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# LiveDocs: A Peer-to-Peer Real-Time Collaborative Document Editor Using WebRTC and CRDTs

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# Proposed Methodology

Use Next.js for the frontend with a custom collaborative editor.

Apply Yjs (CRDTs) for real-time updates and conflict resolution.

Leverage WebRTC for direct peer-to-peer communication and low latency.

Implement JWT authentication for secure access control.

Store documents in PostgreSQL for reliable backups and fast access.

Enable collaboration features like presence, comments, roles, and notifications.

Optimize WebRTC and CRDTs for low latency, scalability, and efficient sync.

# Tools & Frameworks



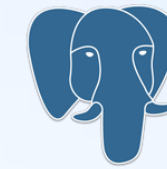
Next.js



TypeScript



Tailwind CSS



PostgreSQL



Prisma



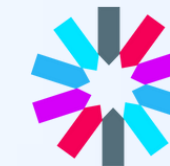
WebRTC



WebSocket



CRDTs (Yjs)



JWT



Git



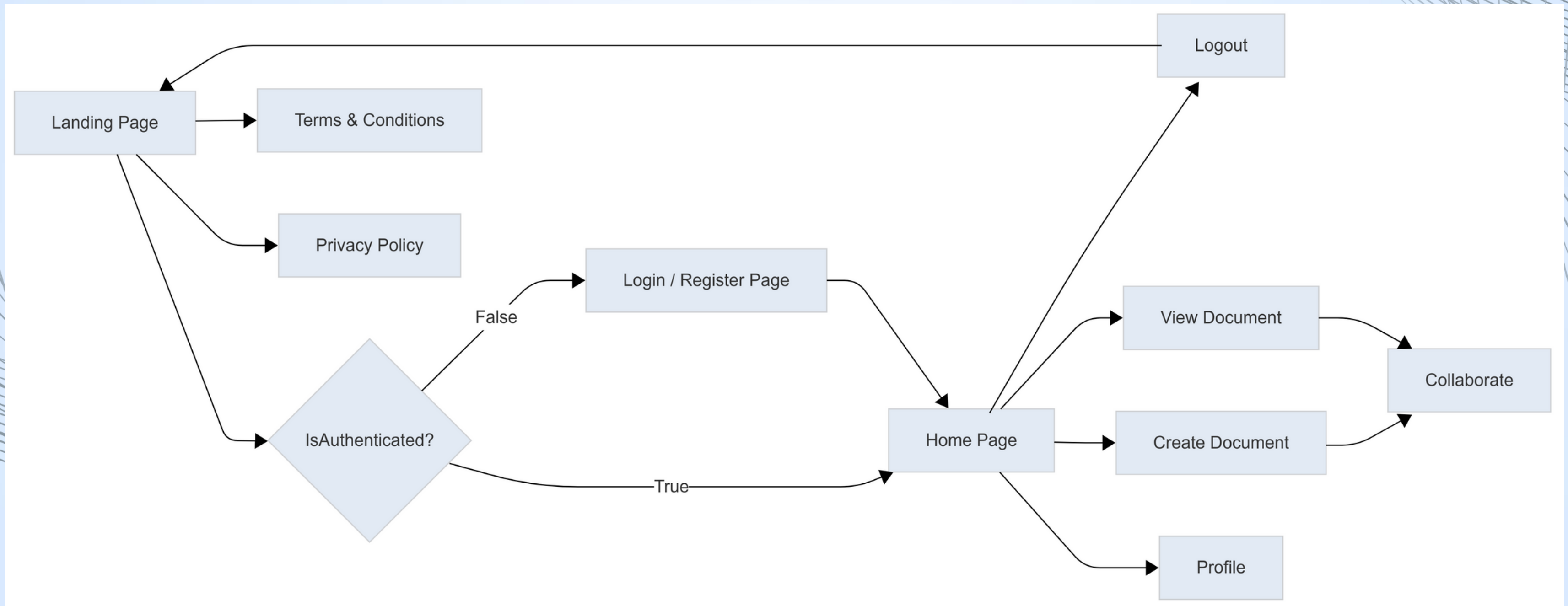
GitHub



Postman



# Flow Chart



# Prototype

The background of the slide is a light blue gradient. It features decorative elements consisting of numerous thin, grey, wavy lines that originate from the left and right edges and curve towards the center, creating a sense of motion and depth.

The background features a light blue gradient with abstract, flowing, wavy lines in a slightly darker shade of blue, creating a sense of movement and depth. These lines are concentrated on the left and right sides, framing the central text.

**Thank you**