConfiguration": Warehouse }
3: {"messageType": "simpleMessage", "messageContent":"You don't have permissions for a free resource distribution\n"}

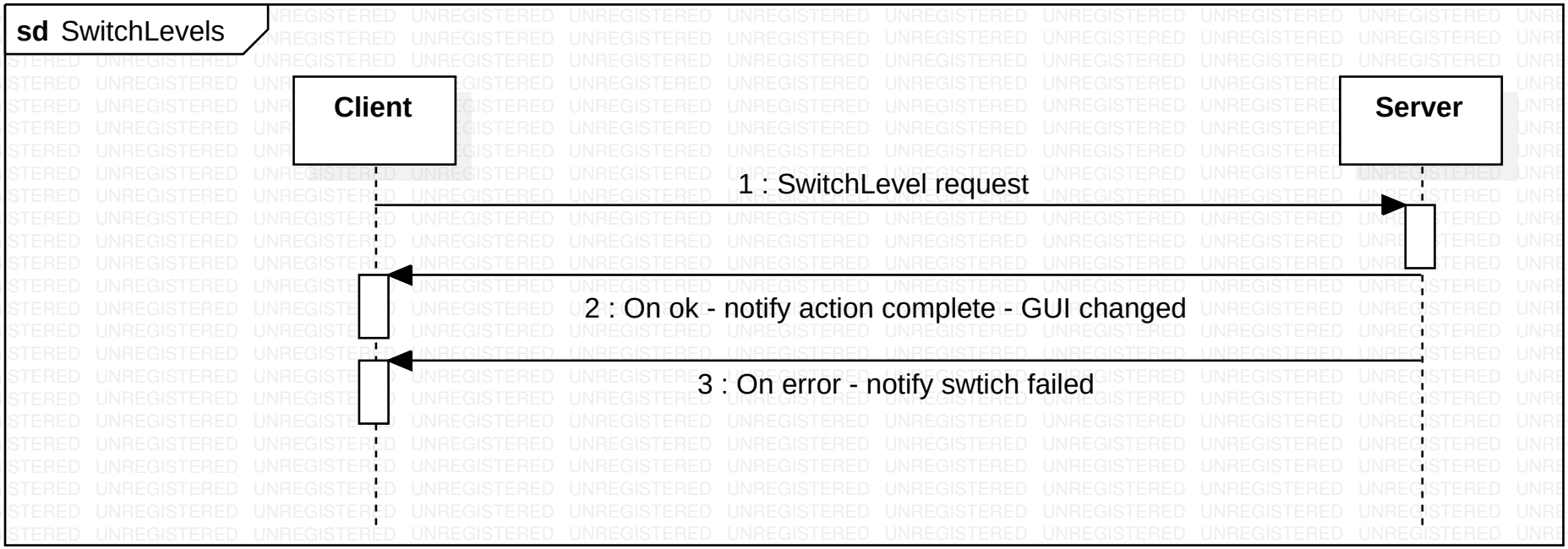


1: {"messageType":"leaderCardSelection","senderNickname":"Player's nickname", leaderCardPosition1:int, leaderCardPosition2:int}
2:{"messageType":"choosedLeaderCards", "messageContent":"Leader card choice completed succesfully\n", "chosenLeaderCards": leaderCards[2]}
3:{"messageType":"simpleMessage", "messageContent":"Selection failed\n"}

