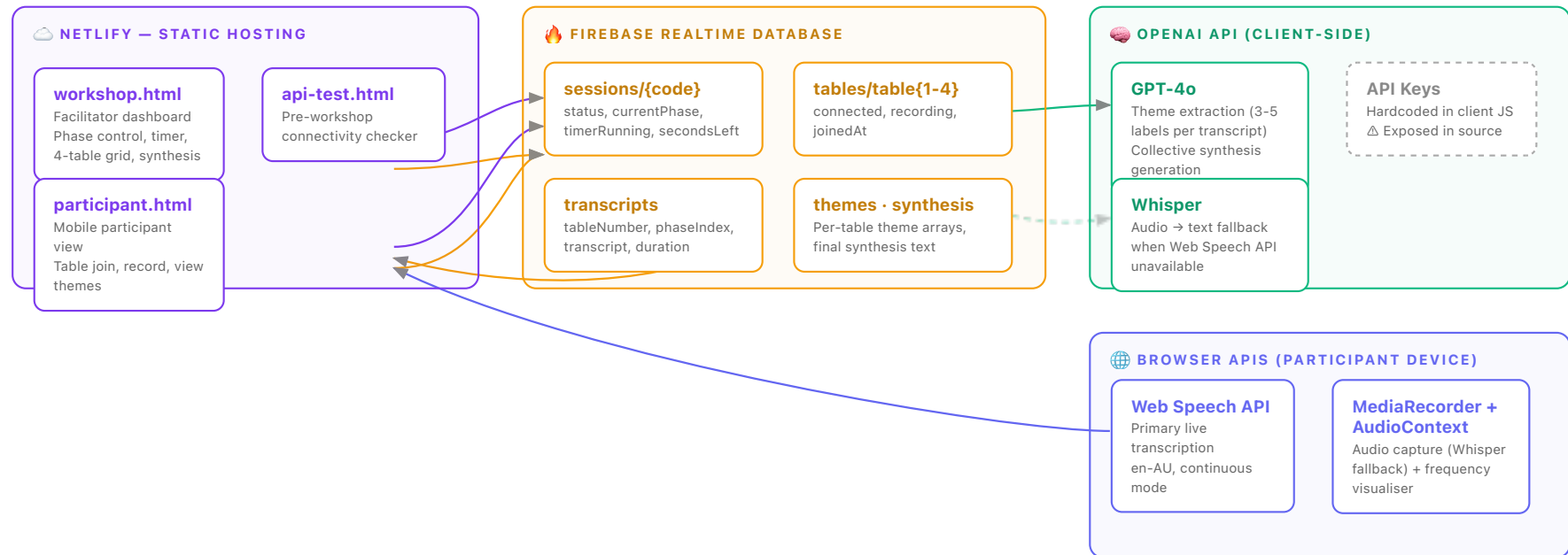


# IA Workshop App — Architecture Map

3 static HTML files · Firebase Realtime DB · OpenAI APIs · Browser Speech APIs · Hosted on Netlify



## Data Flows

### 1 · SESSION CONTROL

1. **Facilitator** creates session → writes to **sessions/{code}**
2. Shares 6-char code + URL with participants
3. Controls **phase, timer, start/end** → Firebase
4. **Participants** listen on **sessions/{code}** for real-time phase & timer sync

### 2 · TRANSCRIPTION

1. Participant taps record → **Web Speech API** transcribes live
2. If Speech API fails → audio blob sent to **Whisper** (fallback)
3. Transcript pushed to **Firebase transcripts**
4. Facilitator dashboard receives via **child\_added** listener

### 3 · THEME EXTRACTION & SYNTHESIS

1. **Facilitator browser** sends transcript to **GPT-4o**
2. GPT-4o returns 3-5 short theme labels (JSON array)
3. Themes written to **Firebase themes** → participants read & display
4. Phase 5: all themes + transcripts sent for **collective synthesis**

#### ⚠ Security Note

OpenAI and Firebase API keys are hardcoded in client-side JavaScript across all three files. Anyone viewing page source can extract and misuse them. For production use, proxy API calls through Netlify Functions (or similar serverless layer) to keep keys server-side.