***mAadhaar- Writeup***

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***1.Project and developer details***

Develop an application to automate the process of applying for an Aadhar Card by making it smoother for Indian citizens.

**Scenario:**

**Varniraj Service PVT. LTD** is closely working with “The Government of India” to help them get a solution for processing applications for Aadhaar Card. Application is intended to register citizens and let them display ID to process their Aadhar Card application.

**Features of the application:**

* Registration
* Login
* Apply for a new Aadhar Card
* Place a request for updating Aadhar details
* Apply for a duplicate Aadhar Card
* Admin: Approve Aadhar Application and issue new Aadhar number
* Apply to close Aadhaar card (due to death)

***2.Sprints planned and the tasks achieved***

For developing this application, I have considered 4 sprints each of 3 hrs.

1st 3-hour:

* Deciding the flow of the application
* Defining class names and functions within
* Preparing the eclipse IDE to start code

2nd 3-hour:

* Writing code for the problem statement proposed
* The web application is responsive and fetched data dynamically without hard-coded values
* Code is split into several classes and each class output is checked side by side

3rd 3-hour

* Implemented a CI/CD pipeline using Jenkins.
* Deployed and host the application on an AWS EC2 instance.
* Implemented automation testing before the application enters the CI/CD pipeline.

4rd 3-hour:

* Used Git branching to perform basic automation testing of the application in it separately.
* Made a rich frontend of the application, which is user-friendly and easy for the user to navigate through the application.
* There will be two portals in the application, the admin and user portal.
* Testing the application that is developed with varies inputs.
* Pushing the code to GitHub
* Created a word document that specifies the application capabilities and user interactions.

***3.Algorithms and flowcharts of the application***

**Admin Portal:**

The admin portal deals with all the backend data generation. The admin user has the ability to:

* Logging in through admin credentials
* Approve new Aadhaar Card request
* Verify request for duplicate Aadhaar
* Display all issued Aadhaar Card
* Delete Aadhaar card details for dead citizen

**User Portal:**

The end-user has the ability to:

* Sign in to apply for a new Aadhar Card
* Login to see the Aadhar number assigned by the admin
* Update address, phone number, and date of birth of Aadhaar Card
* Request duplicate Aadhaar Card

***4.Core concepts used in the project***

1. **Database:** MySQL
2. **Backend:** Java Programming (Spring Boot, JPA, Hibernate)
3. **Frontend:** Angular, Bootstrap, and HTML/CSS
4. **Automation and testing technologies:** Selenium and TestNG
5. **DevOps tools/technologies:** Git, GitHub, Jenkins, and Docker
6. **Optional implementation:**Kubernetes, AWS

***5.Links to the GitHub repository to verify the project completion***