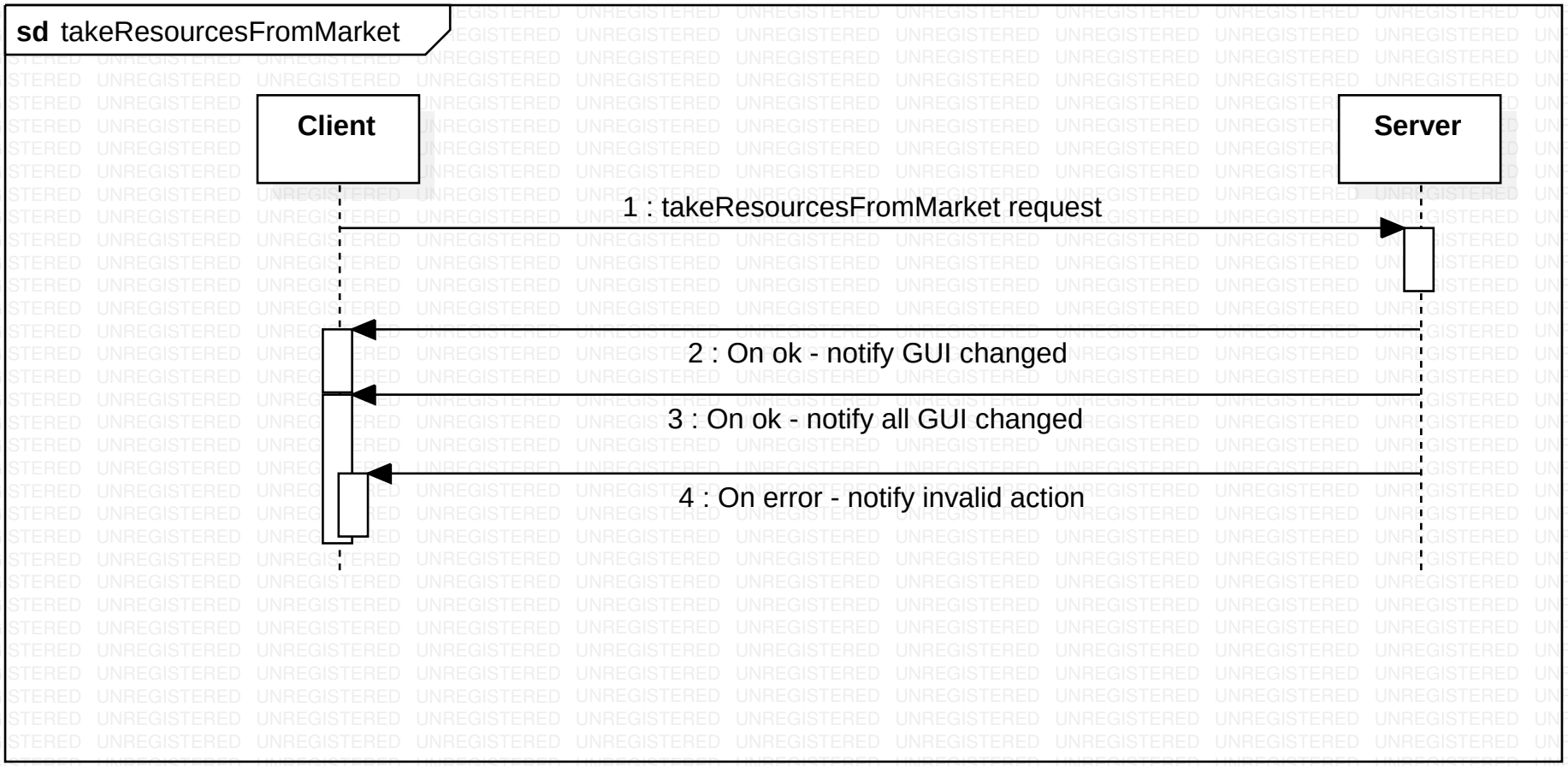


1: {"messageType": "End turn request", "senderNickName": "Player's nickname"}
2: {"messageType": "endTurnNotification", "actualCurrentPlayer": "Player's nickname"}
3: {"messageType": "simpleMessage", "messageContent":"You can't end your turn now\n"}
4: {"messageType": "earnedFaithPoints", "messageContent":"Player current player discarded n resources\n","newFaithPoints":"int"}
5: {"messageType": "simpleMessage", "messageContent":"at the end of the turn victory points will be calculated and game will end"}
6: {"messageType": "simpleMessage" ,"messageContent" : "The winner is game.getWinnerPlayer.getNickname(). Congrats!"

