

Eryantis Protocol Documentation

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1 Messages

1.1 Serialization

For the messages we use Java Serialization and Deserialization by creating a class for each message that implements Serializable

1.2 Client Messages

1.2.1 LoginMessage

This message is sent from the client to the server after establishing a connection to create a player session

Arguments

1. Username

Possible responses

- LobbyMessage: it contains the games already created that the player can join
- ErrorMessage: it contains the reason of the error, for example: Nickname not unique

1.2.2 CreateOrJoinAnswer

This message is sent from the client to the server and contains the choice between creating or joining a game

Arguments

1. choice: 1 if the players wants to create a game, 2 if he wants to join

Possible responses

- AskTowerColor

1.2.3 JoinGameMessage

This message is sent from the client to the server when the user wants to join a game

Arguments

1. GameId: the id of the game that the player wants to join

Possible responses

- SuccessMessage: the player has joined
- ErrorMessage: it contains the reason of the error, for example invalid game id

1.2.4 MoveStudentMessage

This message is sent from the client to the server when the user wants to move a student

Arguments

1. From: the object where is the student
2. Color: the color of the student to move
3. To: the object where the player wants to move the student

4. Id: the id of the island in case the user wants to move the student to an island

Possible responses

- ErrorMessage: it contains the reason of the error

1.2.5 MoveMotherNatureMessage

This message is sent from the client to the server when the player wants to move mother nature

Arguments

1. Steps: the number of steps the player wants to move mother nature

Possible responses

- ErrorMessage: it contains the reason of the error, for example: invalid number of steps

1.2.6 ChooseCloudMessage

The player choose the cloud he wants to get the students from.

Arguments

1. CloudId: the id of the cloud the player selected

Possible responses

- ErrorMessage: it contains the reason of the error

1.2.7 PlayCardMessage

This message is sent from the client to the server when the user wants to play an assistant card

Arguments

1. AssistantCardId: the id of the assistant card played

Possible responses

- ErrorMessage: it contains the reason of the error, for example: card already played in this turn

1.2.8 ActivateCharacterMessage

This message is sent from the client to the server when the user wants to buy a character

Arguments

1. EffectId: the id of the card effect the player selected

Possible responses

- AskIslandMessage: card effect correctly activated, asks the player to choose an island for the effect
- AskStudentMessage: card effect correctly activated, asks the player to choose a student for the effect
- AskSwitchStudents: card effect activated, asks the player for the students to switch
- Effect12Message: confirms the activation of the effect 12
- NotifyCharacterActivation: the card has been correctly activated

- ErrorMessage: it contains the reason of the error, for example: not enough coins

1.2.9 DisconnectMessage

This message is sent from the client to the server when the user disconnects

Arguments

1. Username

Possible responses

- SuccessMessage

1.2.10 ChooseTowerColorMessage

This message is sent from the client to the server

Arguments

1. TowerColor: the chosen tower color

Possible responses

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1.2.11 IslandEffectMessage

This message is sent from the client to the server as a response of the AskIslandMessage

Arguments

1. chosenIsland: the island where he wants to move or that he selected

Possible responses

- NotifyCharacterActivation: card effect correctly activated
- ErrorMessage: it contains the reason of the error

1.2.12 StudentEffectMessage

This message is sent from the client to the server as a response of the AskStudentMessage

Arguments

1. chosenStudent: the student where he wants to move or that he selected

Possible responses

- NotifyCharacterActivation: card effect correctly activated
- ErrorMessage: it contains the reason of the error

1.2.13 SwitchStudents

This message is sent from the client to the server as a response of the AskStudentMessage

Arguments

1. students: the list of the students to switch

Possible responses

- NotifyCharacterActivation: card effect correctly activated
- ErrorMessage: it contains the reason of the error

1.3 Server Messages

1.3.1 ErrorMessage

This message is sent from the server to the client to notify an error to the user

Arguments

Reason: the reason of the error

1.3.2 NotifyDisconnectionMessage

This message is sent from the server to the client to notify a disconnection of a player

Arguments

1. Username: the username of the disconnected player

1.3.3 GenericMessage

This message is sent from the server to the client to notify generic informations to the user

