

## OmegaChess

- Has user String for the current user
- Has Enumeration SCREEN
- Is the core of our program, it launches the client which processes requests from the different screens and sends them to the server.

## OCClient

- Has objects serverHostName, localHostName, hostName, portNumber, socket, out, and in
- OmegaChess
- OCMessages

## OCMessage

- Has objects map and keys
- Converts a request and response to and from a string for Server-Client communication
- OCClient
- OCPProtocol

## OCMultiServer

- Listens for new connections from clients
- If the connection is successful it passes the client to a new OCMultiServerThread

## OCMultiServerThread

- Uses OCPProtocol to process requests from the client
- OCMultiServer

## OCProtocol

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>Processes requests sent from the client and returns an OCMessage as a String to the client</li></ul> | <ul style="list-style-type: none"><li>OCMultiServerThread</li></ul> |
|--|---|

## OCServerData

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>Has objects profiles, matches, and previousGames</li><li>Stores variables on the server to allow users to come and go as they please</li></ul> | <ul style="list-style-type: none"><li>OCMultiServer</li><li>OCMultiServerThread</li><li>OCProtocol</li></ul> |
|--|--|

## MainMenuScreen

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>Has objects stage, loginBtn, registerBtn, and exitBtn</li><li>Choose a screen from login or register</li></ul> | <ul style="list-style-type: none"><li>OmegaChess</li><li>OCClient</li></ul> |
|--|---|

## InviteScreen

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>Has objects stage, submit, home, opponentName, anotherUser</li><li>Sends invite request to the server from the client</li></ul> | <ul style="list-style-type: none"><li>OmegaChess</li><li>OCClient</li></ul> |
|---|---|

## LoginScreen

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>Has objects stage, loginBtn, backBtn, nickNameBox, passwordBox</li><li>Sends login request to the server</li><li>Logs the user in and takes them to the lobby screen</li></ul> | <ul style="list-style-type: none"><li>OmegaChess</li><li>OCClient</li></ul> |
|--|---|

## RegisterScreen

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Has objects stage, registerBtn, backBtn, emailBox, nickNameBox, and passwordBox</li><li>• Checks password strength</li><li>• Sends a register request to the server then returns to MainMenuScreen</li></ul> | <ul style="list-style-type: none"><li>• OmegaChess</li><li>• OCClient</li></ul> |
|--|---|

## LobbyScreen

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• Has objects stage, createGameBtnm, resumeGameBtn, logoutBtn, profileBtn, and exitBtn</li><li>• Gives the player the option to view their profile, send an invite to another user, and resume a match they are in</li></ul> | <ul style="list-style-type: none"><li>• OmegaChess</li></ul> |
|--|--|

## ProfileScreen

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Has objects, stage, unregisterBtn, lobbyBtn, changePwBtn, changeNicknameBtn, skin, style_label, nickname</li><li>• Displays the User's information</li><li>• If you are viewing your own profile option to change nickname and password</li><li>• View the users win/loss/tie ratio</li><li>• Sends a request to the server to get the user's data</li></ul> | <ul style="list-style-type: none"><li>• OmegaChess</li><li>• OCClient</li></ul> |
|--|---|

## RulesScreen

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Has rules</li><li>• Shows the rules of Omegachess to the user</li></ul> | <ul style="list-style-type: none"><li>• OmegaChess</li></ul> |
|---|--|

## MailboxScreen

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Has objects outBox, inBox, outCount, inCount,</li> <li>• Has a button to show the user their outBox/inBox</li> <li>• When viewing outBox cancel an invite</li> <li>• When viewing inBox accept/decline an invite</li> </ul> | <ul style="list-style-type: none"> <li>• OmegaChess</li> <li>• OCClient</li> </ul> |
|--|--|

