

CAPSTONE PROJECT

TOOLS USED - AUTOMATION TESTING
FRAMEWORK WITH SELENIUM, TESTNG,
JENKINS, GIT, CUCUMBER AND JIRA

PROJECT - NOPCOMMERCE AUTOMATION

<https://demo.nopcommerce.com/>

By Khushi

SELF INTRODUCTION

NAME: KHUSHI

TECHNICAL STRENGTHS:

- Strong expertise in Java, Selenium WebDriver, TestNG, Maven, Git, Jenkins, and Jira.
- Hands-on experience in building automation frameworks and implementing CI/CD integrations.
- Proficient in managing test cases through Jira (Zephyr) and generating detailed reports using ExtentReports.

TYPE OF TESTING UTILISED

1. Manual Testing

- Conducted testing activities in Jira Zephyr.
- Manually designed test cases covering:
 - Positive Scenarios
 - Negative Scenarios
 - Edge Cases
- Logged defects directly in Jira for failed test executions.

2. CI/CD Testing

- Integrated with Jenkins for continuous integration:
 - Automatically triggered tests on each GitHub commit.
 - Generated ExtentReports including screenshots for every pass and fail step.

3. Automated Testing

- Developed using:
 - Selenium WebDriver → For automating browser operations.
 - TestNG Framework → To control test execution and support data-driven testing.
 - Page Object Model (POM) → For a structured and maintainable codebase.
- Key Automated Features:
 - User Login & Account Registration
 - Product Search and Filtering
 - Add to Cart and Checkout Process
 - Wishlist Management & Password Recovery

PROJECT DESCRIPTION – NOPCOMMERCE

AUTOMATION CAPSTONE

The objective of this capstone project is to develop a robust, end-to-end automated testing framework for the nopCommerce demo e-commerce application (<https://demo.nopcommerce.com/>).

- The framework focuses on automating key functional areas such as:
 - User Registration & Login
 - Product Search & Filter
 - Add to Cart & Checkout Process
 - Wishlist, Review, and Password Reset functionalities.
- The solution ensures efficient regression, sanity, and smoke testing using a modular approach (Page Object Model), and executes automated test cases in a CI/CD pipeline using Jenkins.
- All requirements, test cases, and defects are tracked in Jira (with Zephyr) for full traceability and collaboration across development and QA teams.

DESCRIPTION OF MY WORK

- Developed and established a Selenium WebDriver automation framework leveraging Java, TestNG, and Cucumber BDD for the nopCommerce demo application.
- Implemented the Page Object Model (POM) architecture with reusable components for WebDriver setup, synchronization, logging, reporting, and data-driven testing via Apache POI.
- Handled requirements, user stories, and test cases in Jira (Zephyr), maintaining complete traceability and execution oversight.
- Employed Git/GitHub for source control with organized branching and commit practices to facilitate team collaboration.
- Set up Jenkins CI/CD pipelines to automatically fetch updates, run TestNG and Cucumber test suites, and produce ExtentReports with integrated screenshots after each build.
- Performed cross-browser testing on Chrome and Firefox to verify compatibility and performance consistency.
- Prepared comprehensive execution summaries, defect records, and final project documentation to ensure full QA lifecycle validation.

