***mAadhaar- Writeup***

**Table of contents**

1.Project and developer details

2.Sprints planned and the tasks achieved

3.Algorithms and flowcharts of the application

4.Core concepts used in the project

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

***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***

https://github.com/Priyamurugesan04/Capstoneprojectmaadhaar.git