Group3

JUAJOBS API DESIGN

GROUP3 MEMBERS

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INTRODUCTION

The JuaJobs API Design Project focuses on building a RESTful API for a gig economy platform that connects skilled workers with clients across Africa. The design emphasizes best practices in resource modeling, endpoint architecture, security, and documentation. It addresses real-world challenges such as mobile-first access, multilingual support, secure payment integration, and regional compliance. The result is a scalable, well-documented, and developer-friendly API tailored to the needs of diverse African markets.

RESOURCE MODELING

Core Resources

- Users
- Job Postings
- Worker Profiles
- Applications
- Reviews

Additional Resources

- Payments
- Messages
- Products

ENDPOINT DESIGN

- **Methods used**: GET, POST, PUT, PATCH, DELETE
- Hierarchical URL structure: /users/{id}/applications
- Consistent naming: lowercase, plural
- Nested resource support and clear ownership mapping

FILTERING & QUERY DESIGN

User-Centric Query Features

- **Filtering**: /jobs?status=open
- **Sorting**: /jobs?sortBy=createdAt&order=desc
- **Pagination**: page, limit parameters
- **Sparse fieldsets**: /users?fields=id,name,email
- Geo-search and full-text search supported

ERROR HANDLING & VERSIONING

Standardized Responses

- Status codes: 200, 201, 400, 401, 403, 404, 500
- JSON error format with clear messages
- Error categories: validation, business logic, system
- Versioning via URI: /v1/...
- Deprecation policies and change management included

OPENAPI & DOCUMENTATION

Documentation Tools and Strategy

- OpenAPI 3.0 (Swagger) specification
- The specification includes all schemas, parameters, responses, and authentication flows
- Example request and response bodies
- API Style Guide: naming, dates, currencies, localization

SECURITY & COMPLIANCE

Security Measures

- JWT authentication with refresh tokens
- Role-Based Access Control: Admin, Client, Worker
- TLS enforced across all endpoints
- PII protection, consent management
- Compliance: GDPR, CCPA, APPIA

LOCALIZATION & MARKET NEEDS

African Market Adaptation

- Multi-language support: (English, French, Swahili, Arabic)
- Local currency formatting and date/time standards
- Batch endpoints and offline-first design
- Mobile money and bank payment integration
- Region-based data filters and address formats

DOCUMENTS

- API Design Document

- OpenAPI Specification File (.JSON)
- Entity-Relationship Diagram
- Github

THANK YOU

Q & A