AUTOMATION FRAMEWORK

SCREENSHOT FROM GIT REPOSITORY

```
C:\Users\hg198\Desktop\Capstone Project\nopCommerce_wipro_capstone>git push -u origin main
remote: Permission to himanshu28-aug/nopCommerce_wipro_capstone_project.git denied to grabky-development.
fatal: unable to access 'https://github.com/himanshu28-aug/nopCommerce_wipro_capstone_project.git/': The requested URL returned error: 403

C:\Users\hg198\Desktop\Capstone Project\nopCommerce_wipro_capstone>git remote -v
origin https://github.com/himanshu28-aug/nopCommerce_wipro_capstone_project.git (fetch)
origin https://github.com/himanshu28-aug/nopCommerce_wipro_capstone_project.git (push)

C:\Users\hg198\Desktop\Capstone Project\nopCommerce_wipro_capstone>git remote remove origin

C:\Users\hg198\Desktop\Capstone Project\nopCommerce_wipro_capstone>git remote add origin https://github.com/himanshu28-aug/nopCommerce_wipro_capstone_project.git

C:\Users\hg198\Desktop\Capstone Project\nopCommerce_wipro_capstone>git branch -M main

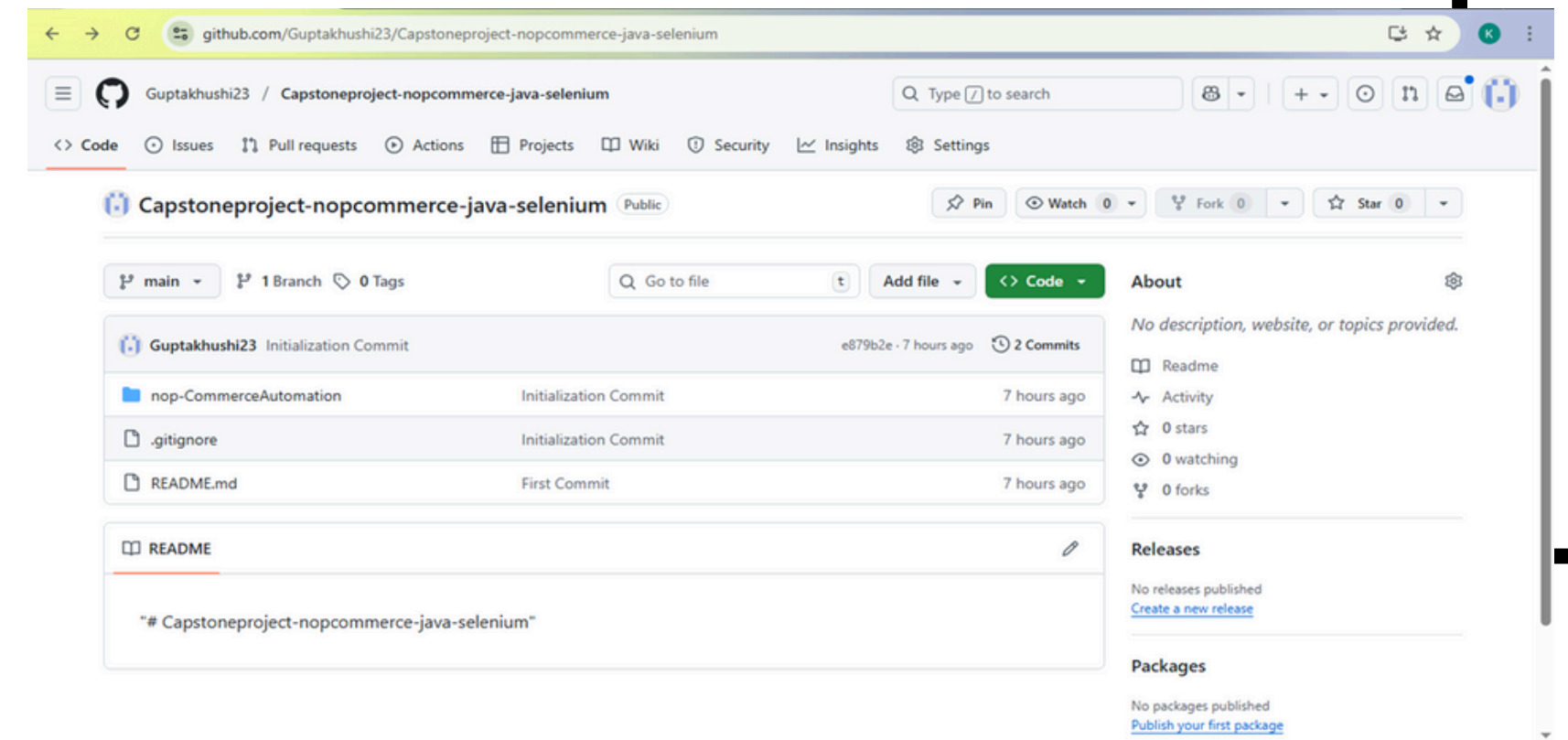
C:\Users\hg198\Desktop\Capstone Project\nopCommerce_wipro_capstone>git push -u origin main
