Global Learning Platform - Technical Assessment Report

1. Current State & Technologies

Frontend:

- React (v18.3.1), TailwindCSS, Framer Motion

Backend:

- Node.js (Express), Drizzle ORM

Database:

- PostgreSQL (with serverless NeonDB integration)

Authentication:

- Passport (passport-local), express-session

Infrastructure:

- Terraform files for AWS deployment

Build Tools:

- Vite, esbuild, TypeScript

Others:

- Stripe (payments), Zod (validation), Radix UI, React Hook Form, Lucide, Recharts

2. Implemented or Planned Features

- User authentication and sessions via Passport

- Modular UI components using Radix and TailwindCSS

- Initial database schema defined with Drizzle ORM

- Stripe integration indicates subscription/payment model

- Client and server codebases are separated (modular monorepo)

- Modern form handling and validation via React Hook Form + Zod

Platform Vision (Inferred):

- Target: Skill-based Learning / Corporate Education

- Users: Students, Professionals, Educators

- Core Features: Course creation, user profiles, payments, analytics

Possible Marketplace Inspiration: Udemy, Skillshare, Teachable

3. Database Schema Overview (via Drizzle ORM)

- Table: users

  Fields: id, email, firstName, lastName, profileImageUrl, role, stripeCustomerId, timestamps

- Table: sessions

  Fields: sid, sess (JSON), expire

- Table: categories

  Fields: id, name, description, createdAt

- Table: courses

  Fields: id, title, description, price, categoryId (FK), teacherId (FK to users),

  thumbnailUrl, videoUrl, duration, level, published, createdAt

Relations:

- Each teacher (user) can own multiple courses.
- Courses are classified under categories.

Missing/Enhanceable Elements:

- Enrollment table (user-course relationships)
- Course sections, lessons, quizzes
- Progress tracking or certificates
- Social features (comments, forums)