Steps taken to develop application:

1. Database Setup\*\*:

- Set up MySQL database to store citizen and Aadhar card information.

- Define the necessary tables to store citizen details, Aadhar card requests, and other related data.

2. \*\*Backend Development\*\*:

- Use Spring Boot to create the backend application.

- Implement RESTful APIs to handle various operations, such as citizen registration, Aadhar card request, updates, and admin approvals.

- Use JPA and Hibernate to interact with the database and perform CRUD operations.

- Implement user authentication and authorization to secure the application.

- Set up the admin portal with functionalities like approving Aadhar card requests, verifying duplicate requests, and managing issued Aadhar cards.

3. \*\*Frontend Development\*\*:

- Use Angular framework along with Bootstrap, HTML, and CSS to create the frontend of the application.

- Create separate components for user registration, login, and various functionalities like applying for a new Aadhar card, updating details, requesting a duplicate card, etc.

- Implement form validation and user-friendly error handling.

4. \*\*Testing\*\*:

- Use TestNG and Selenium for automated testing of the application.

- Write test cases to cover different scenarios and functionalities.

- Execute the tests to ensure the application is functioning correctly.

5. \*\*Integration and Deployment\*\*:

- Set up a version control system (e.g., Git) to manage the codebase.

- Integrate the backend and frontend components of the application.

- Use Docker to containerize the application for easy deployment.

6. \*\*Admin Portal\*\*:

- Implement a separate admin portal with login functionality and appropriate role-based access.

- Provide admin functionalities to approve new Aadhar card requests, verify duplicate requests, view issued Aadhar cards, and delete Aadhar card details for deceased citizens.

7. \*\*User Portal\*\*:

- Implement a separate user portal for end-users to register, log in, and perform Aadhar card-related activities.

- Allow users to apply for a new Aadhar card, update personal details, and request a duplicate card.

8. \*\*API Documentation\*\*:

- Create detailed documentation for the RESTful APIs, explaining their endpoints, request formats, and responses.

9. \*\*Error Handling and Exception Management\*\*:

- Implement proper error handling and exception management to handle unexpected scenarios gracefully.

10. \*\*Security\*\*:

- Ensure the application follows security best practices to protect sensitive user data.

- Implement measures like data encryption, secure communication, etc.

11. \*\*Testing and Quality Assurance\*\*:

- Perform manual testing to validate the application against various use cases.

- Conduct code reviews and address any potential issues.

12. \*\*Deployment and Maintenance\*\*:

- Deploy the application to a production environment.

- Monitor the application for performance and stability.

- Provide regular updates and maintenance as needed.