## MatchScreen

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Has objects chessBoard, fromSquare, toSquare, and turnLabel</li> <li>• Show the users a game board to play against another user</li> <li>• Shows the users the name of the user of whose current turn it is</li> <li>• When a game is ended it shows a pop-up regarding what happens</li> <li>• Players take turns, preventing the users from moving pieces when it is not their turn.</li> <li>• Players are able to return to the lobby or forfeit a match</li> </ul> | <ul style="list-style-type: none"> <li>• OmegaChess</li> <li>• OCClient</li> </ul> |
|--|--|

## ArchivesScreen

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Has objects stage and nickname of the current user</li> <li>• Show previous games that the user has won and lost</li> </ul> | <ul style="list-style-type: none"> <li>• OmegaChess</li> <li>• OCClient</li> </ul> |
|--|--|

## BoardSquare

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Has currentPiece</li> <li>• Contains the sprite of the currentPiece on it</li> <li>• Highlights if it is contained in the legalMoves of a piece</li> </ul> | <ul style="list-style-type: none"> <li>• MatchScreen</li> </ul> |
|---|---|

## GameRecord

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Has objects winner, loser, players, numMoves, and draw</li> <li>• Creates an object that holds the results of a game</li> <li>• Stores it in the OCServerdata/UserProfile</li> </ul> | <ul style="list-style-type: none"> <li>• OCServerData</li> </ul> |
|---|--|

## UserProfile

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Has objects nickname, password, emailAddress, gamesWon, gamesLost, gamesTied, playedWith, and mailbox</li> <li>• Stores the data of a user</li> </ul> | <ul style="list-style-type: none"> <li>• OCServerData</li> </ul> |
|--|--|

## Mailbox

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Has objects sent and received</li> <li>• Holds lists of sent and received invites between other users</li> </ul> | <ul style="list-style-type: none"> <li>• UserProfile</li> </ul> |
|---|---|

## Invite

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Has objects inviter, invitee, accepted, and declined</li> <li>• Send an invite to a user you deem by their username</li> </ul> | <ul style="list-style-type: none"> <li>• Mailbox</li> <li>• OCMultiServer</li> </ul> |
|---|--|

## Notification

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Has objects event, message, date</li> <li>• Notifies the user if they have any change in their mailbox</li> <li>• Notify if you have a game request</li> <li>• Notify if someone accepts/declines game invite</li> </ul> | <ul style="list-style-type: none"> <li>• Mailbox</li> <li>• OCMultiServer</li> </ul> |
|---|--|

## Match

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Has objects board, player1Pieces, player2Pieces, and turn</li> <li>• The match is the instance of a game between two players.</li> <li>• I keeps track of the current board state</li> <li>• When a game is ended it sends a notification to the server regarding if it was ended by forfeit or Checkmate</li> </ul> | <ul style="list-style-type: none"> <li>• OCServerData</li> </ul> |
|---|--|

## TurnTracker

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Has objects player1, player2, currentTurnPlayer, and currentTurnColor</li> <li>• Keeps track of whose turn it is</li> </ul> | <ul style="list-style-type: none"> <li>• Match</li> </ul> |
|--|---|

## ChessBoard

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Has objects moves, black_pieces, white_pieces, and board</li> <li>• Allows a piece to move based on its list of legalMoves</li> </ul> | <ul style="list-style-type: none"> <li>• Match</li> <li>• ChessPiece</li> </ul> |
|--|---|

Abstract

## ChessPiece

Pawn, Rook, Knight, Bishop, Queen, King, Champion, Wizard

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Has objects row, column, and moved</li> <li>• Has Enumeration Color</li> <li>• Returns a list of Moves as a piece's legalMoves</li> </ul> | <ul style="list-style-type: none"> <li>• ChessBoard</li> <li>• Move</li> </ul> |
|--|--|

## LegalMoves

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Has objects listofMoves, isEnPessant, and isCastle</li> <li>• This is a helper class for holding the legal moves of a piece</li> </ul> | <ul style="list-style-type: none"> <li>• ChessPiece</li> </ul> |
|---|--|