PROTOCOL DESIGN

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BEAN MESSAGGIO CLIENT ---> SERVER:

public class Command {

String cmd;

Int numOfPlayers;

String username;

Int chosenLeader1;

Int chosenLeader2;

String chosenResource1;

String chosenResource2;

Int marketPosition;

Int shields;

Int stones;

Int servants;

Int coins;

String resourceType;

Int slotNumber;

Int fromSlotNumber;

Int toSlotNumber;

Boolean slot1Activation;

Boolean slot1Activation;

Boolean slot3Activation;

Boolean baseProductionActivation;

String baseInputResource1;

String baseInputResource2;

String baseOutputResource;

Boolean leader1SlotProduction;

Int leader1Code;

String leader1ConvertedResource;

Boolean leader2SlotProduction;

Int leader2Code;

String leader2ConvertedResource;

Int chestCoins;

Int chestStones;

Int chestShields;

Int chestServants;

Int storageCoins;

Int storageStones;

Int storageShields;

Int storageServants;

Char devCardColour;

Int devCardLevel;

Int leaderCode;

}

BEAN MESSAGGIO CLIENT <--- SERVER:

```
public class Response {
String cmd;
Boolean commandWasCorrect;
String resp;
Int leader1Code;
Int leader2Code;
Int leader3Code;
Int leader4Code;
Int numOfInitialResources;
Int jolly;
Int stones;
Int shields;
Int coins;
Int servants;
Int newTotalVictoryPoints;
Int [] newPlayersPositions = new int[4];
Int newBlackCrossPosition;
Boolean[] newActiveFirstPapalFavourCard = new boolean[4];
Boolean[] newActiveSecondPapalFavourCard = new boolean[4];
Boolean[] newActiveThirdPapalFavourCard = new boolean[4];
Int newGreen1
int newGreen2
int newGreen3
Int newPurple1
Int newPurple2
Int newPurple3
Int newBlue1
int newBlue2
Int newBlue3
```

```
Int newYellow1
int newYellow2
Int newYellow3
Char[] newFirstMarketRow = new char[4];
Char[] newSecondMarketRow = new char[4];
Char[] newThirdMarketRow = new char[4];
Char newExtraMarble
String playerUsername;
String[] playerUsernames = new String[4];
String newResourceTypeOfSLot1
String newResourceTypeOfSlot2
String newResourceTypeOfSlot3
Int newQuantityOfSlot1
Int newQuantityOfSlot2
Int newQuantityOfSlot3
String newResourceTypeOfLeaderSlot1
String newResourceTypeOfLeaderSlot2
Int newQuantityOfLeaderSlot1
Int newQuantityOfLeaderSlot2
Boolean leader1Active;
Boolean leader2Active;
Int newCoinsQuantity
Int newStonesQuantity
Int newShieldsQuantity
Int newServantsQuantity
Int newCurrentPlayer
}
```

INITIAL SETUP:

(this first one only if game was not initialized on server)

cmd = defineNumberOfPlayers

|<----------|

numOfPLayers

|---------->|

commandWasCorrect

|<----------|

cmd = loginReq

|<----------|

username

|---------->|

commandWasCorrect

resp = (username already exists) or (game already full)

|<----------|

cmd = leaderDistribution

leader1code

leader2code

leader3code

leader4code

|<----------|

ChosenLeader1

ChosenLeader2

|---------->|

commandWasCorrect

|<----------|

cmd = giveInitialResources

numOfInitialResources

|<----------|

ChosenResource1

ChosenResource2

|---------->|

commandWasCorrect

|<----------|

A fine del setup di tutti i giocatori:

|<----------|

Cmd = setupUpdate

Cmd = faithTrackUpdate

Poi 1 cmd = storageUpdate per ogni player del game

Poi 1 cmd = leaderCardsUpdate per ogni player del game

cmd = gameStarted

|<----------|

Poi i thread del server si mettono in attesa di comandi del client a cui rispondere

All MACROACTIONS

cmd = buyFromMarket

activateProduction

buyDevCard

activateLeader

discardLeader

moveOneResource

switchResourceSlots

endTurn

|---------->|

More in detail:

BUY FROM MARKET

Cmd = buyFromMarket

MarketPosition

|---------->|

commandWasCorrect

jolly

coins

stones

shields

servants

|<----------|

|<----------|

Cmd = marketUpdate

Coins

Stones

Shields

Servants

|---------->|

commandWasCorrect

coins

stones

shields

servants

|<----------|

ora il server si mette in attesa in un loop interno di messaggi del client che deve piazzare le risorse poiché deve decidere se piazzare ciscuna nello storage o nel chest