remote: Permission to himanshu28-aug/nopCommerce_wipro_capstone_project.git denied to grabky-development.
fatal: unable to access 'https://github.com/himanshu28-aug/nopCommerce_wipro_capstone_project.git/': The requested URL returned error: 403

C:\Users\hg198\Desktop\Capstone Project\nopCommerce_wipro_capstone>git remote remove origin

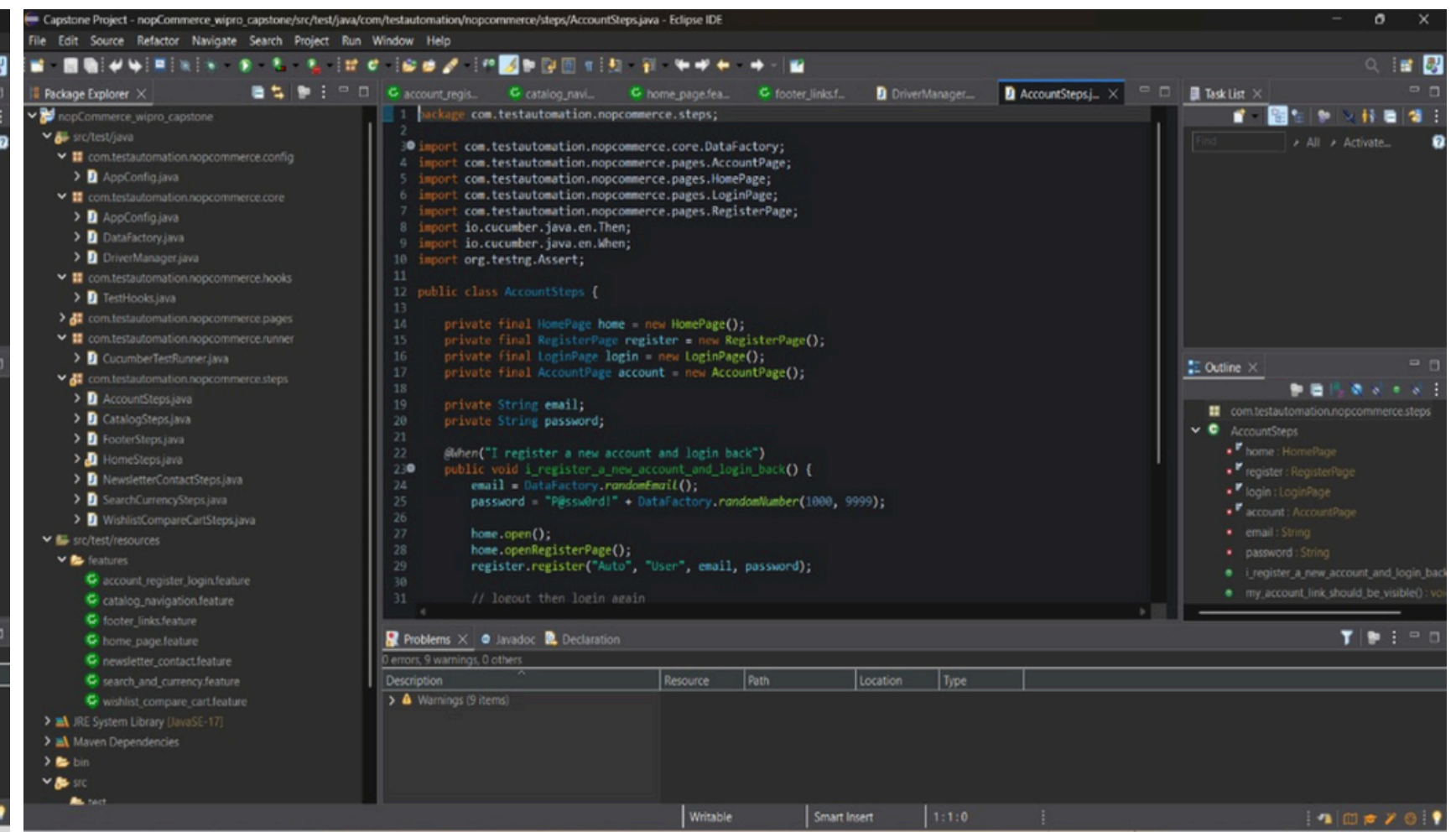
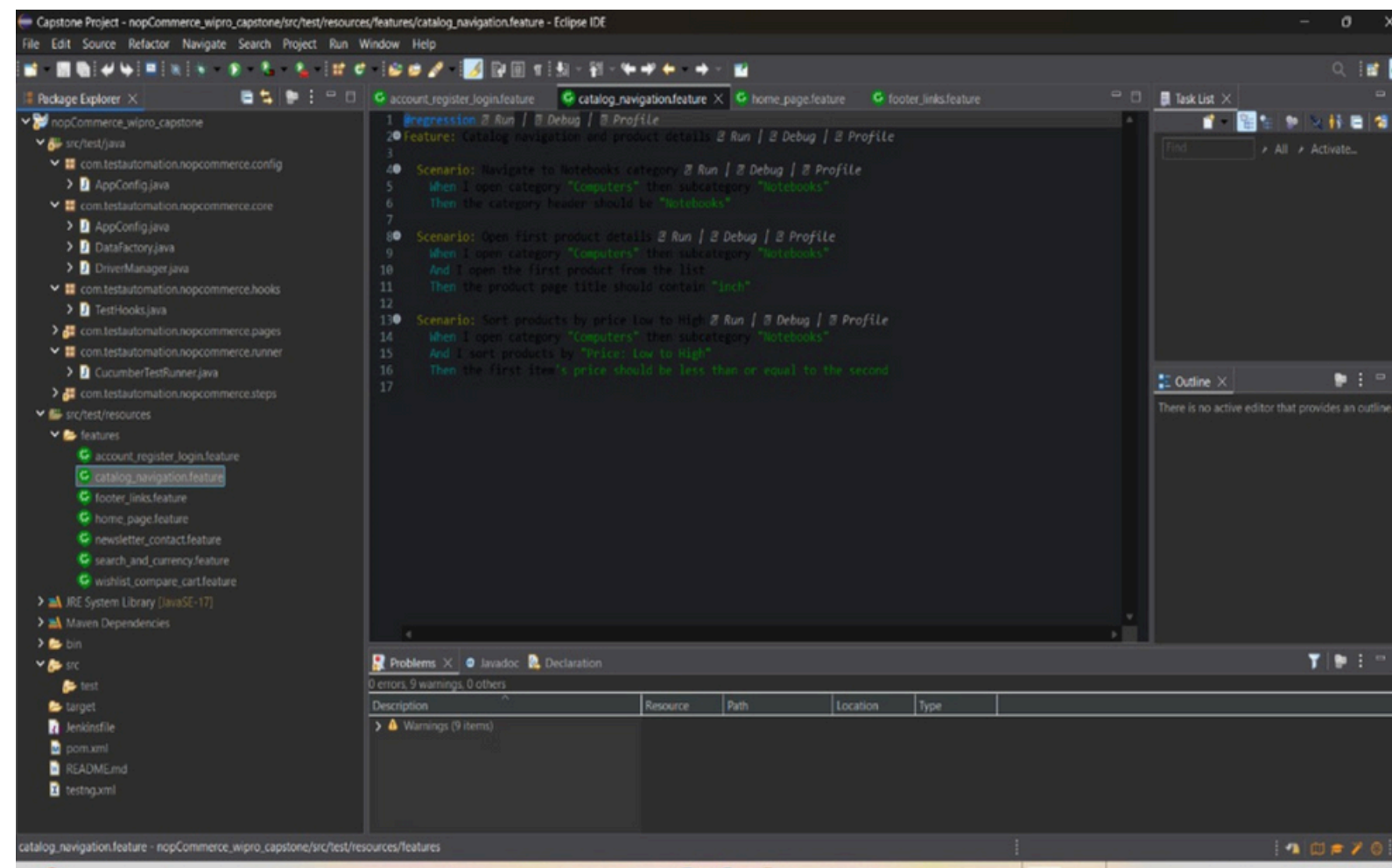
C:\Users\hg198\Desktop\Capstone Project\nopCommerce_wipro_capstone>git remote add origin https://github.com/himanshu28-aug/nopCommerce_wipro_capstone_project.git

C:\Users\hg198\Desktop\Capstone Project\nopCommerce_wipro_capstone>git push -u origin main
Enumerating objects: 91, done.
Counting objects: 100% (91/91), done.
Delta compression using up to 8 threads
Compressing objects: 100% (78/78), done.
Writing objects: 100% (91/91), 33.51 KiB | 164.00 KiB/s, done.
Total 91 (delta 28), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (28/28), done.
To https://github.com/himanshu28-aug/nopCommerce_wipro_capstone_project.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.

C:\Users\hg198\Desktop\Capstone Project\nopCommerce_wipro_capstone>
```



