

COMMUNICATION PROTOCOL

Each client initially tries to login as a player: if the operation is successful the server replies with a success message, otherwise the server sends an error message.

Starting from when the first client successfully connects, a ping message is sent from each client to the server, to which the server responds with a Pong message, at fixed intervals in order to check whether all the connections are still active: if that's not the case, the game ends and the server notifies each client (or, if the server is the one whose connection was shut down, each client takes notice and exits the game).

(To be modified if 'resilience' advanced function is implemented)

Each message exchanged between client and server will be JSON objects.

There are different types of messages that can be exchanged:

- LoginRequestMessage(nickname, numberOfPlayers, gameMode)
- LoginSuccessMessage()
- WizardRequestMessage(wizardName)
- AssistantRequestMessage(assistantID)
- MoveStudentMessage(color, destination)
- MoveMotherNatureMessage(numberOfSteps)
- PickCloudMessage(cloudID)
- CharacterInfoRequestMessage(characterID)
- CharacterInfoReplyMessage()
- CharacterMessage(characterID)
- CharacterColorMessage(characterID, color)
- CharacterDestinationMessage(characterID, destination)
- CharacterColorDestinationMessage(characterID, color, destination)
- WinnerMessage()

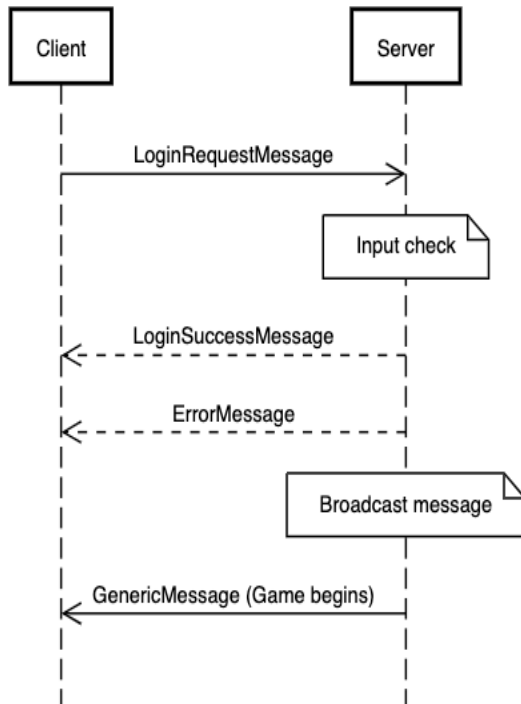
(UTILITY MESSAGES)

- PingMessage()
- PongMessage()
- GenericMessage()
- OperationSuccessMessage()
- ErrorMessage()
- MatchInfoMessage()
- DisconnectionMessage()

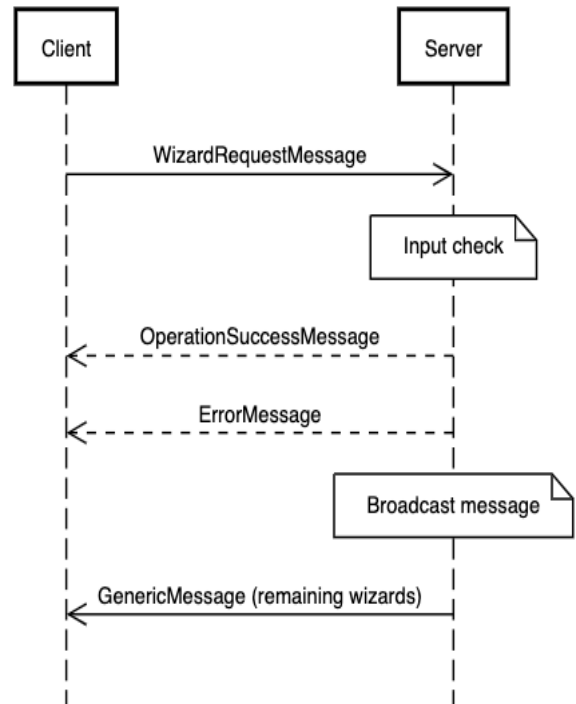
The communication can be divided into 7 phases, each accepting different message types:

