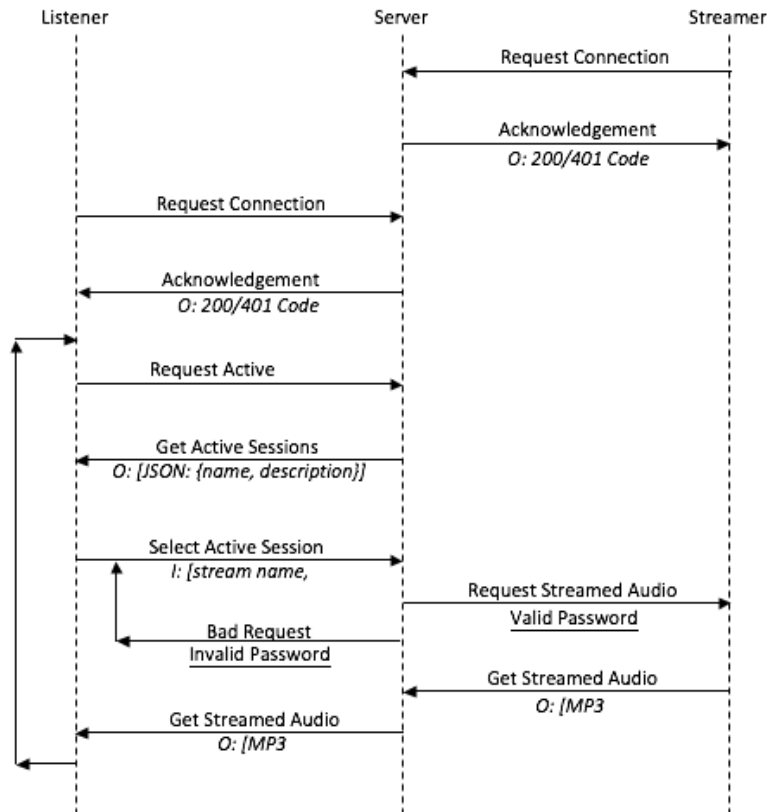Program Flow Diagram

Above the arrow = Action that happens.
Below the arrow (Italics) = Input (I) or Output (O) that the Action does.
Below the arrow (Underlined) = If the situation is fulfilled, follow that direction.

Listener   Server   Streamer

                                    Request Connection
                                 ◄─────────────────

                                    Acknowledgement
                                 ─────────────────►
                                     O: 200/401 Code

        Request Connection
   ─────────────────►

        Acknowledgement
   ◄─────────────────
         O: 200/401 Code

        Request Active
   ─────────────────►

        Get Active Sessions
   ◄─────────────────
   O: [JSON: {name, description}]

        Select Active Session
   ─────────────────►
        I: [stream name,
                                     Request Streamed Audio
                                 ─────────────────►
                                       Valid Password
         Bad Request
   ◄─────────────────
        Invalid Password
                                     Get Streamed Audio
                                 ◄─────────────────
                                        O: [MP3
        Get Streamed Audio
   ◄─────────────────
          O: [MP3

The Listener:
       1. Requests a Connection to the Server.
       2. Gets Acknowledgement from the Server of the Connection (200 or 401 Code).
       3. Requests a list of Active Sessions.
       4. Gets a list of Active Sessions from the Server (in the form of JSON data).
       5. Select an Active Session to Join - insert stream name/password.
       6. a. If Password is valid, request to the Streamer the music data.
          b. If Password is invalid, reask for correct password.
       7. Move stream data from Streamer to Server.
       8. Move stream data from Server to Listener (to play).
       9. Repeat to Step 3 if they want to listen to another channel.

The Server:
       1. Listen for Requests

Above the arrow = Action that happens.
Below the arrow (Italics) = Input (I) or Output (O) that the Action does.
Below the arrow (Underlined) = If the situation is fulfilled, follow that direction.

2. a. If request is for Connection -> send connection with 200/401 Code.
   b. If request is for Active Sessions -> send active sessions list in JSON form.
   c. If request is to Join Session -> check password
     i. If valid, send request for music to Streamer
     ii. If invalid, send acknowledgement of failure to Listener
   d. If request is to Send Audio -> send audio to all Listeners

The Streamer:
   1. Requests a Connection to the Server.
   2. Gets Acknowledgement from the Server of the Connection (200 or 401 Code).
   3. Play the music.
   4. If requests come in for streaming, send data.