AUTOMATION APPROACH, PAGE OBJECT MODEL AND DATA DRIVEN TESTING SCREENSHOT



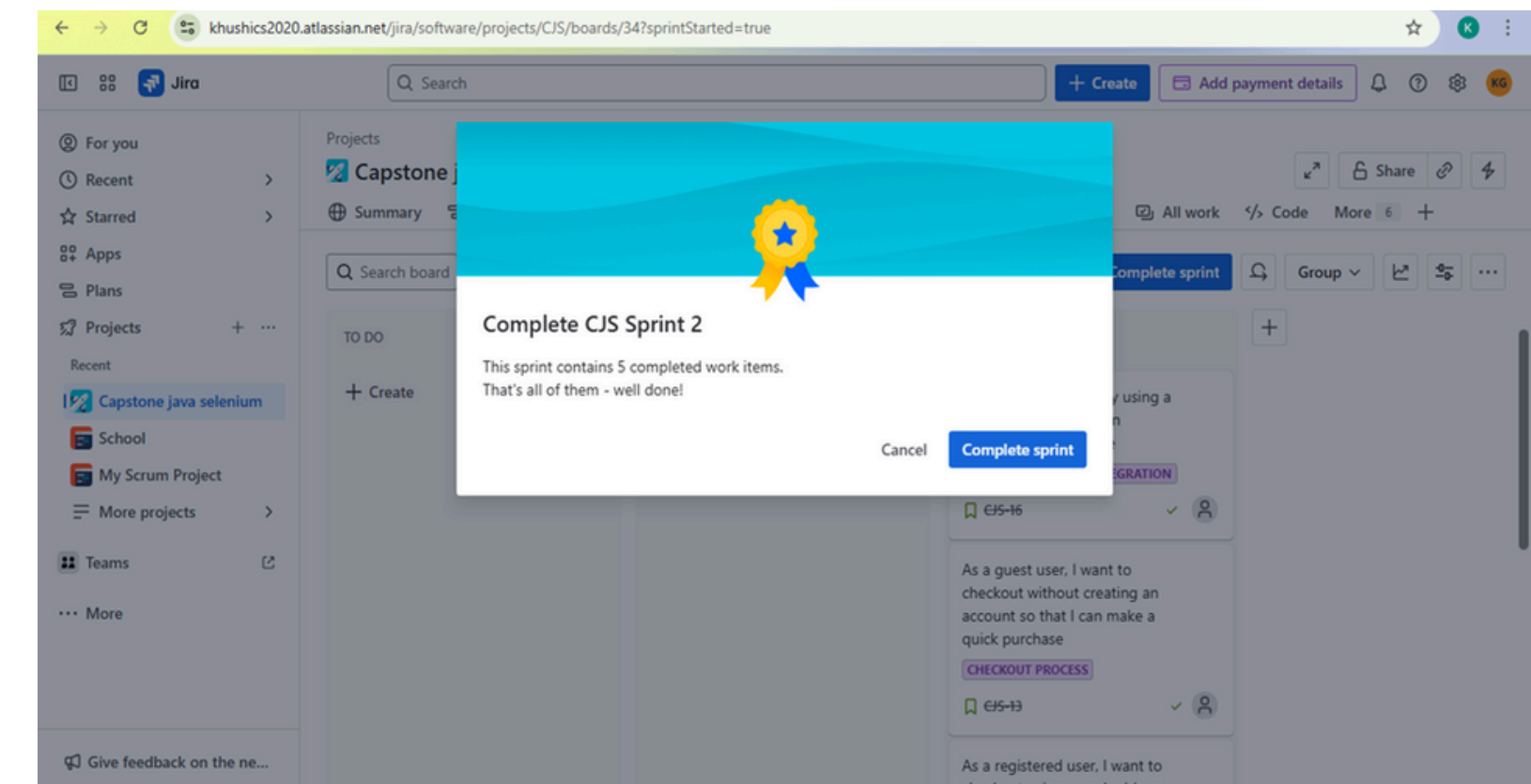
