## **Protocol**

## Server --> Client

1) Successful login of a user. Contains the nickname of the user and the size of the lobby at the moment of the connection. Is sent to each player of the lobby.

LOGIN SUCCESSFUL – nickname – size of the lobby

2) Unsuccessful login of a user. Contains the cause of the unsuccess. Is sent to the player.

LOGIN ERROR - cause of the unsuccess

3) Logout of a user. Contains the nickname of the user. Is sent to each player in lobby.

LOGOUT - nickname

4) Remaning time before the start of the game. Is sent to each player in lobby.

TIMER\_PING - time left

5) A game is started. Is sent to each player of the game.

STARTING\_GAME\_MSG

6) Set of four schemas different for each player of the game.

SET\_SCHEMAS – name of the schema 1 - name of the schema 2 – name of the schema 3 – name of the schema 4

7) Colour of the private objective extracted for the player.

SET\_PRIVATE\_CARD – colour of the private objective of the client

8) Names of the public objectives extracted for the game. Is sent to each player of the game.

SET\_PUBLIC\_OBJECTIVES – name objective 1 – name objective 2 – name objective 3

9) Numbers of the tool cards extracted for the game. Is sent to each player of the game.

SET\_TOOL\_CARDS - number tool card 1 - number tool card 2 - number tool card 3

10) Name of the schema choosed by a user and accepted by the server. Is sent to the player.

APPROVED\_SCHEMA - name of the schema

11) Name of each player of the game that has chosen a default schema and the name of the schema that he has chosen. Is sent to each player of the game.

SET\_OPPONENTS\_SCHEMAS – nickname 1 – name of the schema 1 – nickname 2 – name of the schema 2....

12) Json of the custom schema choosed by a user and accepted by the server. Is sent to the player.

APPROVED\_SCHEMA\_CUSTOM – json of the schema

13) Name of each player in the game that has choose a custom schema with the json of the schema that he has chosen. Is sent to each player of the game.

SET\_OPPONENTS\_CUSTOM\_SCHEMAS - nickname 1 - json of the schema 1 - nickname 2 - json of the schema 2....

14) A new round is started. Is sento to each player of the game.

```
START ROUND
```

15) A new turn is started, contains the name of the new turn's player . Is sent to each player of the game.

```
START_TURN - nickname
```

16) Actions that the player can perform at the moment. Is sent to the player that has the turn.

```
SET_ACTIONS - action1 - action2 - action3 ....
```

17) Contains the colour and value of each dice extracted for the current round. Is sent to each player of the game.

SET\_DICE\_SPACE – colour of the first dice – value of the first dice – colour of the second dice - value of the second dice ....

18) Successfully draft of a dice. Is sent to the turn's player.

```
DRAFT_DICE_ACCEPTED
```

19) Successfully insertion of a dice in the schema of the turn's player. Is sent to the turn's player.

```
INSERT_DICE_ACCEPTED
```

20) Successfully change of position of a dice in the schema of the turn's player. Is sent to the turn's player.

```
MOVE_DICE_ACCEPTED
```

21) Unsuccessfully change of the position of a dice in the schema of the turn's player. Is sent to the turn's player.

```
MOVE DICE ERROR
```

22) Index of the dice space where a dice has been removed. Is sent to each player of the game.

```
PICK_DICE_SPACE - index of the dice space
```

23) Unsuccessfully pick of a dice from the dice space. Is sent to the turn's player

```
PICK_DICE_SPACE_ERROR
```

24) Name of the player that has inserted a dice in his schema, row and column of the schema where the dice has been inserted and colour and value of the dice. Is sent to each player of the game.

PLACE\_DICE\_SCHEMA – nickname – row of the schema – column of the schema – colour of the dice – value of the dice

25) Unsuccessfully insertion of a dice in the schema of the turn's player. Is sent to the turn's player.

```
PLACE_DICE_SCHEMA_ERROR
```

26) Name of the player that has removed a dice from his schema, row and column of the schema where the dice has been removed. Is sent to each player of the game.

PICK DICE SCHEMA - nickname - row of the schema - column of the schema

27) Unsuccessfully removal of a dice from the schema of the turn's player. Is sent to the turn's player.

PICK\_DICE\_SCHEMA\_ERROR

28) Favors left to the player when he used a tool card successfully. Is sent to the turn's player.

USE\_TOOL\_CARD\_ACCEPTED - favors

29) Number of the tool card that has been used. Is sent to each player of the game.

