**Capstone Project: Testing a Healthcare Website**

**Project objective:**

This project requires end-to-end development of a comprehensive QA and test environment for a healthcare website. This QA and test environment should be inclusive of the following testing layers:

1. Browser-based end user testing using Selenium WebDriver
2. Unit testing for back-end elements of the website using TestNG
3. API testing with Postman on AWS cloud
4. Automating the whole testing process by a Jenkins job

The end-deliverables will be executable scripts and modules, which can be run on demand to test the web app.

**Background of the problem statement:**

**Medicare** is a company that supplies medicines and a couple of other healthcare essentials at an affordable price. It was established in 2012 in Delhi, India.

* The admin portal deals with all the back-end data generation and product information.
* The admin portal adds, removes, and edits details of medicines from the application to build a rich product line.
* The admin portal enables or disables a product.
* The end user is able to log in and register for the application.
* The end user searches for products.
* The end user can apply filters and sort results based on different parameters to get the best deals and add them to the cart and complete the purchase.
* The end user receives an order summary details page once the payment is complete to make the necessary arrangements.

**Implementation requirements:**

1. Write an automation script using page object design to store the web elements of the home page
2. Create Selenium scripts to test all the pages on the website
3. Perform unit testing for all back-end classes and methods using TestNG
4. Create Postman scripts to test the API endpoints mentioned
5. Create and build Jenkins job for all the automation testing phases performed in the previous steps

**The following tools must be used:**

1. Eclipse IDE: Source code editing and modification
2. Selenium WebDriver: A browser testing framework for end user black box testing
3. Postman: A standalone application for API testing
4. TestNG: A testing framework for unit testing of the back-end elements of the website
5. Git: To connect and push files from the local system to GitHub
6. GitHub: To store the application code and track its versions
7. Specification document: Any open-source document or Google Docs

**The following requirements should be met:**

1. All testing scripts and code should be pushed to your GitHub repository. You need to document the steps and write the algorithms in it.
2. The submission of your GitHub repository link is mandatory. In order to track your tasks, you need to share the link of the repository.
3. Document the step-by-step process starting from creating test cases and then executing it and recording the results.
4. You need to submit the final specification document, which includes:
   1. Project and tester details
   2. Concepts used in the project
   3. Links to the GitHub repository to verify the project completion
   4. Your conclusion on enhancing the application and defining the USPs (Unique Selling Points)