- Login
- Prepare
- Plan
- Move student
- Move Mother Nature
- Pick cloud
- End game

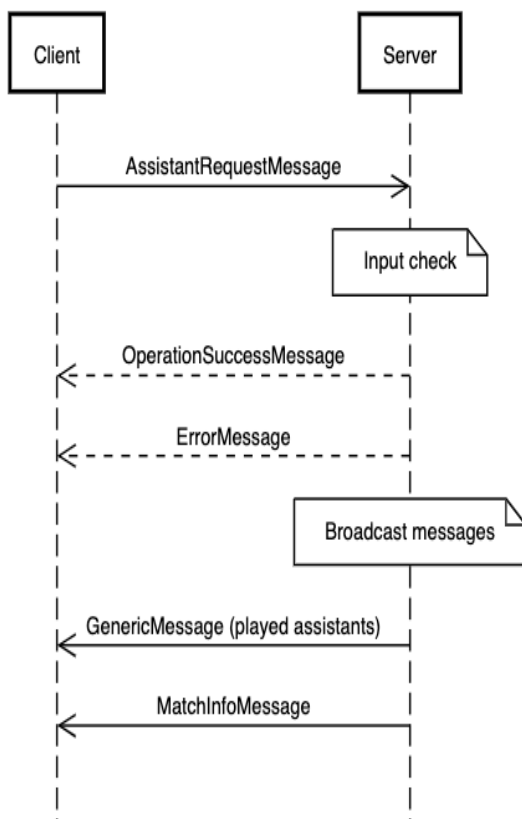
Login Diagram



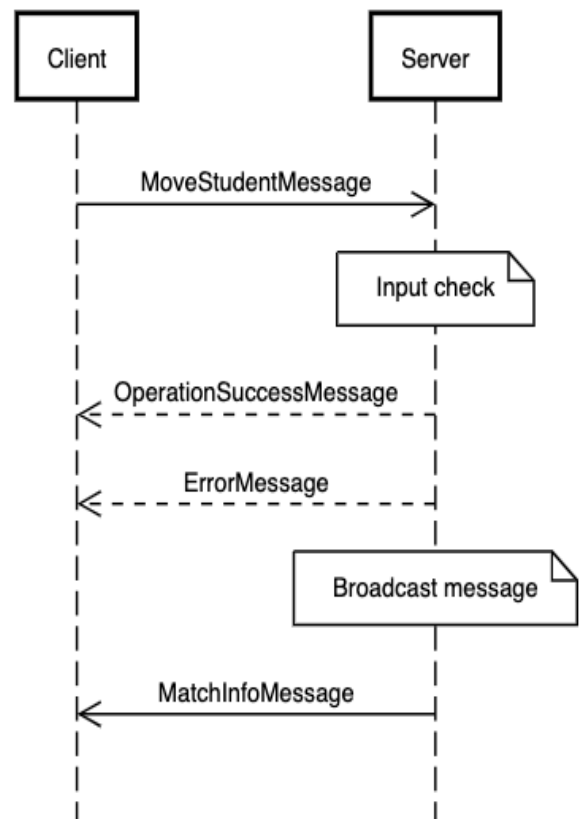
Prepare Diagram



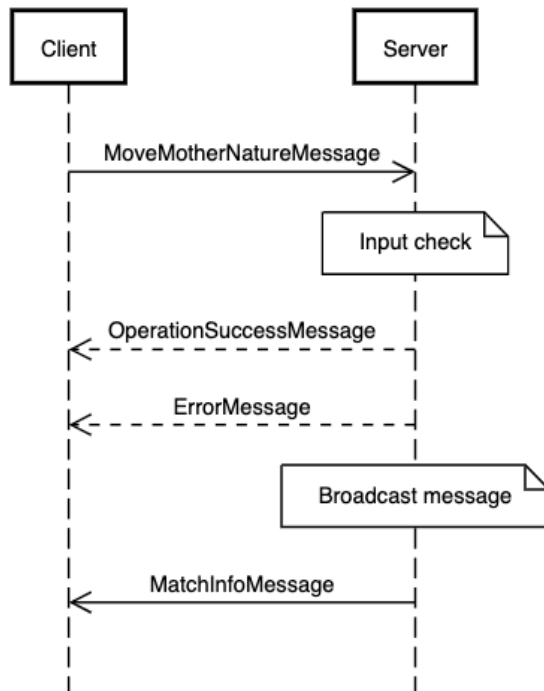
Plan Diagram



