Jukebox Server

PROJECT DEMONSTRATION

Server startup

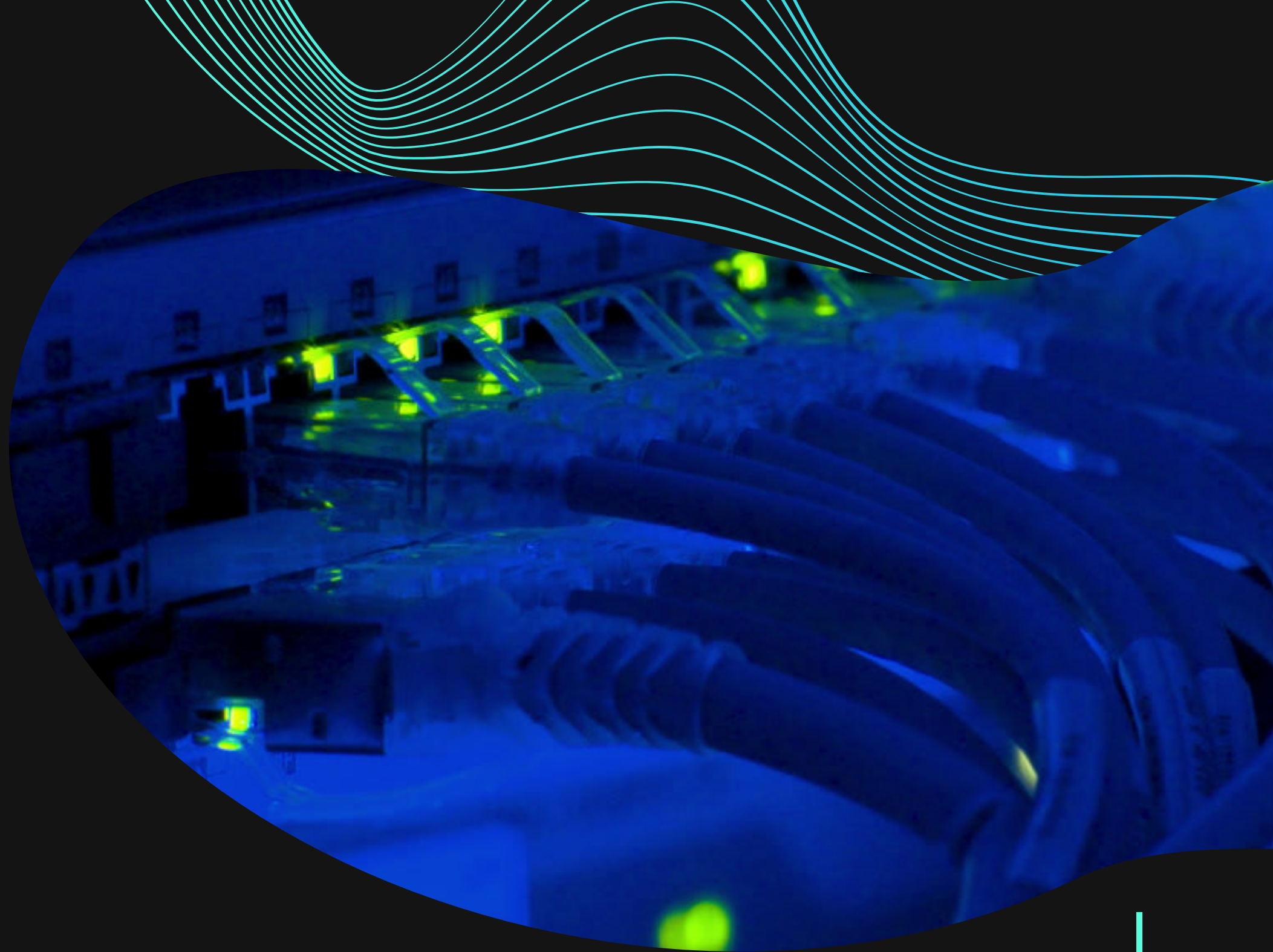`./jukebox-server <port> <dir>`

Search directory dir for mp3 files, and begin listening on port for new connections

NEW CLIENT

Once a client connects, the server adds to its list of connected clients and waits for input

ANOTHER CLIENT?

The server uses epoll to allow multiple clients to send and receive data at the same time

The client

INITIAL CONNECTION

Creates a new socket using the specified server and port to test if they are valid, then closes it

HANDLING CLIENT REQUESTS

Starts a new connection for each request

Supported Functionality

LIST

Lists songs available to the client

INFO <SONG_NUM>

Presents information on specific song

PLAY <SONG_NUM>

Plays an mp3 file for the client until ends or stopped

STOP

Stops a song which is currently playing

EXIT

Stops a song if playing and ends the client

List

- Client sends a request (text message) for a list of songs
- Server replies with text message…
  No.   Filename
  (song_num) mp3_filename
  (song_num) mp3_filename
  …

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Info <song_num>

- Client sends a request (text message) for information on a specific song
- Server checks if provided song number is valid
    1. If invalid, server responds with specified error (text message)
    2. If valid, server responds song information…
        i. If mp3.info available, respond using info from file (text message)
        ii. If mp3.info unavailable, respond with song number and filename (text message)

Play <song_num>

- If song is currently playing, client sends a request (text message) to make the server stop playing the song
- Client sends a request (text message) to play a specific song
- Server checks if provided song number is valid
   1. If invalid, server responds with specified error (text message)
   2. If valid, server responds by sending message (file chunks) back

Stop and Exit

- If song is currently playing, client sends a request (text message) to make the server stop playing the song (exit breaks out of the client)
- Server sends nothing back!

PROTOCOL CHANGES

No initial "hello" messages
No shutdown messages,
No server-check for invalid messages
(besides invalid song number)
No connection close after inactivity

Info: check by song number, not name
Info: No more "try list" when invalid num
Play: send file chunks, not "mp3 message"
Play: No more "try list" when invalid song
number sent to server
Stop: didn't exist, now added! Yay!