Practical 5

Software Testing and Quality Assurance

2CSDE80

Mistry Unnat

20BCE515

Department of Computer Science and Engineering

Institute of Technology

Nirma University

Ahmedabad

AIM : To study and perform sample tests using Selenium Test Tool.

Introduction :

Selenium is the first thing that comes to mind when one is planning to automate the testing of web applications.

- It is a beneficial tool because it is not only open source but also a portable software testing framework for web Applications that support multiple languages like Java, C#, Ruby, Python.
- Eventually choosing the right language varies by project, organization, and individuals driving it.

Thus, writing selenium test cases using Java has multiple benefits:

- Programs written in Java are faster than other popular languages like Python.
- Java is more widely used in commercial applications as compared to other programming languages.

Why we need Selenium testing :

- Selenium is compatible with multiple operating systems like Windows, Linux, Solaris, Macintosh.
- It also supports multiple browsers like Chrome, Safari, IE, Edge, Firefox.
- It is used to automate functional tests.
- Also, Selenium is easy to integrate with tools like Jenkins, Maven, and Docker to achieve a continuous testing approach.
- Tools like TestNG and JUnit further help in structuring the selenium tests for easy maintainability and generating reports.

Pre Requisite Installation of Eclipse IDE and Jar File:

- **Installation of Selenium Testing Tool**
- **Downloading the jar file for Selenium.**