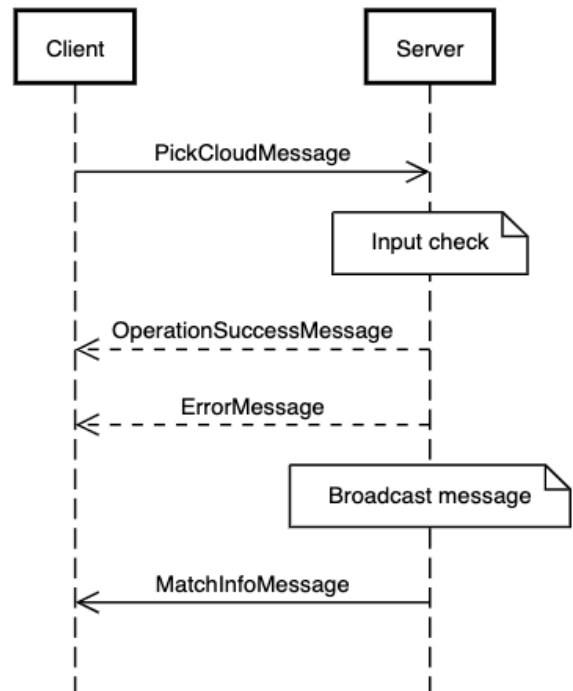
Move Student Diagram



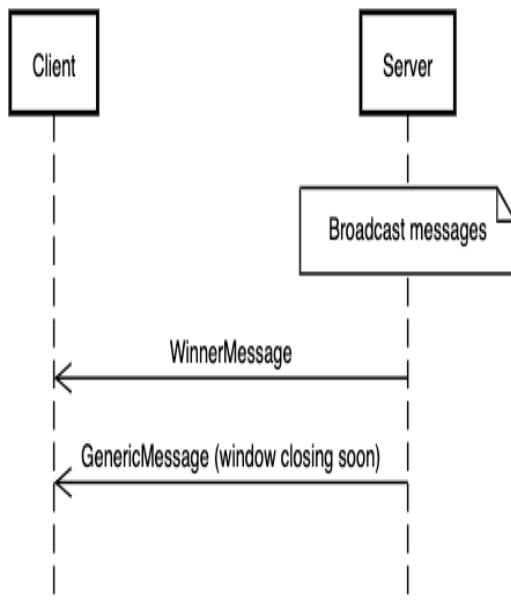
Move Mother Nature Diagram



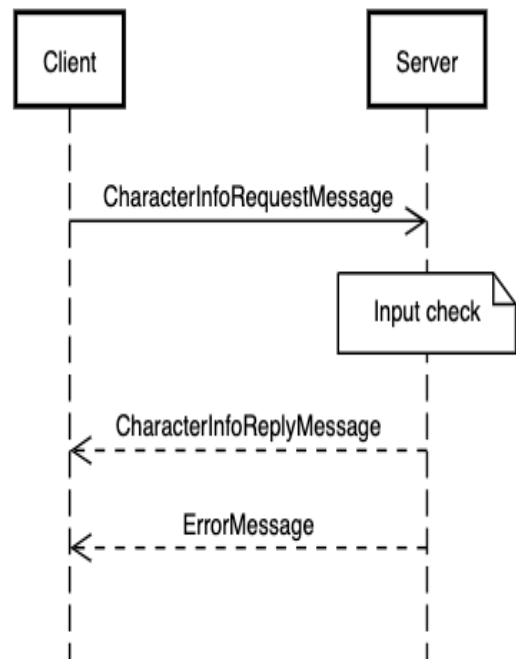
Pick Cloud Diagram



End Game Diagram



Character Info Diagram



Character Activation Diagram

