

PROG8850- Database Automation

Assignment 3

(Total: 20 Points)

Assignment 3: Web Application with Database Integration and Automated Testing using Selenium

The goal of this assignment is to create a simple web application with a login form, integrate it with a MySQL database, and automate the testing of this application using Selenium.

Tasks

Part 1: Web Application Development (5 Points)

- Create a simple web application with a login form using a language and framework of your choice. (Python flask/Django, Javascript, PHP, Java Spring Boot, ASP.NET)
- The form should accept a username and password.
- Upon submission, the form should insert the user's data into a MySQL database.

Part 2: Database Setup (5 Points)

- Set up a MySQL database with a table to store the user data (e.g., users table).
- Ensure that the table has columns for id, username, and password.

Part 3: Selenium Integration (5 Points)

- Write a Selenium script to automate the login process.
- After submitting the login form, use Selenium to validate that the data was correctly inserted into the MySQL database.

Part 4: Submission (5 Points)

- Submit all code, including the web application, the Selenium script, and any database setup scripts.
- Provide a README file with instructions on how to run your application and Selenium tests.
- **Submit a Word/PDF document** that includes:
 - Screenshots of your implemented web application, database setup, and Selenium test results.
 - Clear explanations of each part, including the code implementation and testing process.

Notes for Submission:

- Submit your assignment as a **ZIP file** that includes all the source code files, the README file, and the Word/PDF document with screenshots and explanations.
- Ensure that your submission is well-documented and organized.
- Make sure your code is clean and well-commented.
- Cite any references used.