Code For Checking Login Functionality of LMS Nirma:

```java
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

public class Test1 {
    public static void main(String args[]) {
```

```
            System.setProperty("webdriver.chrome.driver",
"chromedriver.exe");
            WebDriver driver = new ChromeDriver();

            // URL of LMS Website
            driver.get("https://lms.nirmauni.ac.in/login/index.php");

            // Maximize window size of browser
            driver.manage().window().maximize();

            // Email id

       driver.findElement(By.id("username")).sendKeys("20bce515@nirmauni.ac.
in");

            // Passwords
            driver.findElement(By.id("password")).sendKeys("BlahBlahBlah");

            // Logging In By Clicking Login Button
            driver.findElement(By.id("loginbtn")).click();
    }
}
```
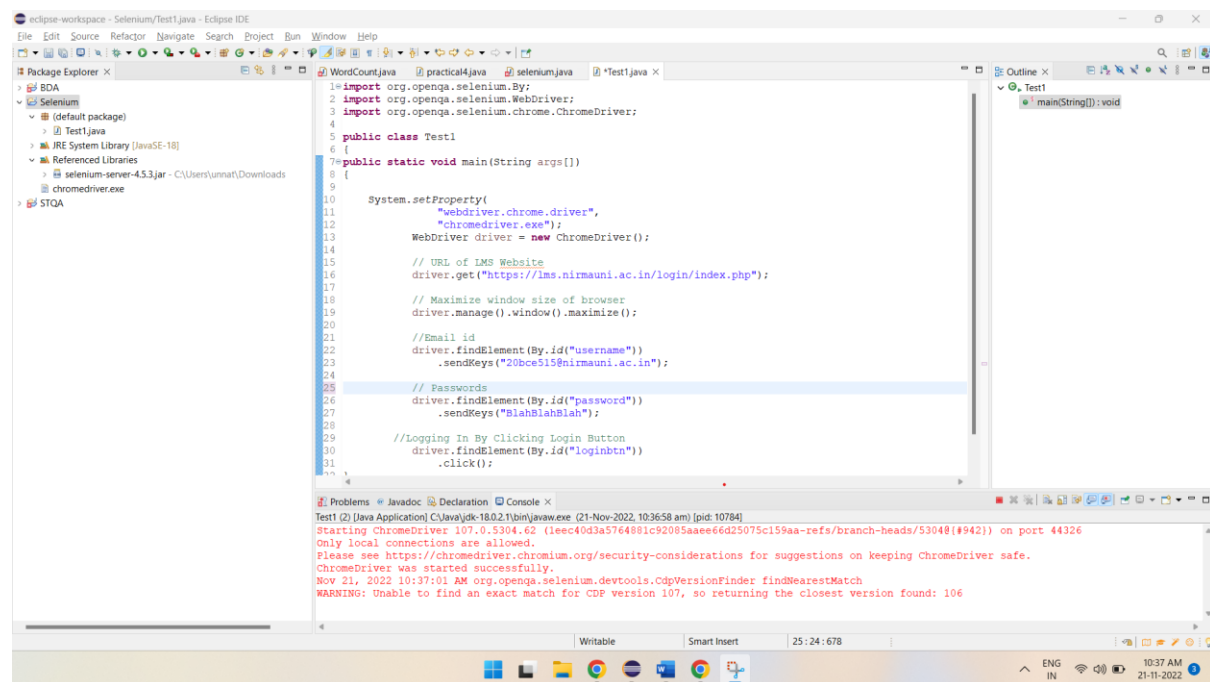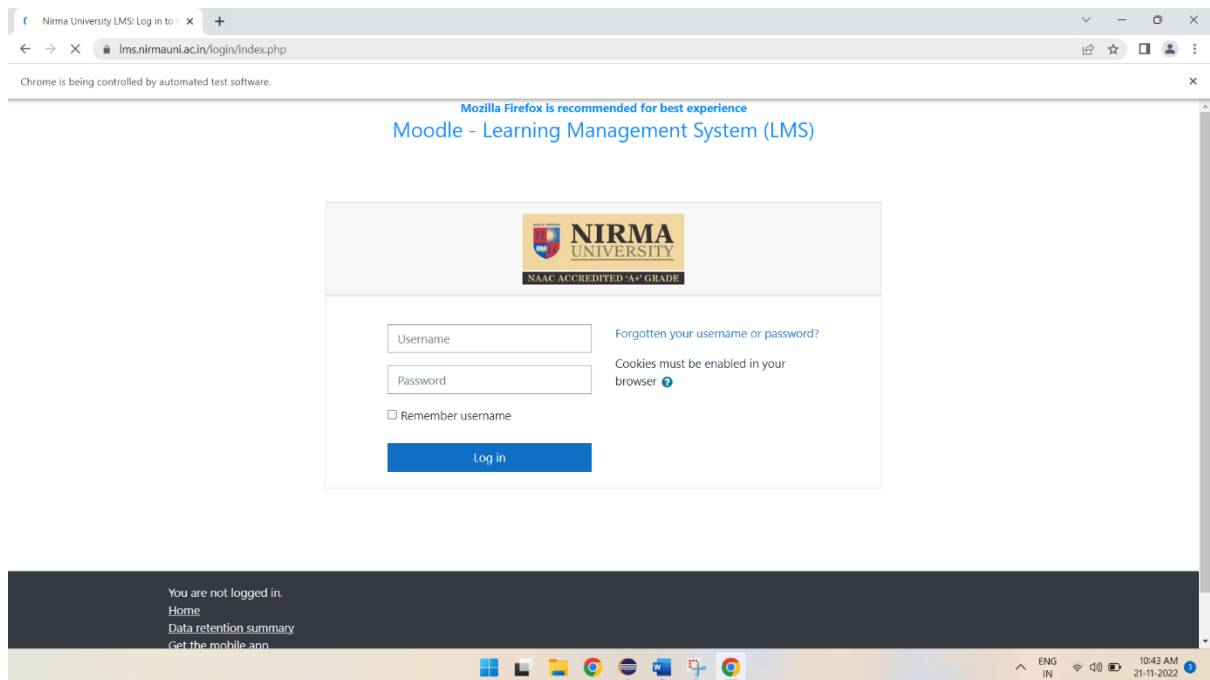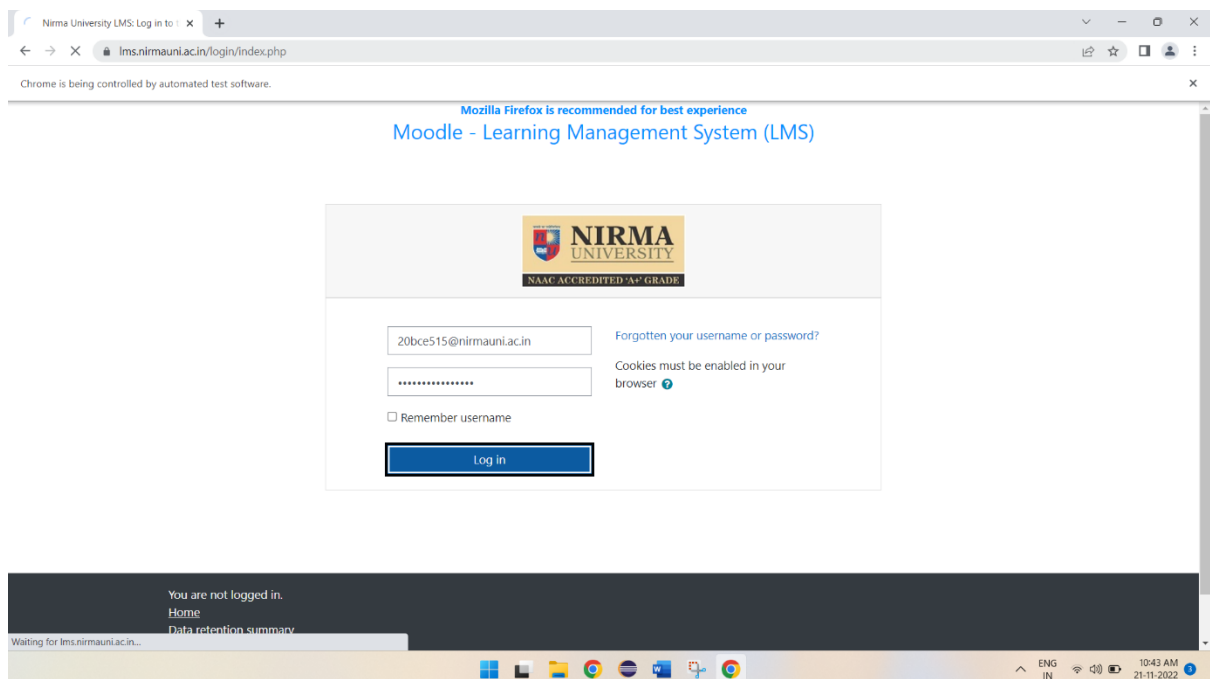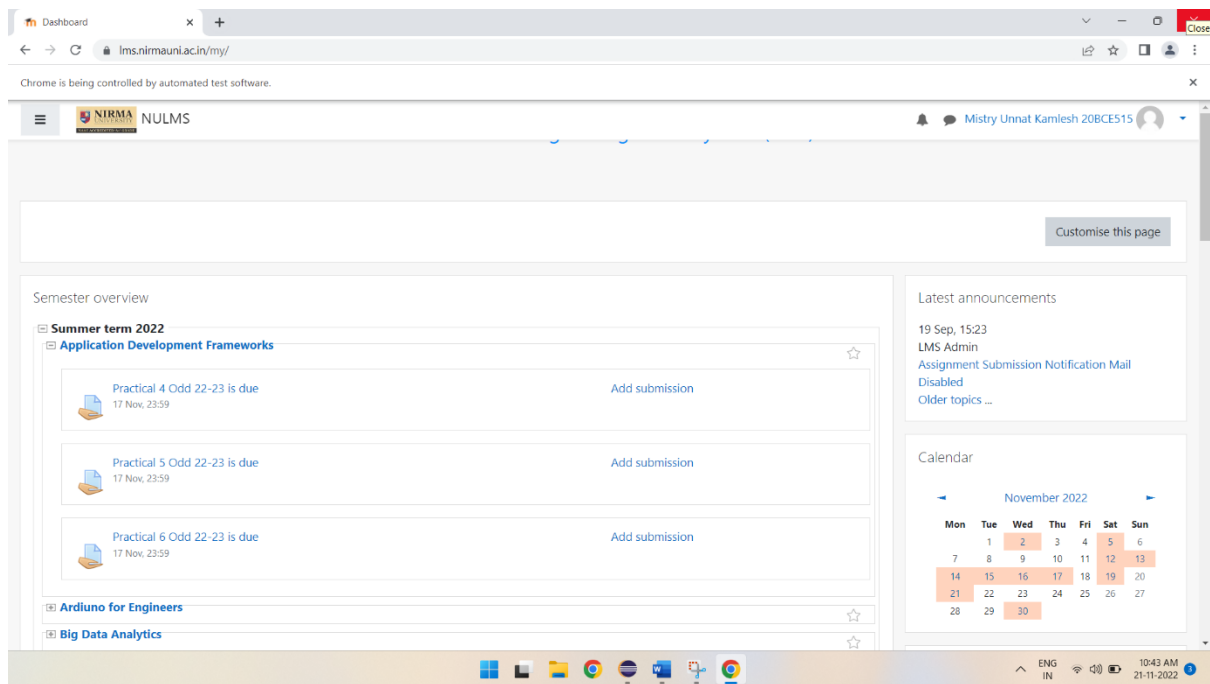
o   Executing the Code:

o   The Website is being opened and credentials will be automatically inserted as per the code.

o   The Website is being opened and credentials will be automatically inserted as per the code.

o   Finally, if credentials are correct, user shall be successfully logged in.

END