Cmd = placeResourceInSlot

ResourceType

SlotNumber

|---------->|

commandWasCorrect

coins

stones

shields

servants

|<----------|

|<----------|

Cmd = storageUpdate

Cmd = discardResource

ResourceType

|---------->|

commandWasCorrect

coins

stones

shields

servants

|<----------|

|<----------|

Cmd = faithTrackUpdate

Cmd =moveOneResource

fromSlotNumber

toSlotNumber

|---------->|

commandWasCorrect

coins

stones

shields

servants

|<----------|

|<----------|

Cmd = storageUpdate

Cmd =switchResourceSlots

fromSlotNumber

toSlotNumber

|---------->|

commandWasCorrect

coins

stones

shields

servants

|<----------|

|<----------|

Cmd = storageUpdate

Cmd =end_placing

|---------->|

commandWasCorrect

|<----------|

|<----------|

Cmd = faithTrackUpdate

ACTIVATE PRODUCTION

Cmd = activateProduction

Slot1Activation

Slot2Activation

Slot3Activation

BaseProductionActivation

BaseInputResource1

BaseInputResource2

BaseOutputResource

LeaderSlot1Activation

Leader1Code

Leader1ConvertedResource

LeaderSlot2Activation

Leader2Code

leader2ConvertedResource

|---------->|

commandWasCorrect

coins

stones

shields

servants

|<----------|

ChestCoins

ChestStones

ChestShields

ChestServants

StorageCoins

StorageStones

StorageShields

StorageServants

|---------->|

commandWasCorrect

coins //only if the command was wrong

stones

shields

servants

|<----------|

|<----------|

Cmd = storageUpdate

Cmd = chestUpdate

|<----------|

Cmd = faithTrackUpdate

BUY DEV CARD

Cmd = buyDevCard

DevCardColour

DevCardLevel

|---------->|

commandWasCorrect

coins

stones

shields

servants

|<----------|

|<----------|

Cmd = devCardsSpaceUpdate

ChestCoins

ChestStones

ChestShields

ChestServants

StorageCoins

StorageStones

StorageShields

StorageServants

|---------->|

commandWasCorrect

coins //if something wrong

stones

shields

servants

|<----------|

|<----------|

Cmd = storageUpdate

Cmd = chestUpdate

SlotNumber

|---------->|

CommandWasCorrect

|<----------|

|<----------|

Cmd = personalDevCardSlotUpdate

ACTIVATE LEADER

Cmd = activateLeader

leaderCode

|---------->|

commandWasCorrect

|<----------|

|<----------|

Cmd = leaderCardsUpdate

DISCARD LEADER

Cmd = discardLeader

leaderCode

|---------->|

commandWasCorrect

|<----------|

|<----------|

Cmd = leaderCardsUpdate

MOVE ONE RESOURCE

Cmd = moveOneResource

FromSlotNum

toSlotNum

|---------->|

commandWasCorrect

|<----------|

|<----------|

Cmd = storageUpdate

SWITCH RESOURCE SLOTS

Cmd = switchResourceSlots

FromSlotNum

toSlotNum

|---------->|

commandWasCorrect

|<----------|

|<----------|

Cmd = storageUpdate

END TURN

Cmd = endTurn

|----------->|

commandWasCorrect

|<-----------|

|<-----------|

Cmd = endTurnUpdate

List of updates:

(riferirsi allo schema della view su miro) (extra: [] indica che è un vettore di valori)

Cmd= setupUpdate

PlayerUsernames[]

<----------

Cmd = leaderCardsUpdate

PlayerUsername

Leader1Code; //if == 0 vuol dire che è stato scartato

Leader1Active;

Leader2code; //if == 0 vuol dire che è stato scartato

Leader2Active;

Cmd = totalvictorypointsUpdate

newTotalVictoryPoints

<----------

Cmd = fathTrackUpdate

newPlayersPositions[]

newBlackCrossPosition

newActiveFirstPapalFavourCard[]

newActiveSecondPapalFavourCard[]

newActiveThirdPapalFavourCard[]

<----------

cmd = devCardSpaceUpdate

NewGreen1

NewGreen2

NewGreen3

NewPurple1

NewPurple2

NewPurple3

NewBlue1

NewBlue2

NewBlue3

NewYellow1

NewYellow2

NewYellow3

<----------

Cmd = marketUpdate

NewFirstMarketRow[]

NewSecondMarketRow[]

NewThirdMarketRow[]

NewExtraMarble

<----------

Cmd = StorageUpdate

playerUsername

NewResourceTypeOfSLot1

NewResourceTypeOfSlot2

NewResourceTypeOfSlot3

NewQuantityOfSlot1

NewQuantityOfSlot2

NewQuantityOfSlot3

NewResourceTypeOfLeaderSlot1

NewResourceTypeOfLeaderSlot2

NewQuantityOfLeaderSlot1

NewQuantityOfLeaderSlot2

<----------

Cmd = chestUpdate

NewCoinsQuantity

NewStonesQuantity

NewShieldsQuantity

NewServantsQuantity

<----------

Cmd = PersonalDevCardSlotUpdate

playerUsername

NewCardOnStackCode

NumStackSlotToPlace

NewTotalCardsPlaced

<----------

Cmd = endTurnUpdate

newCurrentPlayer

<----------