USED\_TOOL\_CARD - number of the tool card

30) Number of the tool card that has not been used. Is sent to each player of the game.

NOT\_USED\_TOOL\_CARD - number of the tool card

31) Unsuccessfully use of a tool card. Is sent to the turn's player.

USE TOOL CARD ERROR

32) Successfully increment or decrement of the value of a dice. Is sent to the turn's player.

CHANGE VALUE ACCEPTED

33) Unsuccessfully increment of decrement of the value of a dice. Is sent to the turn's player.

CHANGE\_VALUE\_ERROR

34) Successfully insertion of a dice in the schema of the turn's player.

PLACE DICE ACCEPTED

35) Successfully rolled a dice. Contains the new value of the dice. Is sent to the turn's player.

ROLL\_DICE\_ACCEPTED – new value of the dice

36) Successfully swap of a dice with one of the dice bag. Is sent to the turn's player.

SWAP\_DICE\_ACCEPTED

37) Indeces of round and dice of a dice in the round track that has been removed. Is sent to each player of the game.

PICK\_DICE\_ROUND\_TRACK – index of the round – index of the dice

38) Unsuccessfully removal of a dice from the round track. Is sent to the turn's player.

PICK\_DICE\_ROUND\_TRACK\_ERROR

39) Index of the round, colour and value of each dice inserted in the round track. Is sent to each player of the game.

PLACE\_DICE\_ROUND\_TRACK - index of the round - colour of the first dice - value of the first dice - colour of the second dice - value of the second dice...

40) Successfully flip of a dice. Contains the new value of the dice.

FLIP DICE ACCEPTED - new value of the dice

41) Successfully cancel of the use of a toolcard. Contains the favors left to the turn's player. Is sent to the turn's player.

```
CANCEL_USE_TOOL_CARD_ACCEPTED - favors
```

42) Successfully insertion of a dice in the dice space. Contains the colour and the value of the dice. Is sent to each player of the game.

```
PLACE_DICE_SPACE - colour of the dice - value of the dice
```

43) Successfully insertion of a dice in the dice space. Is sent to the turn's player.

44) Successfully rolled a dice. Is sent to the turn's player.

45) Successfully swapped a dice with one of the dice bag. Contains the colour and the value of the new dice. Is sent to the turn's player.

```
SWAP_DICE_BAG_ACCEPTED - colour of the dice - value of the dice
```

46) Successfully changed value of a dice. Is sent to the turn's player.

47) Unsuccessfully changed value of a dice. Is sent to the turn's player.

48) Time left untill the end of the turn. Is sent to each player of the game.

49) Name of the player that has won the game. Is sent to each player of the game.

50) Name of each player of the game and score that he has totalized. Is sent to each player of the game.

SET\_RANKINGS - nickname of the first player - score of the first player - nickname of the second player - score of the second player....

## Client --> Server

1) Message of login of the player. Contains the name of the player.

LOGIN – nickname

2) Message of logout of the player.

DISCONNECTED

3) Name of the user and the name of the schema that he has choosen.

```
CHOOSE_SCHEMA - nickname - name of the schema
```

4) Contains the index of the dice space where a dice will be removed, row and column of the schema where it will be inserted.

INSERT DICE – index of the dice space – row of the schema – column of the schema

5) Contains the number of the tool card that will be used.

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USE TOOL CARD - number of the tool card
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6) Contains row and column of the schema where there is a dice and row and column where it will be moved.

```
MOVE_DICE - old row - old column - new row - new column
```

7) Contains the index of the dice space from where the dice will be drafted.

```
DRAFT_DICE – index of the dice space
```

8) Contains the tow and column of the schema where a dice will be inserted.

```
PLACE_DICE – row of the schema – column of the schema
```

9) Contains INCREMENT if the user wants to increment by one the value of a dice or DECREMENT if he wants to decrement it by one.

10) Rolls a dice.

11) Contains the indeces of a round and a dice of the round track where the actual dice will be swapped with another one.

12) Cancels the use of a tool card.

13) Ends the turn of the player.

14) Flips a dice.

15) Place a dice in the dice space.

16) Rolls each dice in the dice space.

17) Change a dice with another one of the dice bag.

18) Changes the value of a dice to the specified value.

CHOOSE\_VALUE – new value of the dice

19) Name of the user and json of the custom schema that he has chosen.

 ${\tt CUSTOM\_SCHEMA-nickname-json\ of\ the\ schema}$