

Welcome to CODE81: Building the Digital Future Together

About CODE81 Established in 2023 as part of the Ghobash Group's technology cluster, CODE81 is a dynamic technology company specializing in digital transformation solutions. With our new office in Cairo, Egypt, we're expanding our capabilities in low-code/no-code development and other cutting-edge technologies to help businesses innovate faster and more efficiently.

What You'll Do As a Mendix Developer, you'll dive into a Java-based environment that focuses on well-designed application architecture and database principles. Don't worry if you're new to Mendix - we provide comprehensive training during your first few months to help you succeed.

Our technology stack extends beyond Mendix to include exciting projects with:

- Adobe Experience Manager
- Liferay
- BPM Camunda
- Spring/Angular for internal systems

The ideal candidate brings strong knowledge of Java, Spring, database technologies, and design principles to the table.

Library Management System Challenge To showcase your skills, we'd like you to create a Library Management System using Java, Spring Boot, and a relational database. Your solution should include:

- A well-designed database schema for:
 - Books with extended metadata (authors, publishers, categories, language, publication year, ISBN, edition, summary, cover images)
 - Members (borrowers)
 - System users (staff, librarians, administrators) with role-based access control
 - Borrowing transactions
- RESTful API endpoints for all CRUD operations, including:
 - Book management
 - Member management
 - System user management (with different permission levels)
 - Borrowing and return functionality

- System User Management:
 - Implementation of at least three roles: Administrator, Librarian, Staff
 - Role-based access control for different API endpoints
 - Secure password storage and authentication
 - User activity logging
- Book Metadata Requirements:
 - Support for multiple authors per book
 - Category/genre classification with hierarchical structure
 - Publisher information
- Basic authentication and authorization
- A README explaining your design choices
- SQL scripts with sample data
- ERD

Bonus points for:

- Including a Postman collection for API testing

Important Notes

- This position requires comfort with low-code/no-code technologies - please let us know if this isn't for you
- You'll have 4 days to complete the task
- Your code must be submitted on time to a public GitHub repository
- Be prepared to demonstrate your application during the interview

We're excited to see what you create and potentially welcome you to the CODE81 team!