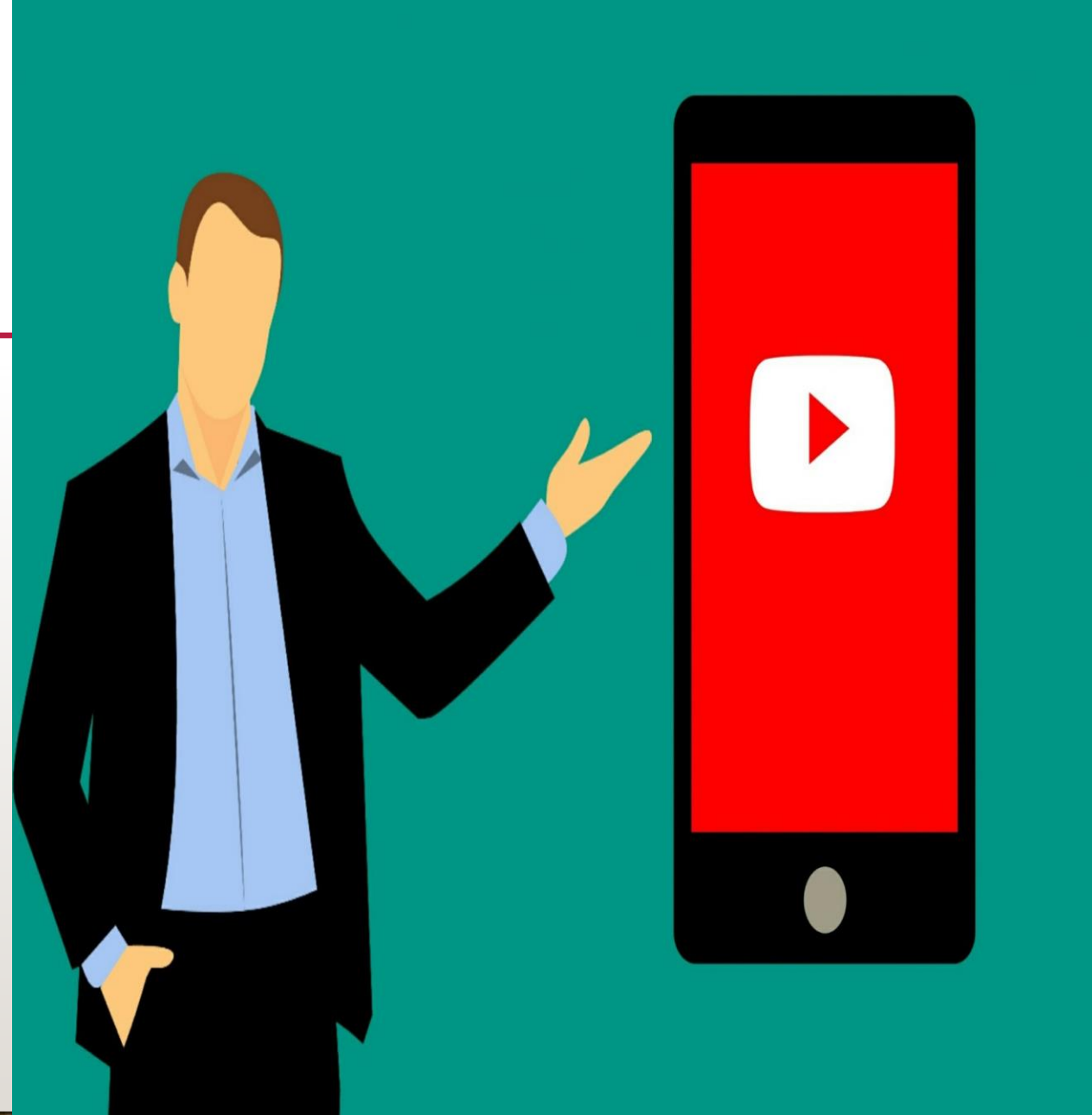


YouTube Video Player

THE IDEA BEHIND
THE PROJECT IS
FOR THE CLIENT
TO MANAGE
YOUTUBE
FUNCTIONS
REMOTELY



SYSTEM

MSP432P401R LAUNCHPAD



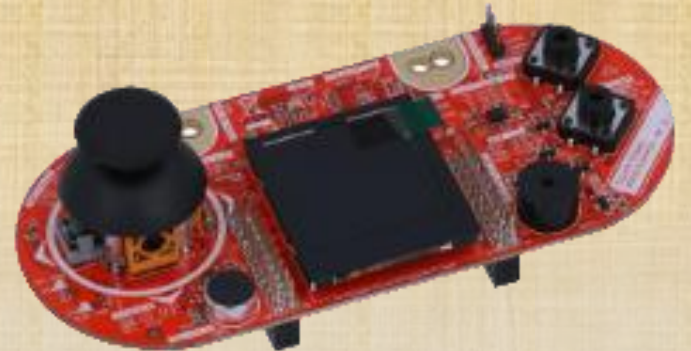
development board for the
MSP432P401R
microcontroller.

ESP32 (ESP32-WROOM-32)



microcontroller with Wi-Fi and
Bluetooth for IoT applications.

