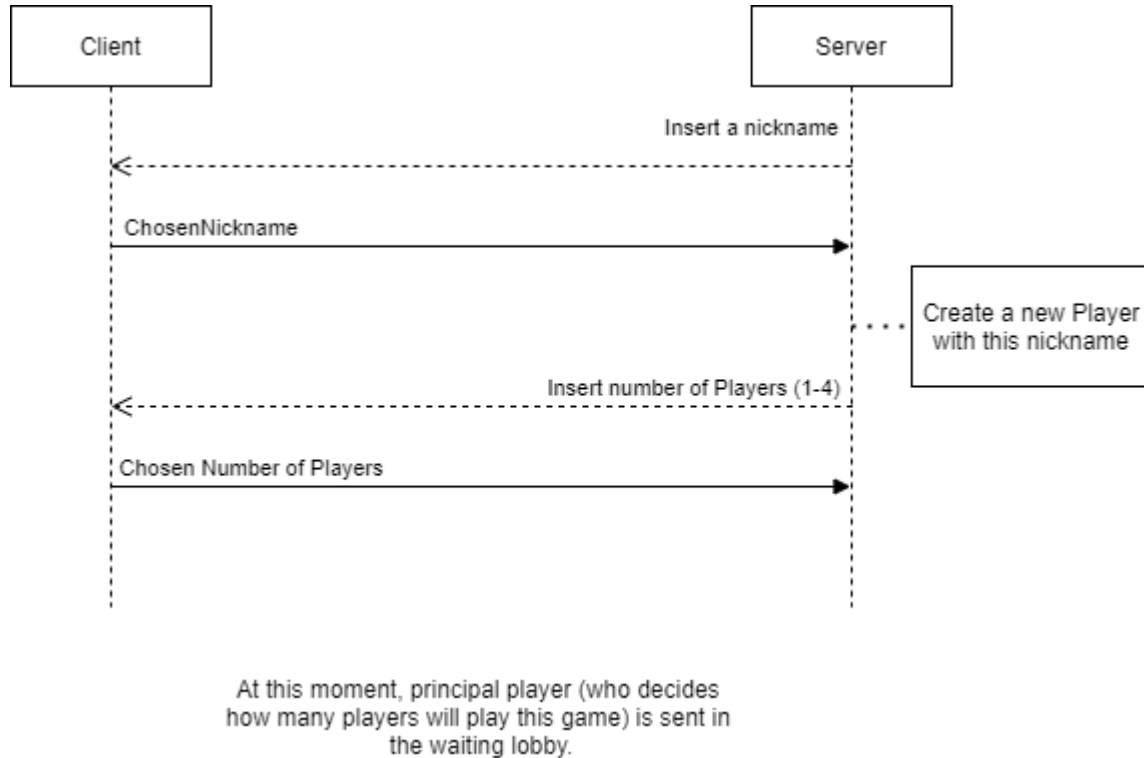


Data Diagram

Initial Phase



In the initial phase first Server starts.

Players run their Client and try to connect to the Server via IP and Socket port.

Here there are all the messages:

- "Insert a nickname": plain text to ask players their nicknames.
- "ChosenNickname": plain text in a String sent by player to the Server.
- "Insert number of Players (1-4)": plain text sent only to the first player connected.
- "ChosenNumberOfPlayers": Integer that indicates number of players of this game.