Arguments

1. Message: the message the server wants to notify to the user

1.3.4 LobbyMessage

This message contains the lobby with the games that the user can join

Arguments

1. Lobby: string containing the full lobby

Possible responses

- JoinGameMessage

1.3.5 AskStudent

This message is sent from the server to the client to ask the client to move a selected student

Arguments

This message has no arguments

Possible responses

- MoveStudentMessage

1.3.6 AskIsland

This message is sent from the server to the client to ask the client to select an island

Arguments

1. Students: list of the students the player can move

Possible responses

- IslandEffectMessage

1.3.7 AskTowerColor

This message is sent from the server to the client to ask the client to move a selected student

Arguments

1. AvailableColors: contains the list of the color the player can choose

Possible responses

- ChooseTowerColorMessage

1.3.8 WinMessage

This message is sent when the game ends

Arguments

1. Winner: the username of the winner player

Possible responses

- This message has no responses

1.3.9 PingMessage

This message is sent from the client to the server or from the server to the client to verify the network is still working, used to keep the connection alive

Arguments

This message has no arguments

Possible responses

- PingMessage: response to confirm the network is still working

1.3.10 AskCard

This message is sent from the server to the client to ask for a card to the player

Arguments

- assistantCards: the list of the card the player has
- turnCardsPlayed: the card played in this turn

Possible responses

- PlayCardMessage

1.3.11 AskCloud

This message is sent from the server to the client to ask for a cloud to unfill

Arguments

This message has no arguments

Possible responses

- ChooseCloud

1.3.12 FillCloudsMessage

This message is sent from the client to the server to notify that the cloud have been filled

Arguments

- Clouds: the clouds in the game board

Possible responses

- ChooseCloud

1.3.13 AskGameSettings

This message is sent from the server to the client to ask for the game settings when creating a new game

Arguments

This message has no arguments

Possible responses

- NewGameMessage

1.3.14 AskMotherNature

This message is sent from the server to the client to ask the player to move mother nature

Arguments

This message has no arguments

Possible responses

- MoveMotherNature

1.3.15 AskSwitchStudents

This message is sent from the server to the client to the player for effects that needs to switch students positions

Arguments

This message has no arguments

Possible responses

- SwitchStudents

1.3.16 CharacterActivated

This message is sent from the server to the client to notify that a character has been activated

Arguments

- effectId: the id of the effect
- owner: the username of the player who activated the card
- activated: true if the effect is being activated or else false

1.4 Effect12Message

This message is sent from the server to the client to notify the activation of the character 12 and the remove of the students

Arguments

- studentColor: the color of the removed students

1.4.1 ChooseMessage

This message is sent from the server to the client to ask the player if he wants to join or create a game

Arguments

This message has no arguments

Possible responses

- CreateOrJoinAnswer

1.4.2 NoEntryTileMessage

This message is sent from the server to a client to notify that a no entry tile has been removed from an island

Arguments

- islandId: the id of the island that had the no entry tile

1.4.3 StartGame

This message is sent from the server to the client to notify the start of the game

Arguments

- firstPlayer: the username of the first player
- reducedModel: the lighter version of the model the client will have

1.4.4 UpdateCharacterStudents

This message is sent from the server to the client to update the students of a character card

Arguments

- students: the students on the card
- effectId: the id of the character card

1.4.5 UpdateClouds

This message is sent from the server to the client to notify that a cloud has been unfilled

Arguments

- cloudId: the id of the unfilled cloud

1.4.6 UpdateModelMessage

This message is sent from the server to the client to update the lighter version of the model in the client, there can be different type of update

Type of update

- TurnCards: update the turn played cards
- Islands: updates the islands

- MaxSteps: updates the max steps that can be made in this turn
- Professor: updates the professor owner
- Merge: notifies a merge has happened
- Conquer: notifies that a island has been conquered

