

# Assignments & Project Themes

## 1. Shakira

**Project Theme: Tourism Management System**

**Project Name:** Choose a creative name (e.g., WanderHub, TravelEase, Explore360)

**Frontend Tech:**

- React + Vite + TypeScript
- Tailwind CSS with a vibrant, travel-inspired palette
- Fully responsive (mobile-first)

**Backend Tech:**

- FastAPI or Django
- PostgreSQL/MySQL

**Core Features:**

- JWT Authentication
- Destination listings + filters
- Booking system
- Reviews and ratings
- Admin dashboard for tour operators
- Simulated payment integration

**Extra Features (Pick 3+):**

- Real-time chat
- Interactive maps
- Weather API
- Multi-language support
- PWA (offline mode)
- Recommendation engine

## 2. Pendo

**Project Theme: E-Commerce Platform**

**Project Name:** *Choose a creative name (e.g., ShopNex, MarketHub, QuickCart)*

**Frontend Tech:**

- React + Vite + TypeScript
- Tailwind CSS with modern e-commerce palette
- Component library (Headless UI or similar)

**Backend Tech:**

- Django + Django REST Framework
- PostgreSQL

**Core Features:**

- Authentication
- Product catalog
- Cart and checkout
- Order management
- Admin product panel
- Search and filtering

**Extra Features (Pick 3+):**

- Real-time inventory
- AI-powered recommendations
- Live order tracking
- Wishlist and comparison
- Social media integration
- Advanced analytics dashboard

### **3. Poli**

**Project Theme: Healthcare Management System**

**Project Name:** *Choose a creative name (e.g., MediCare Plus, HealthSync, ClinicHub)*

**Frontend Tech:**

- React + Vite + TypeScript
- Tailwind CSS with professional healthcare palette
- Accessibility-focused (WCAG compliant)

**Backend Tech:**

- FastAPI or Django
- PostgreSQL

**Core Features:**

- Patient registration
- Appointment scheduling
- Electronic health records (simulated)
- Doctor/staff management
- Prescriptions
- Billing system

**Extra Features (Pick 3+):**

- Telemedicine video calls
- Health monitoring dashboard
- OCR prescription scanner
- Emergency alerts
- Inventory management
- Health analytics

## 4. Fred

**Project Theme:** Learning Management System

**Project Name:** Choose a creative name (e.g., EduSphere, LearnHub, SkillCraft)

**Frontend Tech:**

- React + Vite + TypeScript
- Tailwind CSS with education-focused palette
- Interactive UI components

**Backend Tech:**

- Django + Django REST Framework
- PostgreSQL

**Core Features:**

- User roles: Student, Instructor, Admin
- Course management
- Video/content delivery
- Quizzes and assessments
- Progress tracking
- Discussion forums

**Extra Features (Pick 3+):**

- Live virtual classroom
- AI-powered learning paths
- Gamification
- Certificate generation
- Optional mobile app
- Analytics and reporting

# Design Requirements

## Color Palettes

- **Tourism:** Vibrant, adventurous (teal, orange, blue)
- **E-commerce:** Trustworthy, action-focused (blue, green, strong CTA colors)
- **Healthcare:** Calm, professional (blue, white, soft green)
- **LMS:** Engaging and focused (purple, blue, yellow accents)

**Each intern must ensure:**

- Custom color palette
- Light and dark mode
- WCAG 2.1 AA accessibility compliance

# Technical Requirements

## Frontend (All Projects):

- React 18+, TypeScript
- Vite
- Tailwind CSS
- State management (Context, Redux Toolkit, or Zustand)
- React Router
- React Hook Form + Zod
- Axios or React Query
- Vitest + React Testing Library
- ESLint + Prettier setup

## Backend Options:

### Option A – Django (Recommended for Pendo & Fred)

- Django 4.2+, DRF
- PostgreSQL
- Simple JWT
- CORS headers

## **Option B – FastAPI (Recommended for Shakira & Poli)**

- FastAPI with SQLAlchemy
- Alembic migrations
- JWT authentication
- Background tasks (Celery/ARQ)
- WebSockets for real-time components

# **Project Structure**

```
project-name/
├── frontend/
│   ├── src/
│   ├── public/
│   └── package.json
│       └── tailwind.config.js
└── backend/
    ├── app/
    ├── tests/
    └── main.py or manage.py
└── docker-compose.yml
```

# **Deployment Requirements**

Each intern must deploy:

### **Frontend:**

- Vercel, Netlify, AWS Amplify

### **Backend:**

- Render, Railway, AWS EC2, etc.

### **Database:**

- Supabase, AWS RDS, or any cloud PostgreSQL

### **File Storage:**

- AWS S3, Cloudinary, or similar

## **Timeline & Deadlines**

**Final Deadline:** Wednesday, 17th December 2026

### **Project Schedule:**

- Planning & Design
- Development
- Testing, deployment & Documentation
- Video Presentation

## **Submission Requirements**

**Submit To:** [nexvutures@gmail.com](mailto:nexvutures@gmail.com)

**Subject Format:** Internship Final Project - [Your Name] - [Project Name]

### **Mandatory Deliverables:**

#### **1. GitHub Repository**

- Clean folder structure
- README with overview, setup steps, API documentation, and screenshots
- Proper commit history

#### **2. Live Links**

- Hosted frontend
- Hosted backend API
- API docs (Swagger or Redoc)

### **3. Video Presentation (10–15 min)**

- Must show your face
- Demo + code walkthrough
- Challenges and solutions
- Upload unlisted to YouTube or Google Drive

### **4. Documentation**

- Technical documentation
- User manual
- Deployment guide

## **Evaluation Criteria**

### **Technical Excellence — 40%**

- Code quality
- Architecture
- Optimization
- Security
- Testing

### **Features & Functionality — 30%**

- Core features
- Extra features
- UX
- Responsiveness

### **Documentation & Presentation — 20%**

- Video quality
- Explanation
- Documentation

## **Deployment & Professionalism – 10%**

- Successful deployment
- Timeliness
- Attention to detail

# **Additional Guidelines**

## **Code Quality**

- DRY principles
- Error handling
- Reusable components
- Meaningful comments

## **Security**

- Input validation
- SQL injection prevention
- XSS protection
- Secure authentication

## **Performance**

- Lazy loading
- Asset optimization
- Database indexing
- Caching

## **Best Practices**

- Git branching
- Pull request workflow
- Code reviews
- Optional CI/CD

# Support & Resources

- React: [react.dev](https://react.dev)
- Tailwind CSS: [tailwindcss.com](https://tailwindcss.com)
- Django: [docs.djangoproject.com](https://docs.djangoproject.com)
- FastAPI: [fastapi.tiangolo.com](https://fastapi.tiangolo.com)

# Final Reminder

**Deadline:** Wednesday, 17th December 2026 – 11:59 PM UTC

**Submission Email:** [nexvutures@gmail.com](mailto:nexvutures@gmail.com)

**Late submissions will not be accepted.**

This final project is an opportunity to showcase your full-stack development skills. Deliver your best work.