

QlutchGrid Tech Stack

Frontend (QG-UI)

- Next.js 15 (React 18, App Router) à web app framework and routing.
- TypeScript à static typing for safer front-end development.
- Tailwind CSS v4 à utility-first styling system.
- Ant Design à ready-made UI components for forms and tables.
- Axios à API client for calling backend services.
- Framer Motion à animations and UI transitions.
- @react-google-maps/api à maps and location-based UI.
- Firebase SDK à client-side messaging and integrations.
- Capacitor (Android) à wraps the web app as a mobile application.

Backend (QG-BackEnd)

- NestJS 10 (Node.js) à main API framework and service layer.
- TypeScript à typed backend development.
- TypeORM à database ORM and migrations.
- PostgreSQL à primary relational database.
- JWT Auth (passport-jwt) à authentication and authorization.
- Swagger/OpenAPI à API documentation and testing.
- AWS S3 SDK à file uploads and storage integration.
- Razorpay à plan and booking payments.
- Web Push à browser notifications.
- Firebase Admin SDK à server-side integrations.

Infrastructure & Ops

- PM2 à Node process manager for uptime and restarts.
- Nginx à reverse proxy and SSL termination.
- Docker (optional) à containerized deployment support.
- Amazon EC2 à current production hosting.

Third-Party Integrations

- Surepass KYC APIs à PAN/GST verification during onboarding.
- MSG91 (DLT/SMS) à OTP and transaction messages.
- Razorpay à payment gateway for plans and bookings.
- Web Push (VAPID) à browser push notifications.