

E-Commerce Web App Requirements

Tech Stack

- Frontend: Vanilla JS
- Database: Firebase Firestore (stay within read/write limits)
- Auth: Firebase Authentication (only email/password & Google login)
- Storage: Firebase Storage (compressed images, <5MB each)
- Hosting: Firebase Hosting (for web app deployment)
- Styling: bootStrap or basic CSS (free and lightweight)
- Payments: Stripe in test mode only (no live fees)

Key Features & Limits for Free Usage

- User Features: Signup/Login with email/password or Google
- Browse product catalog (pagination to limit reads)
- Add to cart (local storage + sync with Firestore)
- View order history (only for current user)
- Basic profile management (username, email)
- Admin Features: Add/edit/delete products
- Upload product images (optimized for size)
- View user orders (limited to recent 20 orders to save reads)
- System Features: Firestore rules for data security (no backend needed)
- Static hosting via Firebase Hosting
- Stripe test payments only (no real transactions or Cloud Functions)

Team Responsibilities

- UI/UX & Frontend Components Developer: Home, product list/detail, cart, profile pages
- Auth & Cart Flow Developer: Auth, cart (local+Firestore), checkout simulation-
- Data & Firestore Rules Developer: Firestore structure and rules
- Admin Panel Developer: Admin-only product management UI
- Deployment & Firebase Manager: Firebase Hosting, Emulators, Usage monitoring

Free Tier Limits Compliance Tips

- Firestore: <20K reads/day, use pagination
- Auth: Use only email/password or Google
- Storage: Compress images to <200KB
- Hosting: Stay under 10 GB/month bandwidth
- Functions: Optional, not used in MVP

Excluded from MVP (to avoid cost)

- Phone number login
- Live Stripe transactions
- Realtime database
- Heavy image/video content