

Tick Tack Toenail

General Message Format

Text based format

List of Messages

- Client Connecting to Server
 - Client to Server: "CONN"
 - Server to Client: "CSID:(SESSION_ID)"
 - Client to Server: "CSID:(SESSION_ID)"
 - Server to Client: "CONF"
- Client Requesting Game
 - Client to Server: "PLAY:(SESSION_ID)"
 - Server to Client: "PLAY:(SESSION_ID)"
 - Server can connect or reject Client
 - Server to Client: "CONN:(SESSION_ID):(GAME_ID):(X/O)"
 - This step may take some time if there is no available 2nd player
 - Server to Client: "RJCT:(SESSION_ID):(REASON)"
- Server sending update of move
 - Server to Client: "TURN:(SESSION_ID):(GAME_ID):(POSITION)"
 - The session id is actually that of the client, not that of who made the move
 - The server sends this update to the player who did not make the move
- Client Requesting a Move
 - Client to Server: "TURN:(SESSION_ID):(GAME_ID):(POSITION)"
 - Server can reject or accept move
 - Server to Client: "CONF:(SESSION_ID):(GAME_ID):(POSITION)"
 - Server to Client: "RJCT:(SESSION_ID):(GAME_ID):(POSITION)"
- Client Disconnects From Game
 - When a player disconnects from the game, the other player wins the game.
 - Client to Server: "DCON:(SESSION_ID):(GAME_ID)"
 - Server to Client: "DCON:(SESSION_ID):(GAME_ID)"
- Client Disconnects From Server
 - When a player disconnects from the server, if there is a game, the other player wins the game.
 - Client to Server: "DCON:(SESSION_ID)"
 - If there is a game in progress with that session id
 - Server to Client: "DCON:(SESSION_ID):(GAME_ID)"
 - Server to Client: "DCON:(SESSION_ID)"
- Server Disconnects Client
 - This may happen because the client timed out or administrative action
 - In the event the client timed out, the server still sends a message
 - Server to Client: "DCON:(SESSION_ID):(GAME_ID)"
 - Server to Client: "DCON:(SESSION_ID)"
 - It is intentional that the client does not get a reason for the disconnect

- Game Ends In Win, Lose or Tie
 - Server to Client: "ENDG:(SESSION_ID):(GAME_ID):(W/L/T)"
 - Server to Client: "DCON:(SESSION_ID):(GAME_ID)"

Values

(SESSION_ID): A hex number for the session

(GAME_ID): A hex code for the game

(POSITION): 0-9

(X/O): Whether the player is X or O

(W/L/T): Whether the player wins loses or ties W L T

(REASON): A contextual error code

CONN: Connect

DCON: Disconnect

RJCT: Reject

CONF: Confirm

ENDG: End the game

TURN: Request/Response to making a move

PLAY: Request/Response to playing a game

CSID: Request/Response to connect to server

Value to Position

1	2	3
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4	5	6
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7	8	9

An Example game

Player1 Connects to Server; Recieves ID:9AF

Client Message	Server Message
CONN	
	CSID:9AF
CSID:9AF	
	CONF

Player1 Requests Game; Recieves ID:6BE and X

Client Message	Server Message
PLAY:9AF	

Client Message	Server Message
	PLAY:9AF
	CONN:9AF:6BE:X

Player2 Connects to Server; Recieves ID:8CD

Client Message	Server Message
CONN	
	CSID:8CD
CSID:8CD	

Player2 Requests Game; Recieves ID:6BE and O

Client Message	Server Message
PLAY:8CD	
	PLAY:8CD
	PLAY:8CD:6BE:O

**As per rules of the game X goes first
Player1 Makes First Move on 3**

Client Message	Server Message
	TURN:9AF:6BE:0
TURN:9AF:6BE:3	
	CONF:9AF:6BE:3

Player2 Recieves last Move on 3 Makes A Move on 3 Fails, and Moves on 4 Successfully

Client Message	Server Message
	TURN:8CD:6BE:3
TURN:8CD:6BE:3	
	RJCT:8CD:6BE:3:1
TURN:8CD:6BE:4	
	CONF:8CD:6BE:4

Player1's Perspective Player1 Makes A Winning Move

Client Message	Server Message
	TURN:9AF:6BE:9
TURN:9AF:6BE:6	
	CONF:9AF:6BE:6
	ENDG:9AF:6BE:W
	DCON:9AF:6BE:0

Player2's Perspective Player1 Makes A Winning Move

Client Message	Server Message
	TURN:9AF:6BE:6
	ENDG:9AF:6BE:L
	DCON:9AF:6BE:0

State Machine