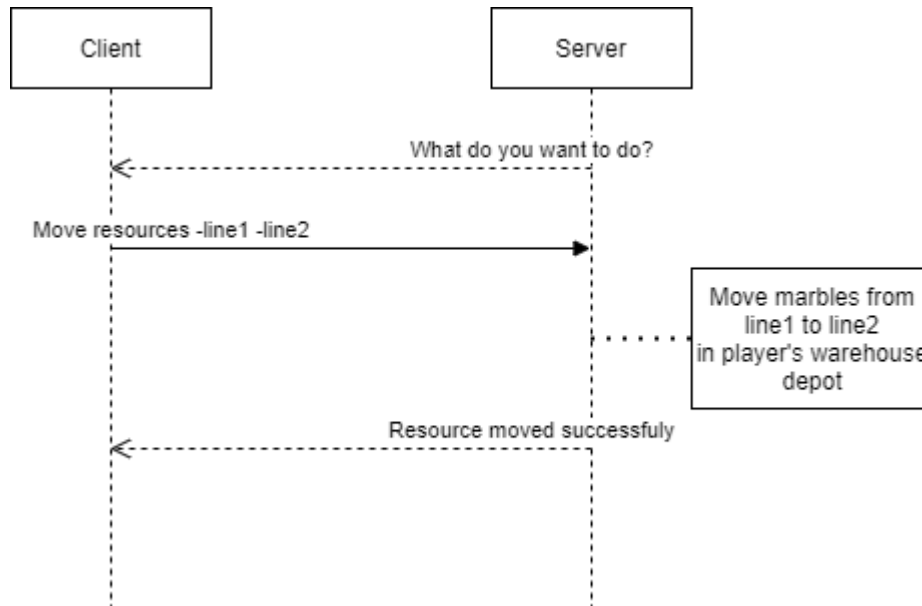
For other players there will be only the first and the second message.

When Server creates new Object Player, the player will be sent in the waiting lobby.

Game Phase

In Game Phase Server will send always the first message: “What do you want to do?” and it will wait player response.

Move Resources:



Messages:

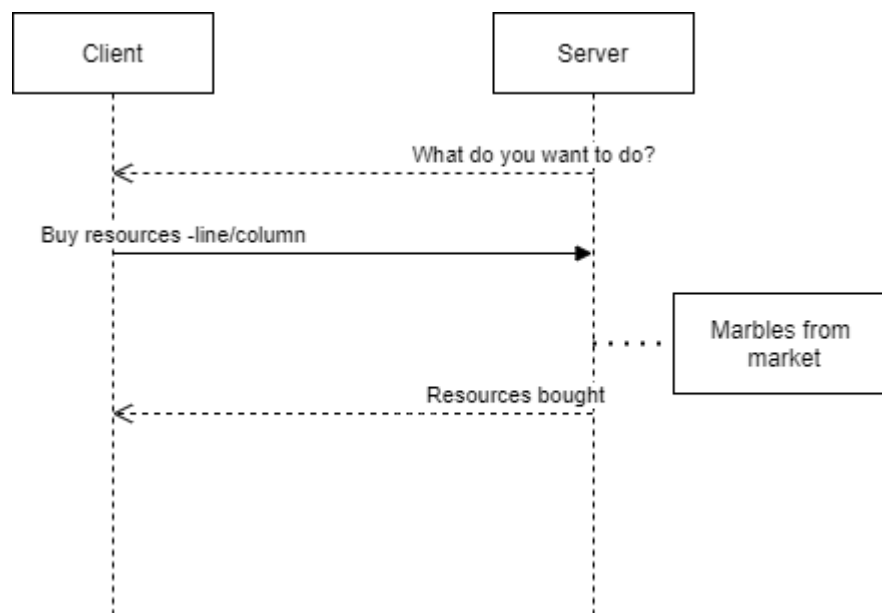
- “Move resources -line1 -line2”: plain text with “Move resources” to ask the Server to switch resources from Warehouse Depot line1 (integer) to line2(integer) and vice versa.
- “Resource moved successfully”: plain text that informs the player that moving action has successfully done.

Errors:

If the player insert:

- Not a number for line1 and line2: Server will send plain text “Not a number”.
- An invalid value for line1 or line2: “Choose valid warehouse lines to switch”.
- If values inserted by player do not pass controls in the moveresources method: “Can’t switch these lines”.

Buy resources:



Messages:

- "Buy resources -line/column": plain text and integer (line OR column) to ask Server to buy resources from this line/column of Market Structure.
- "Resources bought": Server will respond to inform player of the successfully purchase.
- "Faith increased": plain text sent to player If one of the marbles obtained from Market structure is a red one.