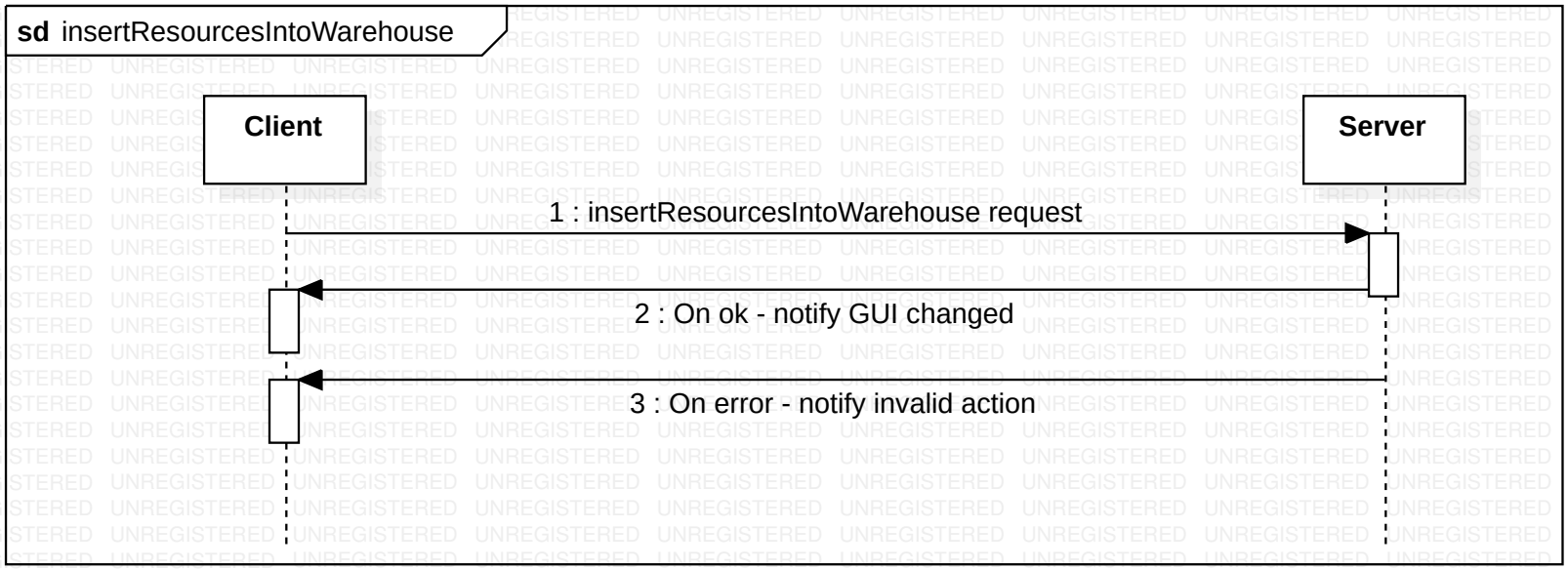
SwitchLevelsInteraction1:SwitchLevels



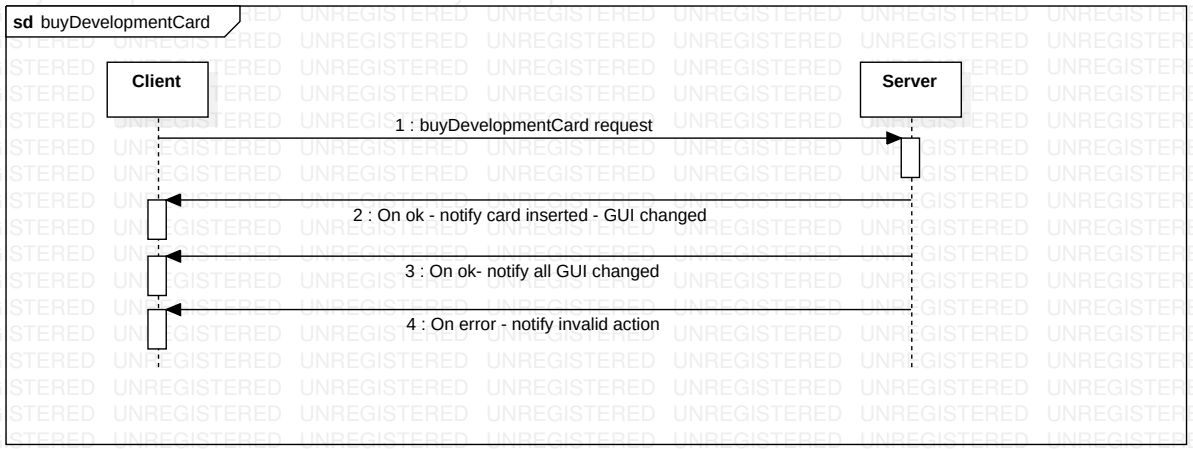
1:{"messageType":"SwitchLevel","senderNickname":"Player's Nickname","levelsToSwitch":[int level1, int level2]}
2: {"messageType": "notifyWareHouseChange", "warehouseConfiguration": Warehouse }
3: {"messageType": "simpleMessage", "messageContent":"You can't switch those levels\n"}