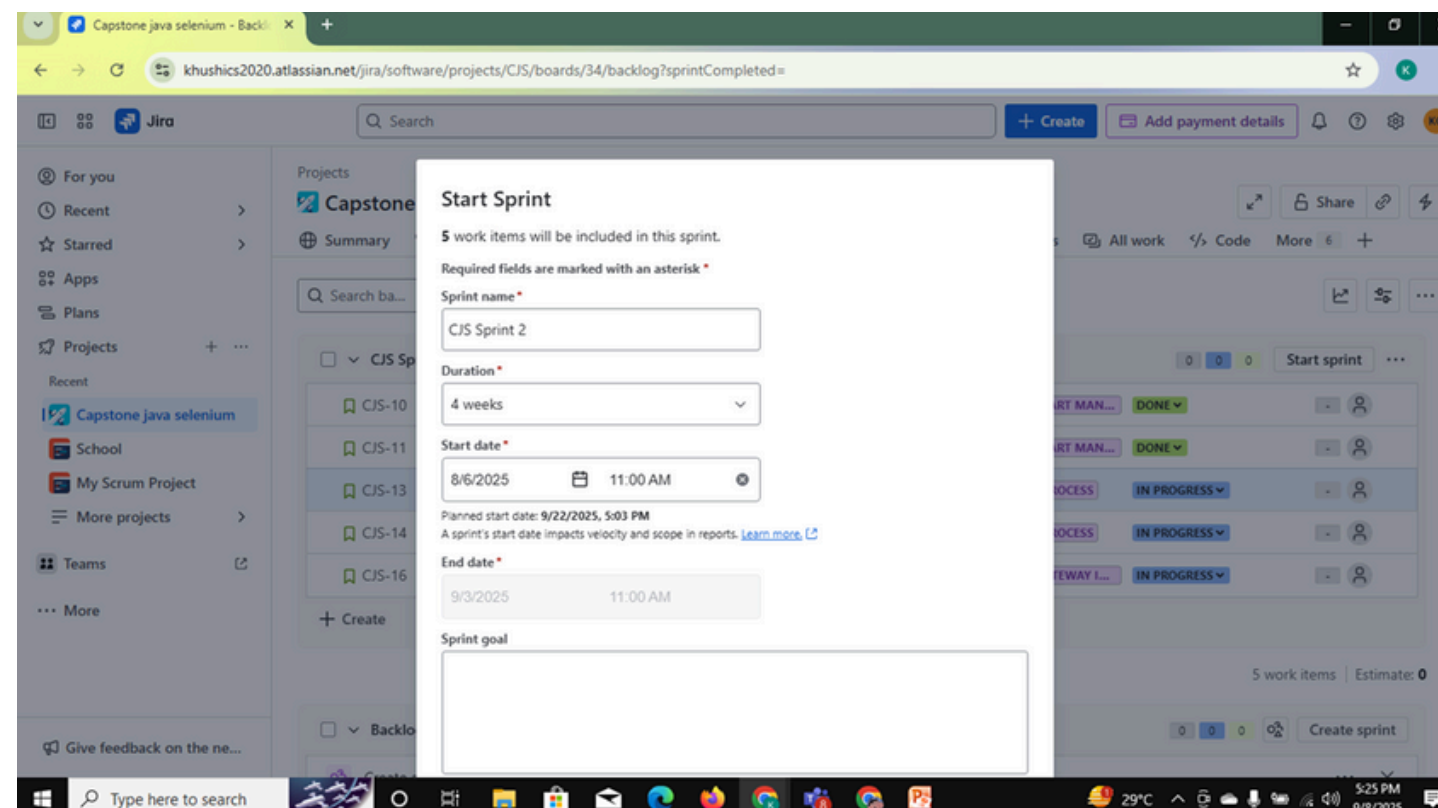
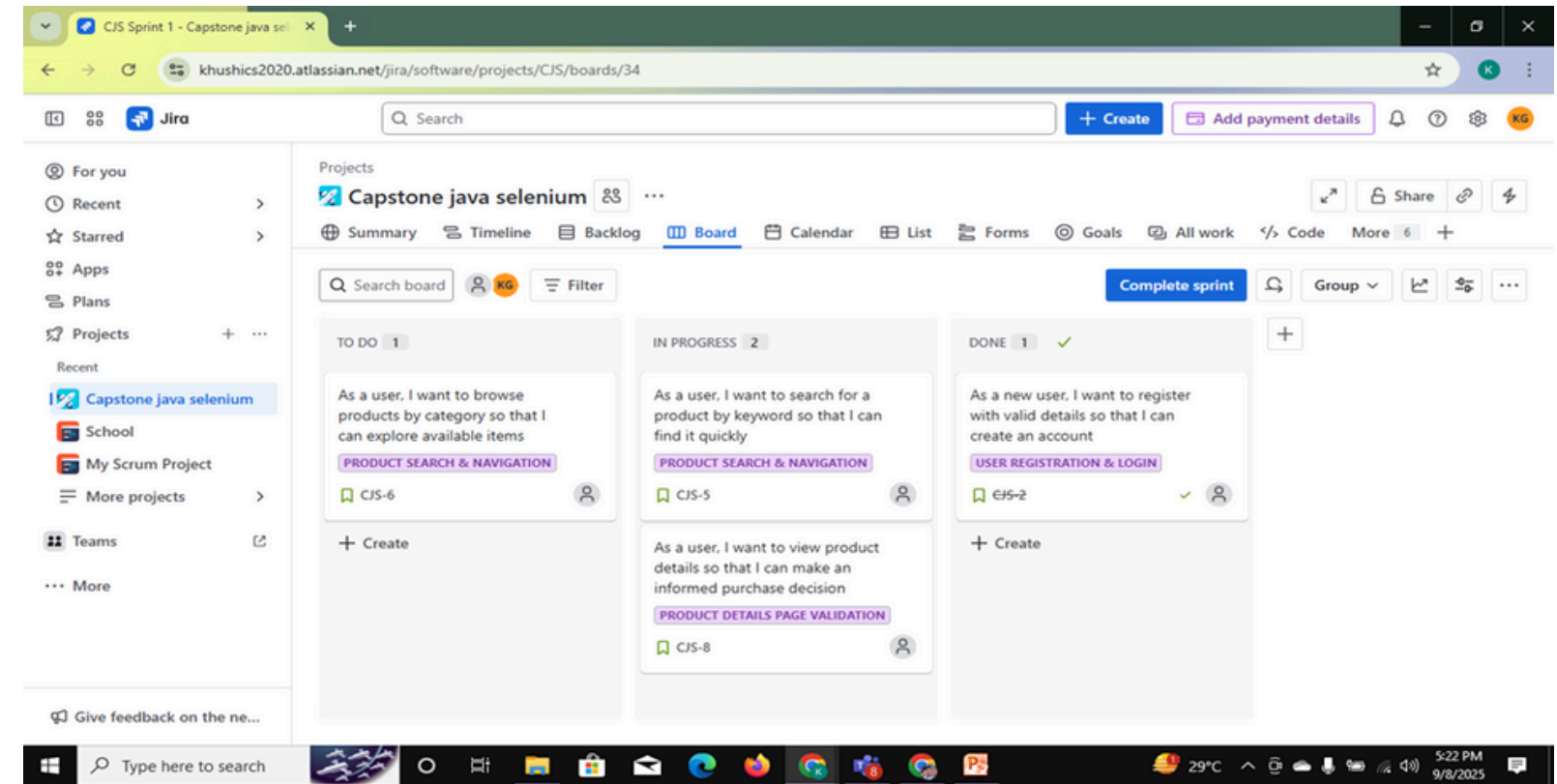
