The Institution of Electronics and Telecommunication Engineers (IETE)

Request for Proposal (RFP) for Database Migration to MySQL and Membership Module Development

Introduction

The Institution of Electronics and Telecommunication Engineers (IETE) is seeking proposals from qualified vendors for the migration of our current database system (dBase III) to MySQL and the design and development of a Membership Management Module. This project will include database migration, role-based access control, membership module development, and deployment on a cloud platform.

Scope of Work

(A) Database Migration and Platform

1. Database Migration

- Assess and analyse the current dBase III database.
- Design a normalized MySQL schema to accommodate the migrated data.
- Perform data migration, ensuring data integrity and consistency.
- Test and validate the migrated data.

2. Platform Setup

- Host the application on a VPS or AWS platform.
- Configure hosting environment for optimal performance, **backup, restore & security of database & module files** and scalability.

3. Technology Stack

- **Frontend:** React JS, CSS, Bootstrap (Browser compatibility for Android and iOS).
- **Backend:** MySQL, Python, Django, and Django REST Framework (DRF).

(B) Role-Based Access Control (RBAC)

- Implement role-based access control to define user roles, including Admin, Manager, and Member.
- Restrict access to specific information, views, and actions based on roles.
- Ensure security and compliance with best practices.

(C) Membership Module Design and Development

1. Online User Registration

- Enable members to register online, providing personal information and uploading required documents/files.

2. User Registration and Authentication

- Develop a secure authentication system with features like email verification and password recovery.

3. Eligibility Criteria Verification

- Validate user eligibility based on category and date of birth during registration.

4. Payment Integration and History

- Integrate payment gateways to support online transactions.
- Auto-save transaction IDs and generate receipt numbers.
- Maintain a payment history for users.

5. Admin Dashboard

- Provide tools for administrators to manage users, view metrics, and approve/reject registrations.

6. Approval Workflow

- Implement a multi-step approval process for user registration and related actions.

7. Reports and Certificate Generation

- Enable administrators to generate reports and certificates.
- Provide a print option for certificates and reports.

(D) Development, Testing, Deployment, and Maintenance

1. Backend Development

- Develop a robust backend system using Python, Django, and DRF.
- Ensure secure API development and data handling.

2. Frontend Development

- Create a responsive and user-friendly interface using React JS, CSS, and Bootstrap.
- Ensure compatibility with Android and iOS browsers.

3. Testing

- Conduct unit, integration, and system testing to ensure functionality, performance, and security.
- Perform usability testing for the membership module.

4. Deployment

- Deploy the application on VPS/AWS with proper configurations.
- Ensure high availability, performance, and scalability.

5. Maintenance

- Provide ongoing support for bug fixes, updates, and performance enhancements.
- Implement a monitoring and logging system for error detection.

Proposal Submission Guidelines

1. Technical Proposal

- Detailed approach to database migration, platform setup, and module development.
- Technology stack and tools to be used.
- Project timeline and milestones.
- Proposed team structure and expertise.

2. Financial Proposal

- Detailed cost breakdown for:
  - Database migration
  - Cloud platform
  - Membership module development
  - Testing and deployment
  - Maintenance and support

3. Experience and References

- Relevant experience in similar projects.
- Case studies or references from previous clients.

4. Deliverables

- List of deliverables, including documentation, application source code, and deployment setup instructions.

Proposal Evaluation Criteria

1. Technical expertise and approach
2. Cost-effectiveness
3. Relevant experience and references
4. Project timeline and delivery schedule

Timeline

- **RFP Release Date:** 31 Dec 2024
- **Proposal Submission Deadline:** 10 Jan 2025
- **Presentation by Vendors:** From 13 Jan to 14 Jan 2025
- **Selection Announcement:** 17 Jan 2025
- **Project Kick-off:** 20 Jan 2025

Please send Proposal/Quotation at sec.gen@iete.org