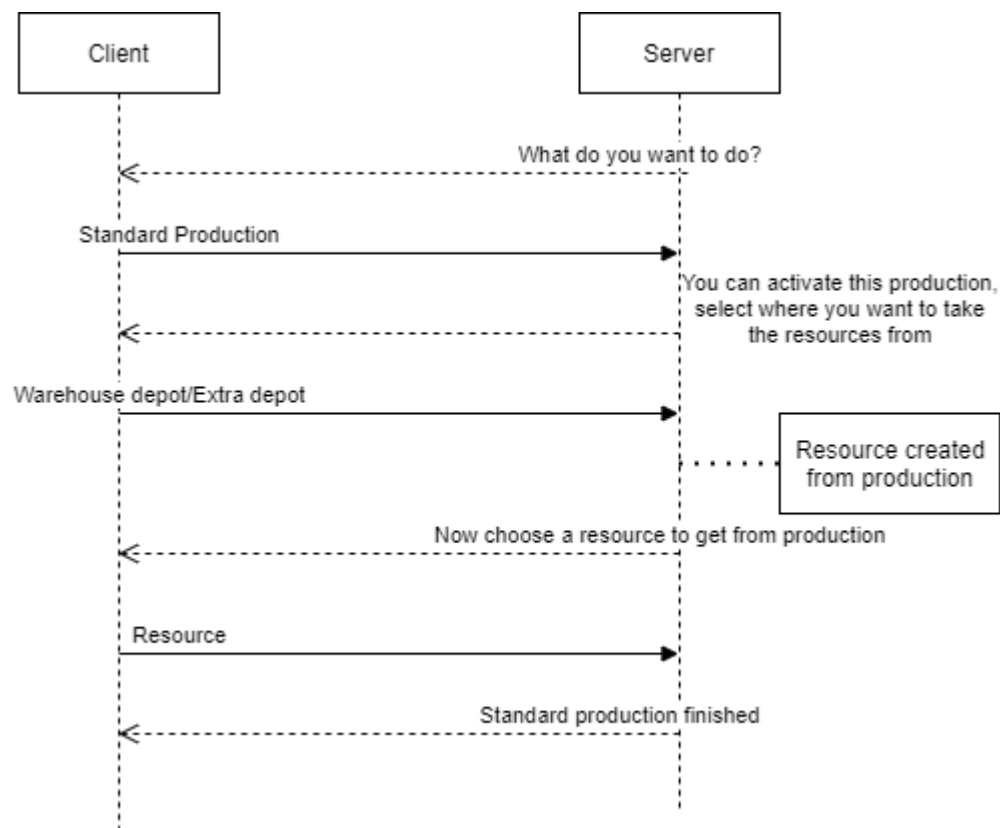
If the players have one or two Leader card of conversion there are more messages to handle:

- "Select if you want to transform or discard the white marble": plain text sent to player to discard or to convert the white marble obtained from Market structure.
- "Select the resource you want to convert the marble into": plain text sent to player to decide the conversion of the white marble.

Errors:

- "Not a number": Server will send this message if the player inserted a value that is not an integer for line/column.
- "Index out of bounds": If the player inserted a value that is not in the interval $1 < \text{line} < 3$ or $1 < \text{column} < 4$.