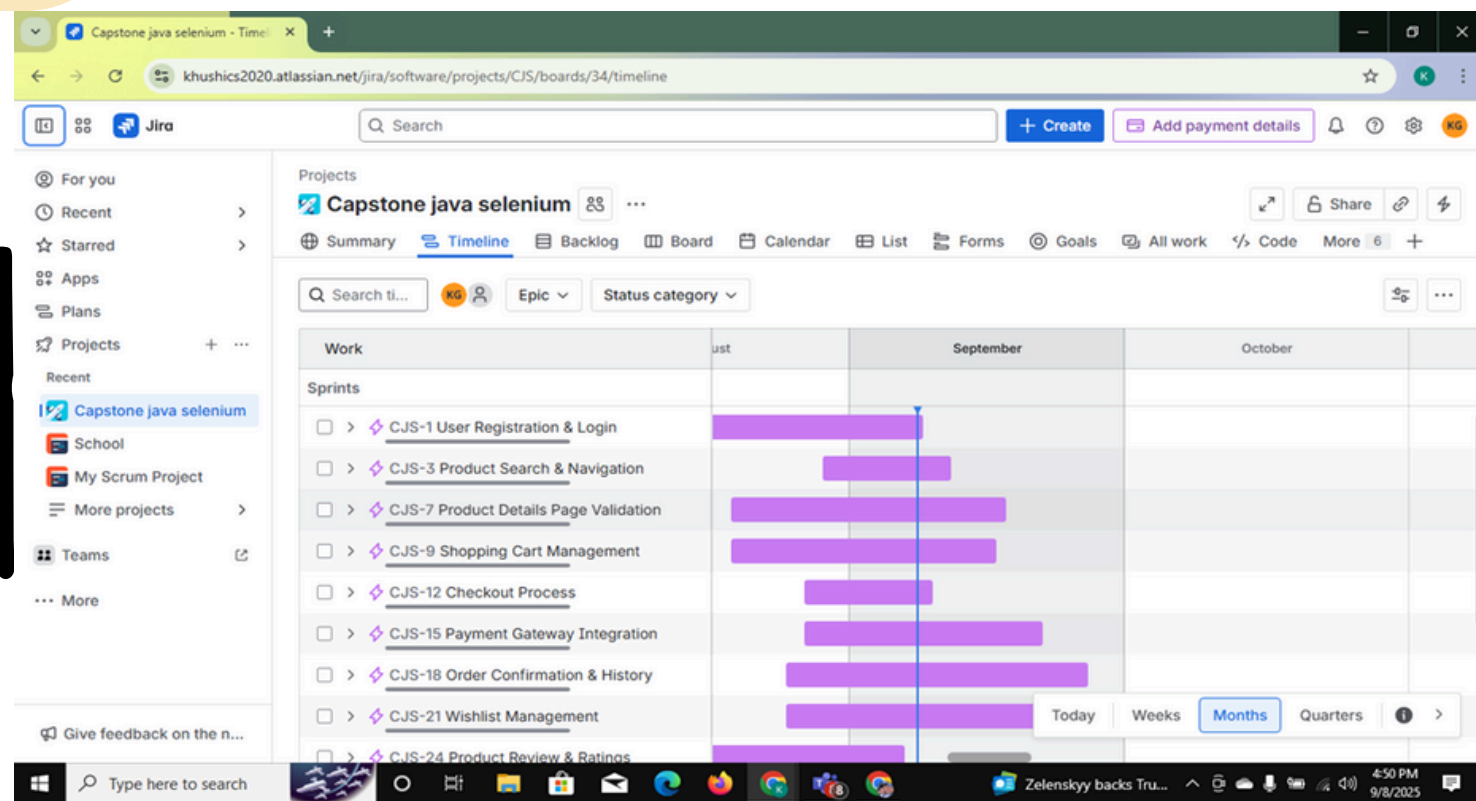
ZEPHYR BOARD - SMOKE CASE, SANITY CASE AND REGRESSION CYCLE