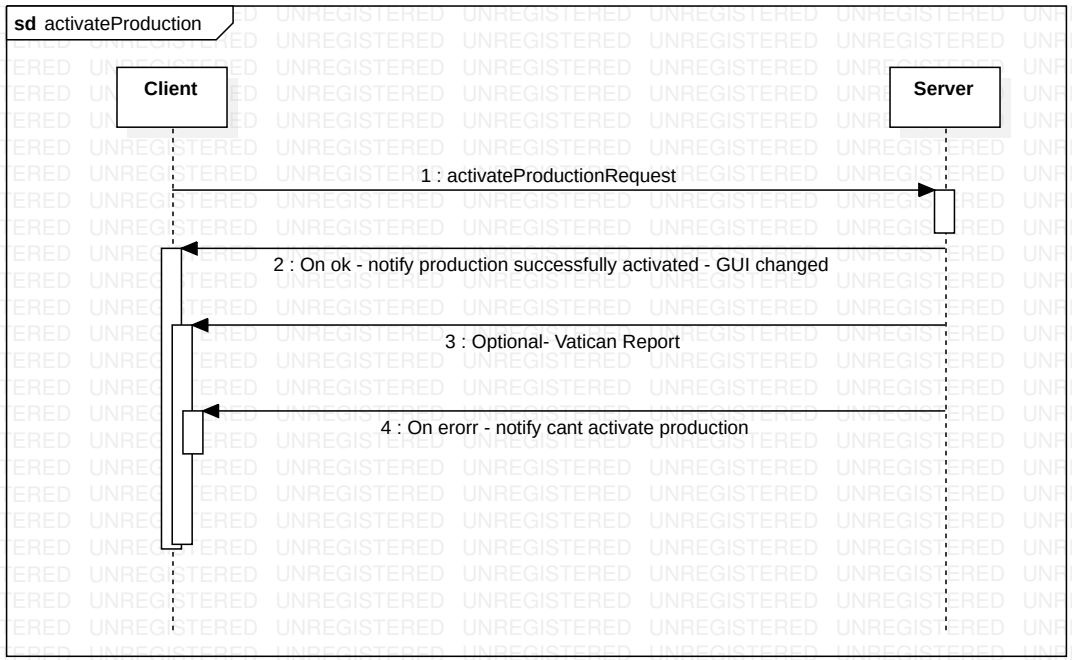
1:{"messageType":"takeResourceType","marketPosition":[int row,int column]}
2: {"messageType": "notifyTemporaryResourcesChanged", "temporaryResourcesConfiguration": HashMap<ResourceType,Integer> }
3:{"messageType":"notifyMarketboardChanged","marketboard" : "Marketboard"}
4: {"messageType": "simpleMessage", "messageContent":"Invalid action\n"}



1:{"messageType":"insertResourceType","resourceToInsert":"ResourceType","quantityToInsert":"int","intoExtraDeposit":"boolean"}
2: {"messageType": "notifyInsertedOk", "temporaryResourcesConfiguration": HashMap<ResourceType,Integer>,"warehouseConfiguration","Warehouse"}
3: {"messageType": "simpleMessage", "messageContent":"Invalid action, can't insert resources\n"}

