

Product Requirements Document (PRD)

Project: Zoom-Lite — 1-Click Video Rooms

1. Overview

Zoom-Lite is a simplified, browser-based video calling tool that enables users to instantly create or join a video room with a single link. The goal is to replicate the *core experience* of Zoom — real-time video, audio, and screen sharing — without the complexity of a full enterprise platform. This clone is scoped for a 7-day build cycle and focuses on delivering a functional, stable MVP.

2. Problem Statement

Modern video conferencing tools are powerful but often overloaded with features that aren't necessary for quick, lightweight calls. For this assignment, we aim to reverse-engineer Zoom's essential value: fast, reliable, real-time communication. The challenge is to recreate this core experience with minimal infrastructure and maximum speed.

3. Target Users

- Students needing quick study sessions
- Remote collaborators
- Friends/family wanting simple video chats
- Anyone who needs a frictionless, no-login video call

4. Goals & Non-Goals

Goals (In Scope)

- Create/join a video room via URL
- Real-time video and audio using WebRTC
- Mute/unmute and camera toggle
- Screen sharing
- Basic text chat
- Clean, intuitive UI
- Stable 1:1 or small-group calls (2–4 people)

4. MVP Feature Set

Core Features

Feature	Description
Room Creation	User generates a unique room URL
Room Join	Anyone with the link can join
Video/Audio Streaming	WebRTC peer-to-peer connection
Mute/Unmute	Toggle microphone
Camera On/Off	Toggle video stream
UI Layout	Grid layout for participants

6. Technical Approach

Frontend

- **Framework:** Next.js
- **Styling:** TailwindCSS
- **State:** Zustand
- **Media APIs:** `getUserMedia`, `getDisplayMedia`

Backend

- **Server:** Node.js + Express
- **Signaling:** WebSockets for exchanging WebRTC offer/answer/ICE candidates
- **Deployment:** Vercel (frontend) + Railway (backend)

Real-Time Communication

- **Protocol:** WebRTC
- **Connection Type:** P2P (simplest for small rooms)
- **STUN Server:** Google STUN server (free)
- Basic error handling (permissions, connection issues)