The screenshot displays the Zephyr Board interface for a project named "Capstone java selenium". The selected item is "Smoke Test Cycle" under the "Test Cycles / CJS-R1 / Test Player" view. The cycle details include "No estimated time", "No execution time", "Planned start date: 08/Sep/25", and "Planned end date: 08/Sep/25". A list of test cases is shown on the left, with "CJS-T1 (1.0) E1-US1.1-TC1 Register New User Smoke" selected. The details for this test case are shown on the right, including "Execution" (Environment: None, Release version: None, Executed by: Khushi Gupta, Actual: 29s), "Objective" (Verify that a new user can register successfully with valid details), and "Precondition" (User is on Registration page).

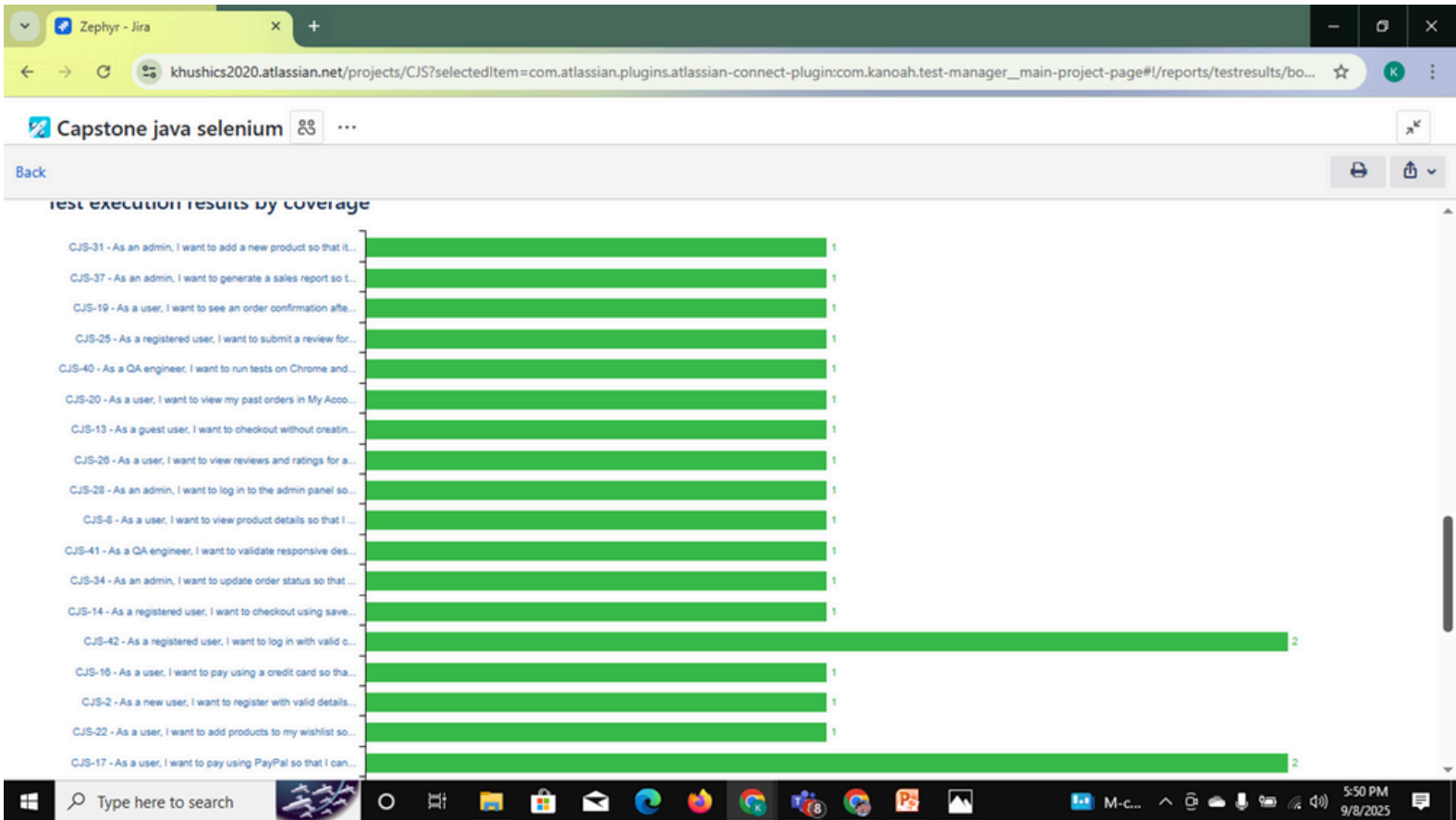
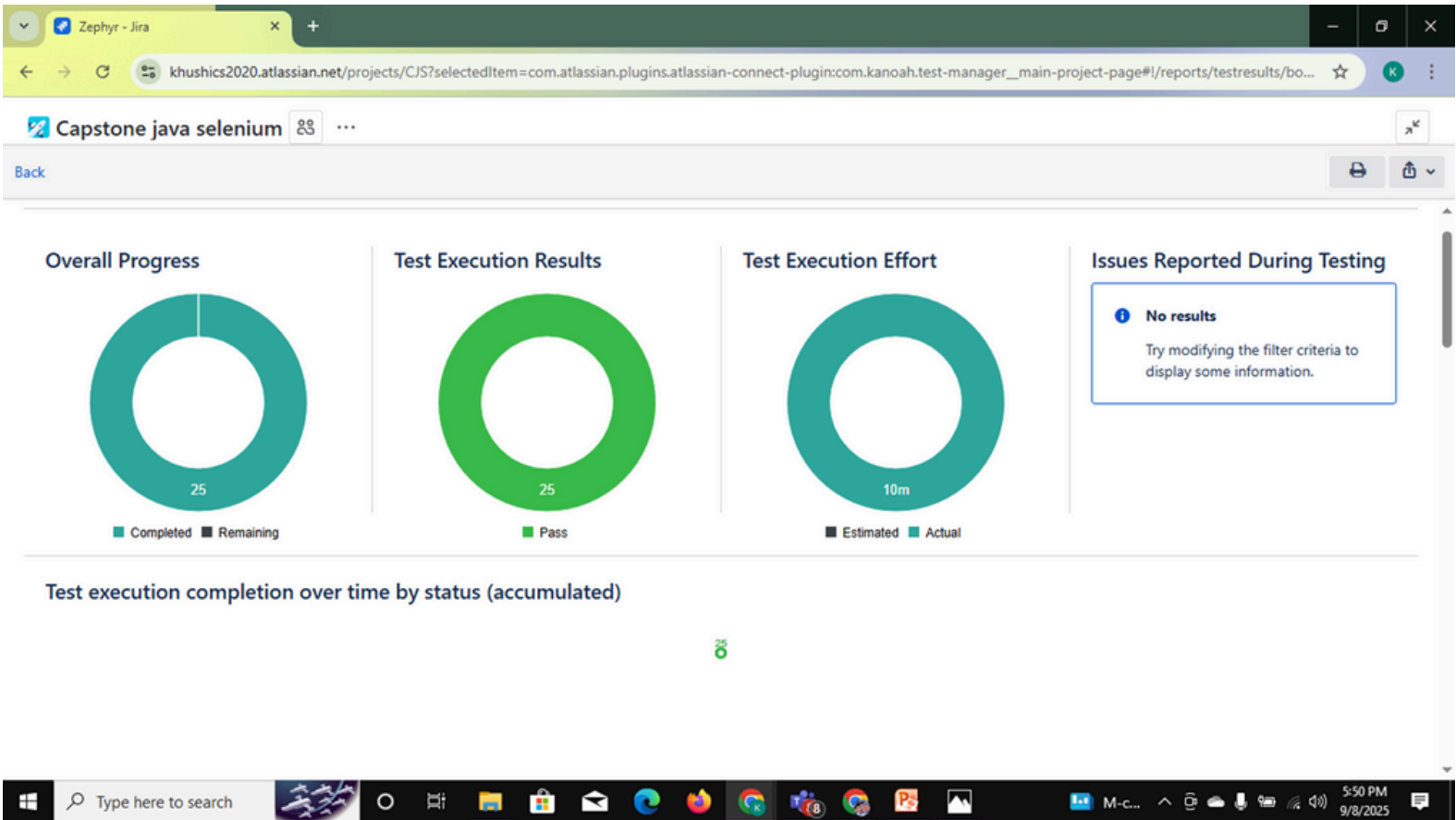
The screenshot displays the Zephyr Board interface for a project named "Capstone java selenium". The selected item is "Regression Test Cycle" under the "Test Cycles / CJS-R3 / Test Player" view. The cycle details include "No estimated time", "No execution time", "Planned start date: 08/Sep/25", and "Planned end date: 08/Sep/25". A list of test cases is shown on the left, with "CJS-T11 (1.0) E6-US6.1-TC1 Pay by Credit Card Regression" selected. The details for this test case are shown on the right, including "Execution" (Environment: None, Release version: None, Executed by: Khushi Gupta, Actual: 36s), "Objective" (Verify credit card payment works), and "Precondition" (Product in cart).

The screenshot displays the Zephyr Board interface for a project named "Capstone java selenium". The selected item is "Sanity Test Cycle" under the "Test Cycles / CJS-R2 / Test Player" view. The cycle details include "No estimated time", "No execution time", "Planned start date: 08/Sep/25", and "Planned end date: 08/Sep/25". A list of test cases is shown on the left, with "CJS-T22 (1.0) E12-US12.1-TC1 Update Order Status Sanity" selected. The details for this test case are shown on the right, including "Execution" (Environment: None, Release version: None, Executed by: Khushi Gupta, Actual: 33s), "Objective" (Verify admin can update status), and "Precondition" (Admin logged in, order exists).

JIRA BACKLOG SCREENSHOT AND DESCRIPTION ONE LINE TO SHOW AGILE WORK IN SPRINT



TEST REPORT FROM ZEPHYR - SCREENSHOT





THANK YOU