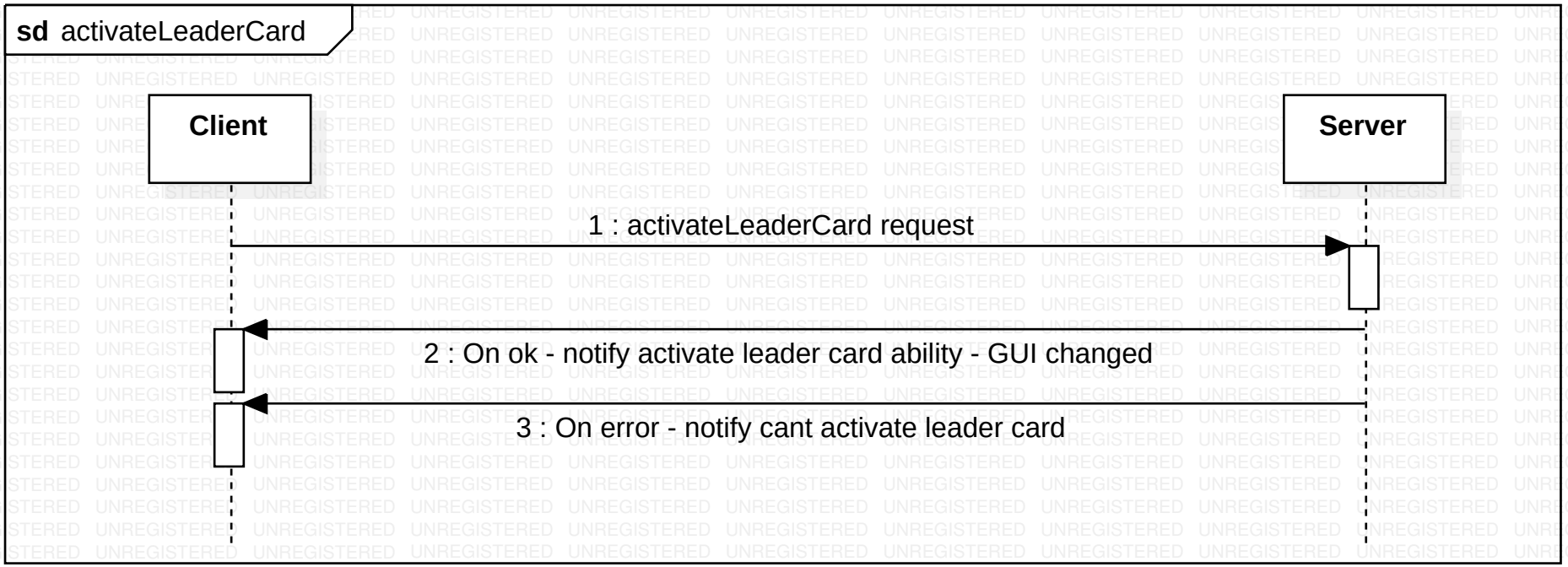


1:{"messageType":"buyDevelopmentCard","level":"int","colour":"Colour","slot":"int", "payUsingExtraDeposit":[int payUsingExtraDeposit1,int payUsingExtraDeposit2]}
2:{"messageType":notifyDevelopmentCardInsertedOk","developmentCardConfiguration":"developmentCard[3]","warehouseConfiguration":"Warehouse","depositConfiguration":"ExtraDeposit[2]","strongboxConfiguration","HashMap<ResourceType,Integer>"}
3:{"messageType":"notifyDeckgridChanged","deckgrid":"Deckgrid"}
4:{"messageType": "simpleMessage", "messageContent":"You can't buy this card\n"}

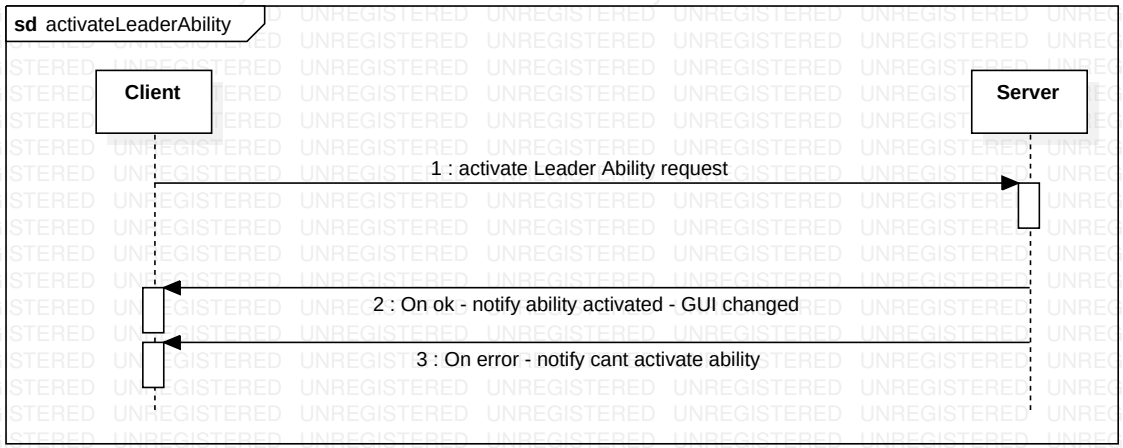


Il controller guarderà l'array di faith cards del player per vedere quando viene chiamata la prima, seconda o terza udienza salvando su un array di booleani quando una faith card viene posta a zero (corrispondenza 1 a 1 posizioni faithCards-booleano)