Activate standard production:



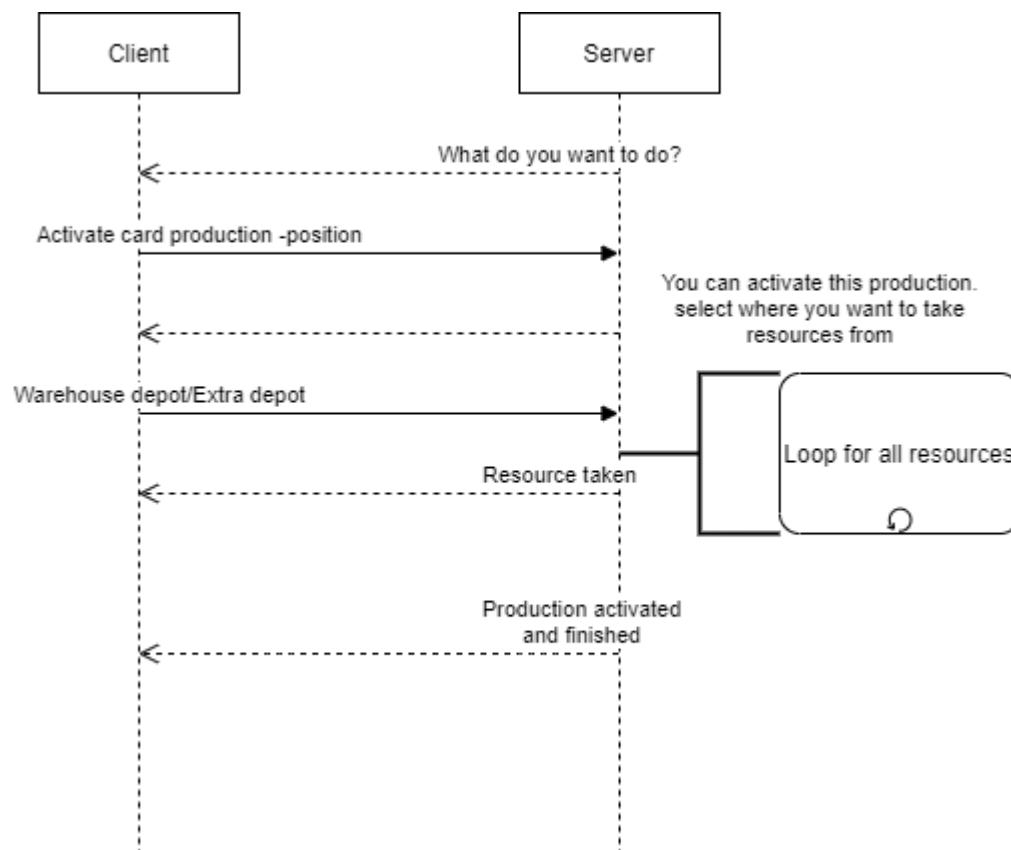
Messages:

- "Standard Production": plain text to ask server to start a standard production.
- "You can activate this standard production, select where you want to take the resources from": plain text.
- "Warehouse depot" OR "Extra depot": from where the player wants to take resources.
- "Now choose a resource to get from production": ask the player the resource that he wants to obtain from the production.
- "Resource": plain text of the resource wanted (Coin, Stone, Servant, Shield)
- "Standard production finished": Server inform the player that the standard production is successfully done.

Errors:

- "Select a valid resource location (Warehouse depot or Extra depot)": if the player inserts a location that does not exist.
- "Select a valid resource": if the player did not insert a valid resource.

Activate card production:



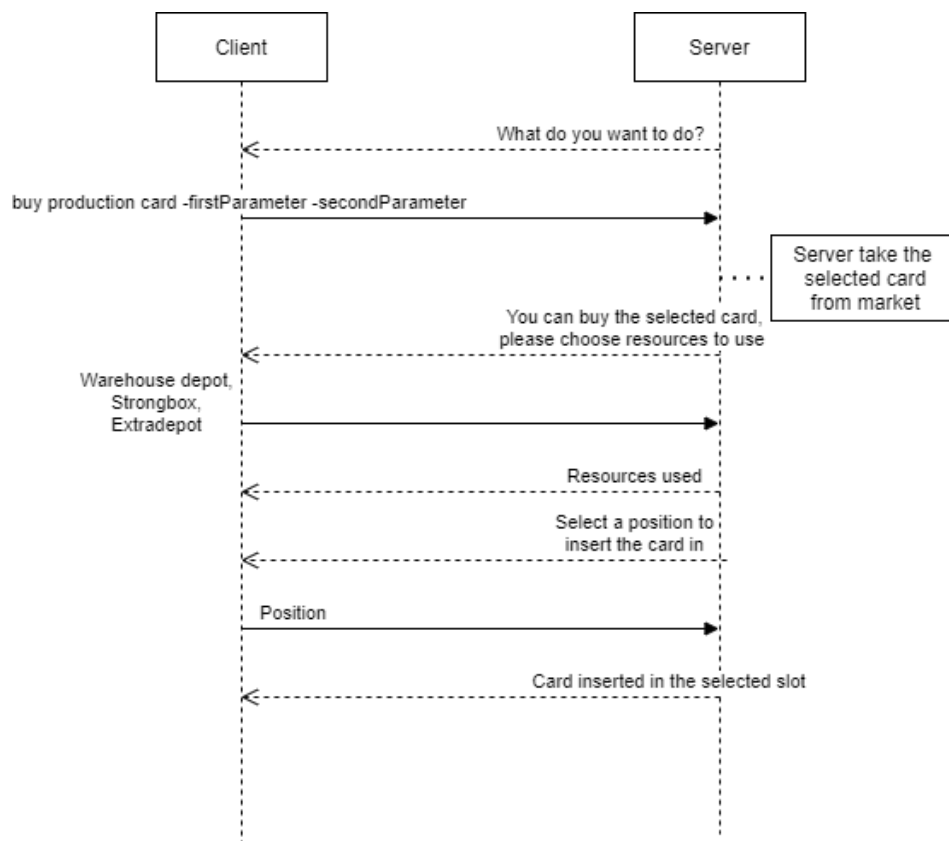
Messages:

- "Activate card production -position": plain text to activate a card production, position is an integer that represents the position of production card slot.
- "You can activate this production, select where you want to take resources from": plain text.
- "Warehouse depot" OR "Extra depot".
- "Resource taken": this message and the previous are sent in a loop where the player has not chosen all the needed resources.
- "Production activated and finished": plain text.

Errors:

- "Index out of bounds": if position is not in the interval $1 < \text{position} < 3$.
- "Not a number": if position is not an integer.
- "Select a valid resource location (Warehouse depot or Extra depot)": if the player inserts a location that does not exist.

Buy production Card:



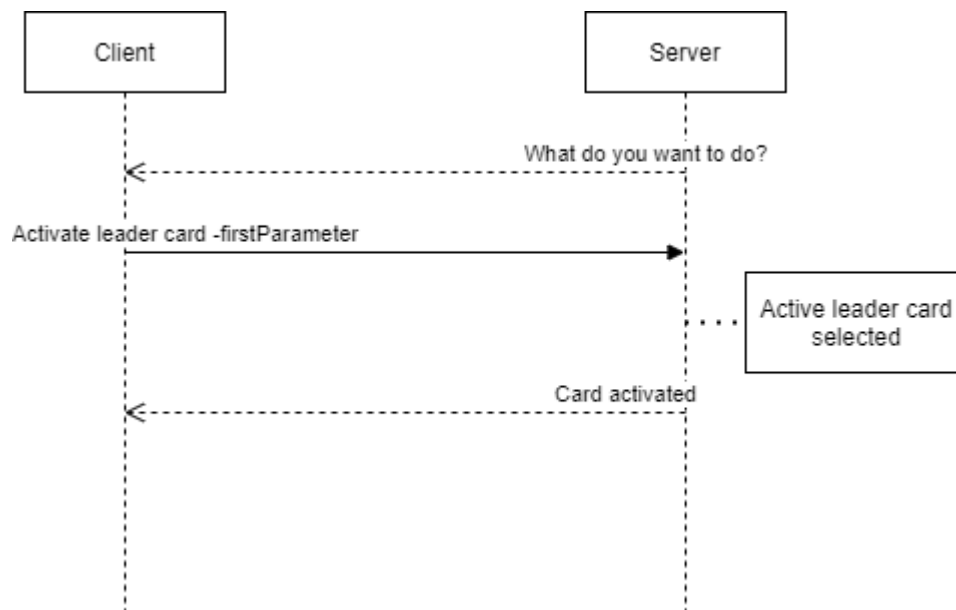
Messages:

- "Buy production card -firstParameter -secondParameter": plain text with two integers (firstParameter and secondParameter). firstParameter indicates the row and secondParameter indicates the column where is the card in the Card Market.
- "You can buy the selected card, please choose resources to use": plain text.
- "Warehouse depot" OR "Strongbox" OR "Extra depot": plain text sent by player to choose the resource location.
- "Resource used": plain text.
- "Select a position to insert the card in": plain text sent by Server to clarify where the player wants to insert the card in his Production Card Slot.
- "Position": Integer that indicates the position in player's Production Card Slot.
- "Card inserted in the selected slot": plain text to warn player that purchase is completed successfully.

Errors:

- “This resource isn’t available in your Warehouse depot”: this plain text is sent to player when he has not this resource in his Warehouse depot.
- “This resource isn’t required”: this plain text is sent if player choose a resource that is not required for this Production card purchase.
- “Select a valid resource (Coin, Stone, Servant or Shield)”: plain text sent to player if he did not select a valid resource.
- “Wrong resource”: plain text sent to player if he chooses a wrong resource to use.
- “Already empty”: plain text sent to player if his Extra depot is empty.
- “This resource isn’t available in your Strongbox”: plain text sent to player if the resource chosen is not available in his Strongbox.
- “This resource isn’t required”: plain text sent to player if the resource chosen is not required to buy this card.
- “Select a valid location (Warehouse depot, Extra depot or Strongbox)”: plain text sent to player if he chooses an invalid location.
- “Not a number”: if position is not an integer.
- “There are no cards left on the selected pile”: plain text sent to player when he is trying to buy a card from a pile where there are not any cards left.
- “No more space”: plain text sent to player when he has already had three cards of the same level.
- “No level 1 card active”: plain text sent to player when he is trying to buy a level 2 card when he has not a level 1 card activated.
- “No level 2 card active”: plain text sent to player when he is trying to buy a level 3 card when he has not a level 2 card activated.

Activate leader card:



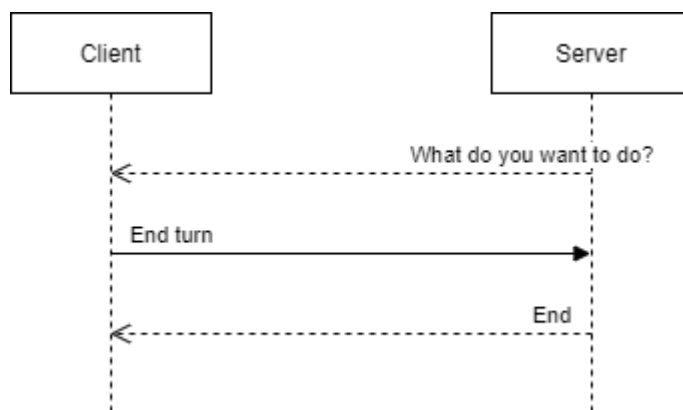
Messages:

- "Activated leader card -firstParameter": plain text with an integer ($1 < \text{firstParameter} < 2$) that represents the leader card that the player wants to active.
- "Card activated": plain text sent to player when the activation of the card is done successfully.

Errors:

- "Not a number": plain text sent to player when firstParameter is not an integer.
- "Unable to activate this card": plain text sent to player when he has not enough resources to activate this card.
- "Index out of bounds": plain text sent to player when he inserts a number for firstParameter that is not in the interval $1 < \text{firstParameter} < 2$.

End turn:



Messages:

- "End turn": plain text sent by player to server.
- "End": plain text sent by Server to warn player thar his turn is over.