1.5 UpdateMotherNature

This message is sent from the server to the client to update mother nature

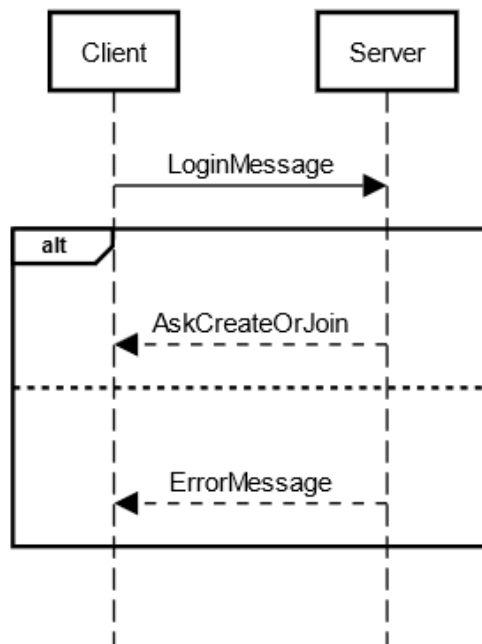
Arguments

- motherNature: the mother nature value

2 Scenarios

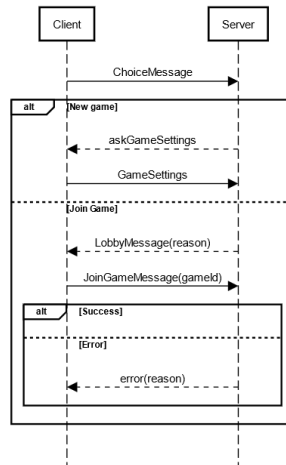
2.1 User connection and Login

2.1.1 Login



The connection starts with the Login, if it goes well the Server sends to the client the LobbyMessage so the user can see the game he can join.

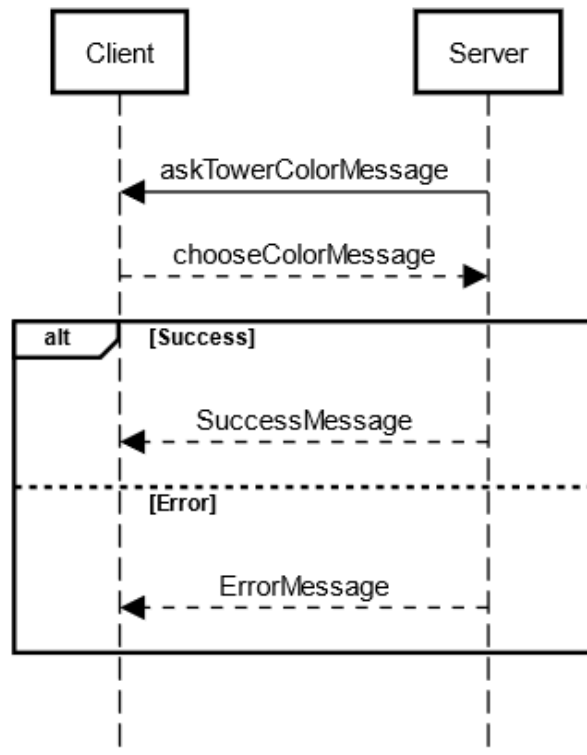
2.1.2 User menu



The user has 2 options:

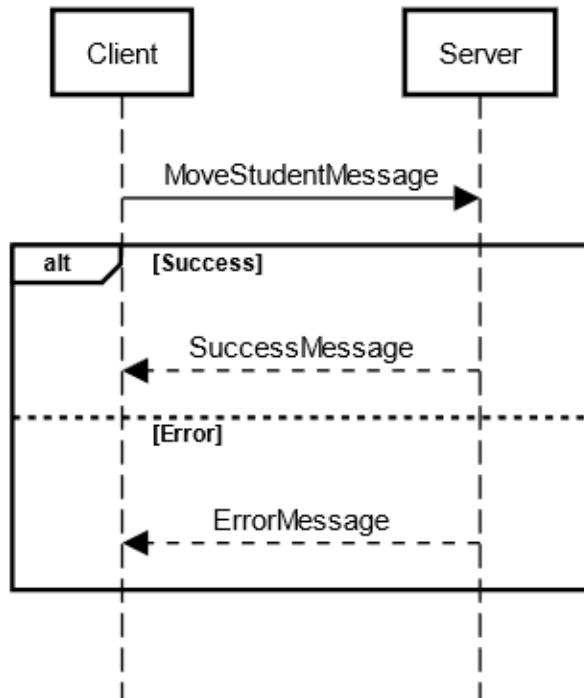
1. Create a new game: the user can create a new game and has to insert the number of player he wants (2 or 3), the clients sends a Create-NewGameMessage which contains the number of player selected .
2. Join a game: the user selects a game he wants to join and send a JoinGameMessage which contains the id of the game he wants to join.