1:{"messageType":"activateProductionMessage","senderNickname":"playerNickname","whichDevCardSlot":"boolean[3]","fromPersonalBoard":"boolean","whichLeaderCard":"boolean[3]"
,"resourceBaseProduction":"ResourceType[3]","resourceFromLeader":"ResourceType[2]","payUsingExtraDeposit":"int[2]"}
2:{"messageType":notifyActivateProduction","warehouseConfiguration":"Warehouse","depositConfiguration":"ExtraDeposit[2]","strongboxConfiguration","HashMap<ResourceType,Integer>", "newFaithPoints":"int"}
3:{"messageType":"simpleMessage","messageContent":"Vatican Report occurred!(fiirst, second or third managed by controller)"}
4:{"messageType": "simpleMessage", "messageContent":"You can't activate production\n"}

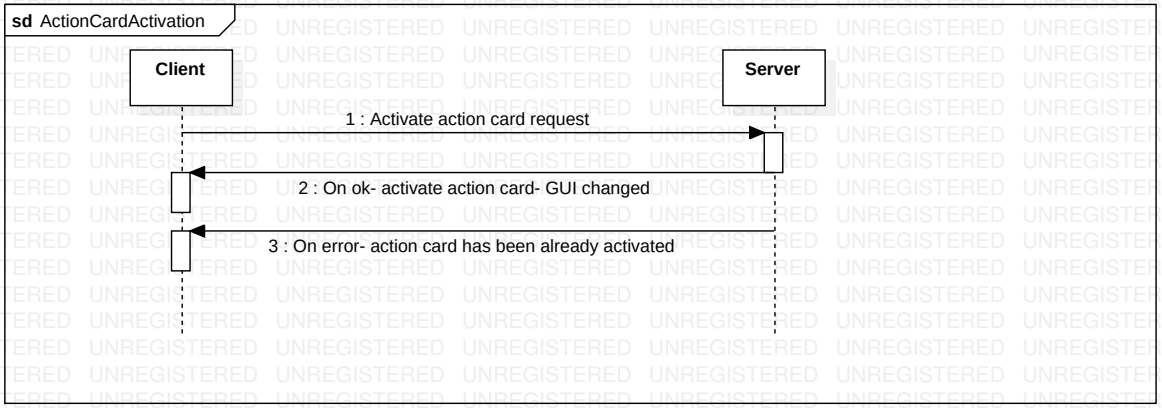


1:{"messageType":"activateLeaderCardMessage","senderNickname":"playerNickname","position","int"}
2:{"messageType":notifyActivateLeaderCard","choosenLeaderCard":"LeaderCard"[int]}
3:{"messageType": "simpleMessage", "messageContent":"You can't activate leader card\n"}



1:{"messageType":"activateLeaderAbilityMessage","senderNickname":"playerNickname","position","int"}
2:
-(case deposit){"messageType":"notifyActivateLeaderAbilityDeposit","position","int", "extraDepositConfiguration":["extraDeposit1", "extraDeposit2"]}
-(case discount){"messageType":"notifyActivateLeaderAbilityDiscount","position","int" }
-(case whiteTransformation){"messageType":notifyActivateLeaderAbilityWhiteTransformation","position","int", "temporaryResources": HashMap <ResourceType,Integer>,
remainingWhiteMarbles: int}
-(case production){"messageType":notifyActivateLeaderAbilityProduction","position","int" }
3:{"messageType": "simpleMessage", "messageContent":"You can't activate this leader card\n"}

ActionCardActivation Interaction ActionCardActivation



1:{"messageType":"actionCardActivation"}
2:
-(case move){"messageType":"moveLorenzo","newFaithPoints":"int"}
-(case moveAndShuffle){"messageType":"moveAndShuffle","newFaithPoints":"int", "actionCardConfig":"ActionCardStack"}
-(case RemoveDevCard){"messageType":"notifyDeckgridChanged","deckgrid":"Deckgrid"}
3:{"messageType":"simpleMessage","messageContent":"action card has been already activated"}