MAGNO, Grace

MERCADO, Emir R.

YAP, Sharmaine A.

Documentation of the Protocol
MMP - MingMing Protocol

Messages Received by the Server

Message Format	Actions Taken
`SET_ALIAS <client alias>`	The client sends the message to the server, introducing itself to the server by giving its alias.
`LEAVE <client id>`	Client A sends the message to the server, saying that it wants to disconnect from the server. The server and the client then closes the sockets that connect them. Finally, the server informs the other clients that the client A has left.
`READY <client id>`	Client A sends the message to the server while in the waiting room, saying that it is ready (not ready) to play. The server then updates its variables and informs the clients of the change. It works like a toggle button.

GAME_CMD <command>	Client A sends the message to the server during the game, saying that a certain action has happened from the client's side. The command could either be a TIMEOUT or a COMMAND (button press) from the control panel. (see the variations below)
GAME_CMD TIMEOUT	The server received a timeout message from client A. Meaning, the command given to the client was not executed within the time given. The server sends a new command to client A and informs the other clients of the game event.
GAME_CMD COMMAND:<cmd_num>:<state_num>	The server received a command message from client A. The server checks if the command sent by client A is any of the commands assigned to the other clients. If yes, the server updates the game variables, gives the clients an update of the current score, and assigns a new command to client A. Otherwise, the server discards the message.

Messages Received by the Client

Message Format	**Actions Taken**
SETID <status_code> <status_code> - <client_id> - SERVER_BUSY the hosts in the room are currently playing - SERVER_FULL the waiting room is full - SERVER_DEAD the server has recently closed	Client A was able to connect to the server. If the server sends the message containing client A's ID, it means that the client has been allowed to enter the waiting room. The server then informs the other clients that client A has entered the room. Else, the server will send the status code indicating the reason the server cannot accommodate the client.
LEFT <client_id>	The client was informed that a certain client has left the room voluntarily.
KICK <client_id>	Client A was informed that a certain client has been kicked out (or is to be kicked out) of the room by the server. If <client_id> is equal to client A's ID, Client A leaves the room.
SERVER_LEFT	The client was informed that the server has left or has been turned off. The client then leaves the room by closing its connection to the server.

PLAYERS <player1>,<player2>,<player3>,<player4>	The client receives player information from the server. Each player information includes the player's ID, Alias, and Ready status. The client updates its own player information to be displayed.
GAME START	The server informs the client that the game has started. The client then sets its status to playing.
GAME KILL	The client is informed that the server exits while the game is happening. The client then disconnects as well.
GAME_UPDATE <update>	The client receives a game update from the server. (see variations below)
GAME_UPDATE PANELS <panel1>,<panel2>,<panel3>,<panel4>,<panel5>,<panel6>	The client receives the set of six switch IDs that it will use for the stage.
GAME_UPDATE CURRENT:<score> <client_id>:<cmd_num>:<state_num>	Client A receives a score update from the server. Client A updates its own score value with <score> to be displayed. Also, if the change in score is caused by client A (using <client_id>), it will update the command assigned to it through the values <cmd_num> and <state_num>.

Notes:

1. Each switch in a player's panel produces a command string when clicked.

```
COMMAND:<cmd_num>:<state_num>
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The <cmd_num> indicates the switch's id in the switch database (see **`mingpanel.py`**), and the <state_num> indicates on which state the switch is currently on (toggle on/off, level 1-3, level 1-5)