## Data Flow Diagram (DFD) - Video Conferencing Web App

## Level 0 DFD – Context-Level Diagram

This shows the overall interaction between external entities (users) and the system.

## Level 1 DFD – Internal System Flow

This diagram breaks the system into its main functional components.

```
1. Sign in / Sign up
                        Authentication Service |
                        (Firebase / JWT)
2. Create/Join Room
                                              4. Send Message
Room Management API
                                              Chat Handler
(Express + MongoDB)
                                             (Socket.io Server)
  3. Token + Room Info
                                             5. Broadcast Message
     Agora Media Service
                                                 All Participants
```

## DFD Description

Component	Function
User	Sends requests to create/join a video room, chat, or share screen.
Authentication	Validates users using JWT/Firebase before room access.
Room Management API	Creates a room ID and stores meeting/session data in MongoDB.
Agora Media Service	Handles real-time video/audio communication between users.
Socket.io Chat Server	Manages real-time chat by broadcasting messages to all connected users.