2.2 Setup Phase



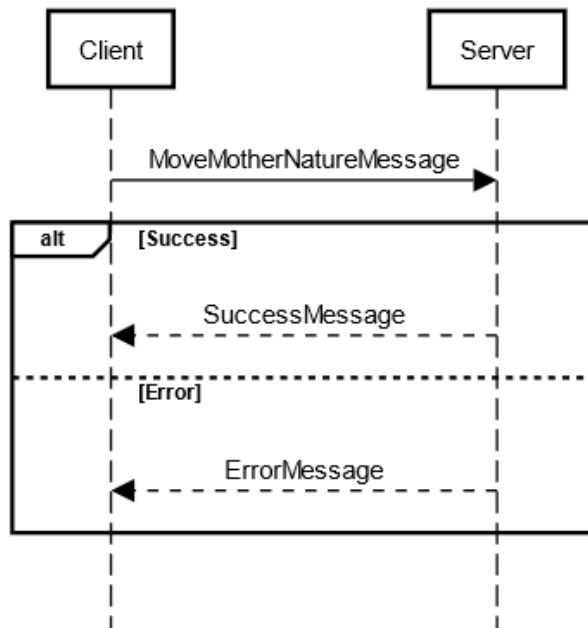
After the game starts, during the setup phase the server asks to all the clients to choose a tower color by sending a message with the available colors

2.3 Move Student



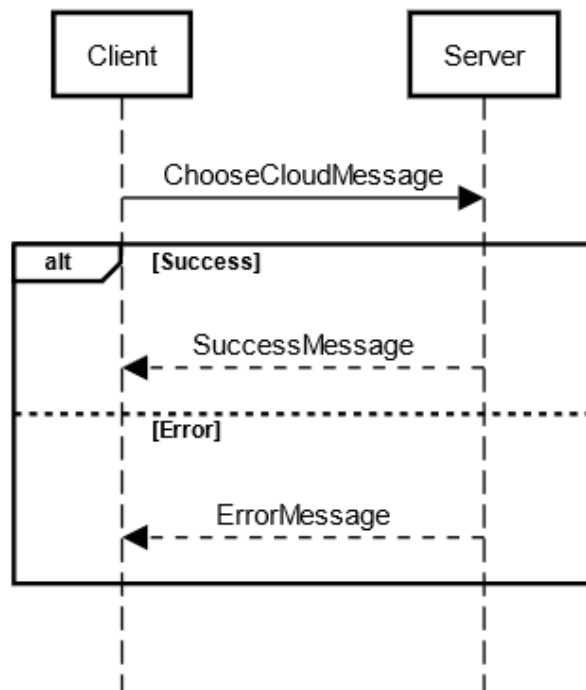
When a player wants to move a student sends a message containing From (the object where is currently the student), Color (the student color), To (Where he wants to move the student). If the student is correctly moved the server sends a SuccessMessage, if there is an error the server sends an error message containing the reason