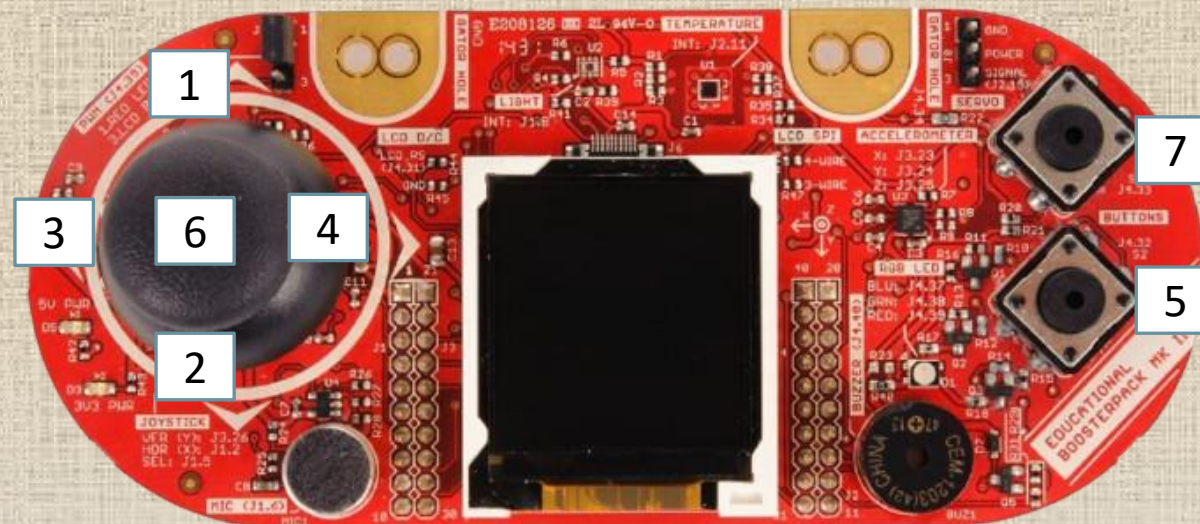
MSP432P401R BOOSTERPACK
BOOSTXL-EDUMKII



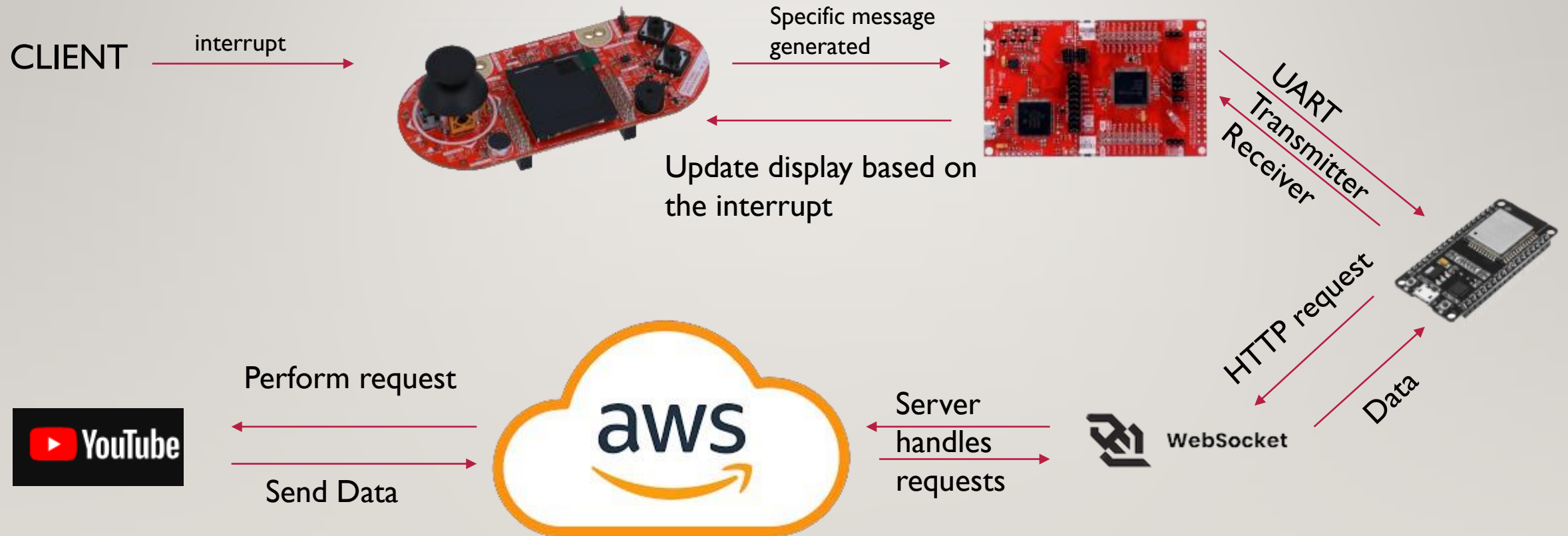
range of sensors and user
interface components.

Commands

1. Volume up
 2. Volume down
 3. 10 seconds backward
 4. 10 seconds forward
 5. Mute/Unmute
 6. Pause/play
-
7. Enter/exit the menu
 1. Up
 2. Down
 7. Select



WORKING FLOW (INTERRUPTS) (DATA STRUCTURES AND ALGORITHMS)



PRESENT SOME CORE C CODES FOR YOUR IMPLEMENTATION - >
THE MOST IMPORTANT AND
REPRESENTATIVE LINES (JUST A COUPLE OF LINES)



PROBLEMS ENCOUNTERED

- No APIs
 - YouTube does not have APIs for its operations
- Client server loaded by ESP32 was too heavy

SOLUTIONS TO PROBLEMS

- Solution to no APIs
 - Communication with WebSockets:
 - 2-way interactive communication session between the browser and the server.
- Set up AWS server to handle the requests

CONCLUSIONS AND FUTURE WORK

It was a great experience to learn how to interact with softwares and sensors.

We also learned how to use WebSocket APIs instead of relying on APIs offered by the server

We were able to set up a server to handle requests

We could improve the system by adding many different streaming platforms on a single page and control them all simultaneously and add different commands