**client**

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| Client |
| -String : username  -ServerConnector : sc  -CommandThread : commandThread  -boolean : isHost  -HostServer : hs  -Playlist : playlist |
| +getAvailableSongs() : List<Song>  +refreshPlaylist() : Playlist  +upvoteSong(Song) : boolean  +downvoteSong(Song) : boolean  +removeSong(Song) : boolean  +addSong(Song) : boolean  +advanceSong() : Song  +joinPlaylist(String) : boolean  +exitPlaylist() : boolean  +stopPlaylist() : boolean  +startPlaylist(String,int,List<Song>) : boolean  +getPlaylist(String,String) : List<Song>  +getPlaylists(String) : List<String>  +removePlaylist(String) : boolean  +followUser(String) : boolean  +getFollowing() : List<String>  +createPlaylist(String,Playlist) : boolean  +copyPlaylist(String,String) : boolean  +isHost() : boolean  +getUsername() : String |

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| ServerConnector |
| -Socket : server  -ObjectInputStream : ois  -ObjectOutputStream : oos |
| +ServerConnector(String,String) > IOException  +Login(String,String) : boolean  +addHost(String,String) : boolean  +connect(String) : Host  +removeHost(String) : boolean  +getPlaylist(String,String) : List<Song>  +getPlaylists(String) : List<String>  +followUser(String,String) : boolean  +getFollowing(String) : List<String>  +createPlaylist(String,String,Playlist) : boolean  +copyPlaylist(String,String,String) : boolean  -sendMessage(Object) : void |

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| CommandThread |
| -int : TIMEOUTATTEMPTS  -int : CONNECTIONSLEEP  -ConcurrentLinkedQueue<HostCommand> : commands  -Socket : socket  -String : hostname  -int : port  -ObjectInputStream : ois  -ObjectOutputStream : oos  -List<Song> cachedSongs |
| +CommandThread(Socket,String,int) > IOException  +addCommand(HostCommand) : void  +executeImmediate(ImmediateCommand) : ServerReply  +executeCommand(HostCommand) : ServerReply  +exitPlaylist() : void  +run() : void  -reconnect() : void |

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| Playlist |
| -List<PlaylistSong> : allSongs  -List<PlaylistSong> : playedSongs  -List<PlaylistSong> : toPlay  -PlaylistSong : current |
| +Playlist()  +addSong(Song) : boolean  +deleteSong(Song) : boolean  +upvote(Song) : boolean  +downvote(Song) : boolean  +sortToPlay() : void  +advanceSong() : Song  +songIndex(Song) : int  +getAllSongs() : List<PlaylistSong>  +getPlayedSongs() : List<PlaylistSong>  +getToPlay() : List<PlaylistSong>  +getCurrentSong() : PlaylistSong |

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| PlaylistSong |
| +long : servialVersionUID  -Song : song  -Playlist : owner  -int : voteScore  -boolean : played |
| +PlaylistSong(Song)  +PlaylistSong(PlaylistSong)  +upvote() : void  +downvote() : void  +setVoteScore(int) : void  +setOwner(Playlist) : void  +setPlayed(boolean) : void  +getSong() : Song  +getScore() : int  +getOwner() : Playlist  +hasPlayed() : boolean  +toString() : String |

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| Song |
| +long : servialVersionUID  -String : uri  -String : songName  -String : songArtist |
| +Song(String,String,String)  +equals(Song) : boolean  +getURI() : String  +getSongName() : String  +getSongArtist() : String |

**host**

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| HostServer |
| -UpdateThread : updater  -ServerSocket : ss  -int : port  -List<Song> : availableSongs |
| +HostServer(int,UpdateThread,List<Song>)  +stopHost() : void  +run() : void  -readConfigurationFile() : void |

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| ReceiverThread |
| -UpdateThread : updater  -ObjectInputStream : ois  -ObjectOutputStream : oos  -Socket : socket  -List<Song> : availableSongs |
| +run() : void |

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| UpdateThread |
| -ConcurrentLinkedQueue<HostCommand> : commands  -Playlist : playlist  -boolean : running |
| +UpdateThread(Playlist)  +addCommand(HostCommand) : void  +stopUpdating() : void  +getRefreshedPlaylist() : Playlist  +run() : void  -sendMessage(Object,ObjectOutputStream) : void |

**server**

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| Server |
| -ServerSocket : ss  -int : port  -Map<String,Host> : activeHosts |
| +Server(int)  +shutDownServer() : void  +removeServerThread(ServerThread) : void  +addHost(String,String,int) : void  +removeHost(String) : void  +run() : void  +main() : void |

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| ServerThread |
| -ObjectInputStream : ois  -ObjectOutputStream : oos  -Server : server  -DatabaseConnector : dc |
| +ServerThread(Socket,Server)  +run() : void  -sendMessage(Object) : void |

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| DatabaseConnector |
| -Connection : conn |
| +DatabaseConnector()  +userExists(String) : boolean  +createUser(String,String,String) : boolean  +login(String,String) : boolean  +getFriends(String) : List<String>  +followFriend(String,String) : boolean  +playlistExists(String,String) : boolean  +createPlaylist(String,String,List<PlaylistSong>) : boolean  +copyPlaylist(String,String,String) : boolean  +removePlaylist(String,String) : boolean  +getPlaylist(String,String) : List<Song>  +getPlaylists(String) : List<String>  +getFollowing(String) : List<String>  -hashPassword(String) : String |