2.4 Move mother nature



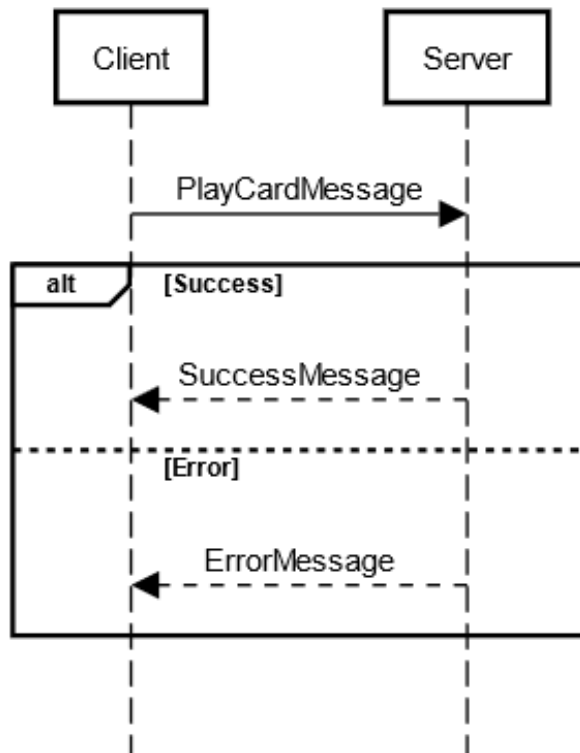
When a player wants to move mother nature sends a message containing the number of steps he wants to move mother nature. If mother nature is correctly moved the server sends a SuccessMessage, if there is an error the server sends an error message containing the reason of the error.

2.5 Choose cloud



At the start of the action phase a player has to choose a cloud to remove the students from, the clients sends a message containing the id of the cloud he wants to choose.

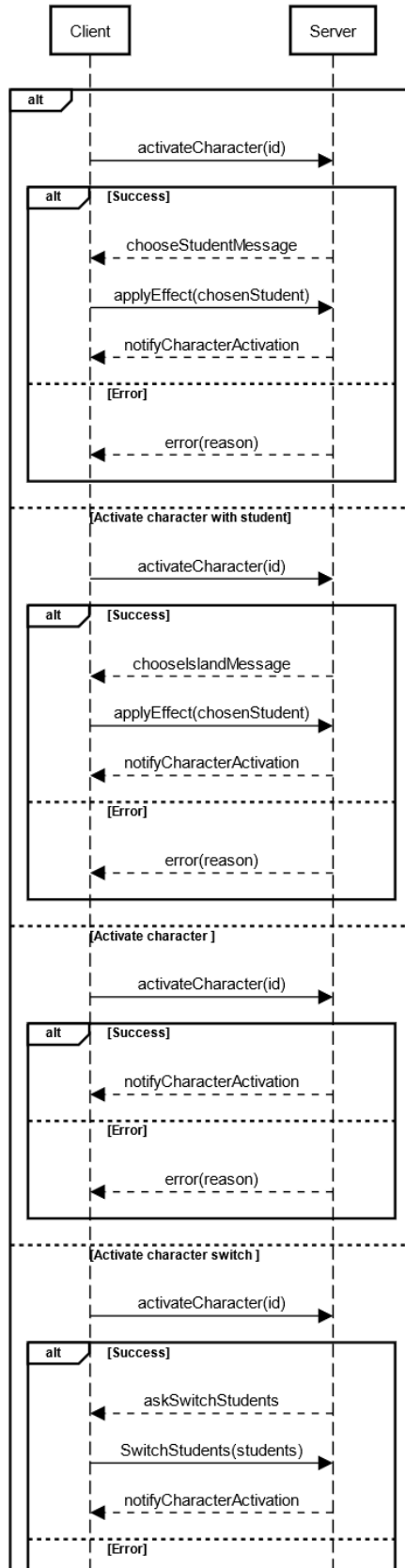
2.6 Play assistant card



When the user has to play an assistant card he sends a message containing the id of the assistant card he wants to play

2.7 Activate character

Activate Character



When the player decides to activate a character card a message containing the id is sent, the server can reply in four ways:

1. SuccessMessage: the character has been correctly activated
2. AskStudentMessage: the selected character needs to select the students/ the student to move
3. AskIslandMessage: the selected character needs to select an island
4. ErrorMessage: for example the player has not enough coins for the selected character

So the player has to reply by sending a ChooseStudentMessage, ChooseIslandMessage or a switch students message(for the first effect the server will ask for an island and also for a student) containing the selected Island or Student after the server asked.

2.8 Game phase

During the game phase the server sends the update to the client as an UpdateModelMessage.