

ASCENDION

Capstone Project



Personal BACKGROUND

(Name, Past Experience, Qualification, Career Summary)

Name : Prabhu Krishnamoorthy

Past Experience : 7.5 years

Qualification : Lead Engineer

Career Summary : Lead QA Engineer with 7.5 years of expertise across Functional Testing, UI Automation, API Automation, and Mobile Testing, ensuring high-quality, scalable test coverage.



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Key Takeaways/Learnings from the Program (HTD)

- **Strong foundation in building scalable automation frameworks**
 - Using Page Object Model (POM), reusable utilities, and clean coding practices.
- **Efficient UI automation with Selenium WebDriver**
 - Mastered locators (XPath, CSS, ID), waits, browser handling, and debugging dynamic elements.
- **Complete test execution workflow**
 - Implemented data-driven testing, assertions (NUnit/MSTest), and integrated tests with CI/CD.



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Problem Statement of the Capstone Project

Maintaining stable UI tests is challenging due to frequent application changes.

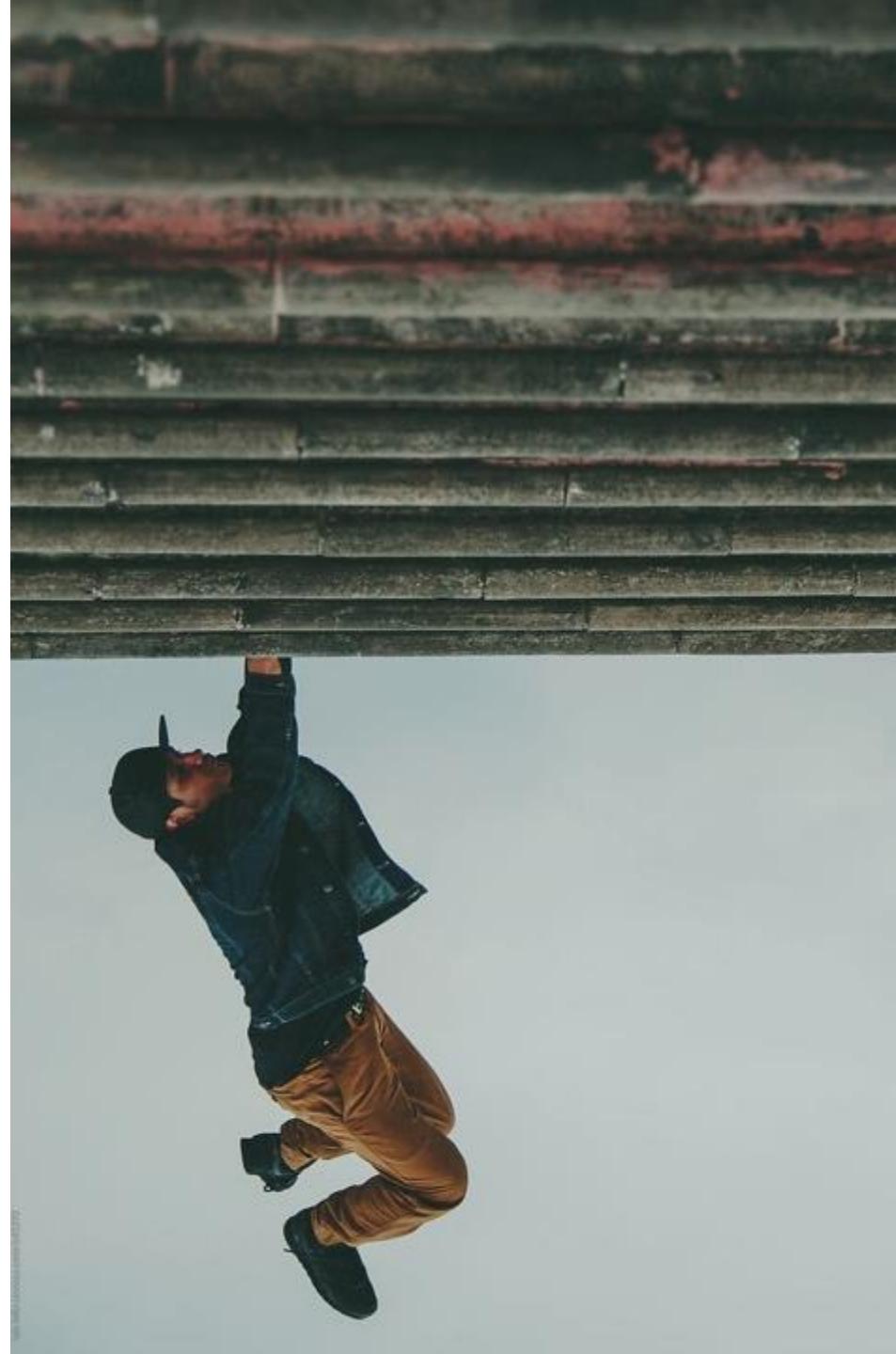
This project overcomes the issue by using a strong Page Object Model (POM) with:

- Centralized locators
- Reusable action methods
- Explicit waits for dynamic elements

Basic automation projects often lack structure, reporting, and reusability.

This project solves these gaps by building a scalable, industry-level framework using:

- **Driver Factory** for consistent browser setup
- **Excel-based Data-Driven Testing**
- **Extent Reports** for detailed execution insights
- **Modular, extensible design** for easy maintenance and growth



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The screenshot shows a dark-themed IDE interface with the following details:

- Top Bar:** Displays tabs for "CreateUserTests.cs", "UpdatePutUserTests.cs", "GetUsersTests.cs", "DeleteUserTests.cs", and "UpdatePatchUserTests.cs".
- Solution Explorer:** Located on the right side, it shows the project structure for "CartAPI_Testing".
 - Dependencies:** Contains a warning icon.
 - Base:** Contains "Base.cs".
 - Models:** Contains "User.cs".
 - Reports:** Contains a folder "Reports" with a file "ExtentReport.html".
 - Tests:** Contains "CreateUserTests.cs", "DeleteUserTests.cs", "GetUsersTests.cs", "UpdatePatchUserTests.cs", and "UpdatePutUserTests.cs".
 - Utils:** Contains a folder "Reporter" with "Configuration.cs".
- Code Editor:** The main area displays the "CreateUserTests.cs" file content. The code uses RestSharp to perform a POST request to create a user. It includes imports for System, Newtonsoft.Json, NUnit.Framework, RestSharp, and CartAPI_Testing.Models. The class "CreateUserTests" inherits from "BaseTest". The test method "POST_User_Should_Create" creates a new user with specified details and adds JSON body data.
- Status Bar:** At the bottom, it shows "Ln: 9, Ch: 34 | (10 chars, 1 lines) | SPC | CRLF | UTF-8 with BOM".

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Test Explorer

Test run finished: 5 Tests (5 Passed, 0 Failed, 0 Skipped) run in 5.1 sec

Test

- CartAPI_Testing (5)
 - CartAPI_Testing.Tests (5)
 - CreateUserTests (1)
 - DeleteUserTests (1)
 - GetUsersTests (1)
 - UpdatePatchUserTests (1)
 - UpdatePutUserTests (1)

Run | Debug | Profile

Group Summary

CartAPI_Testing

Tests in group: 5

Total Duration: 4.6 sec

Outcomes

5 Passed

Search (Ctrl+I)

0 Warnings 0 Errors

HTTP Report 09-12-2025 10:53:36

Tests

Test	Status	Timestamp	Duration	Details
POST_User_Should_Create	Pass	09-12-2025 10:53:36	09-12-2025 10:53:37	1130.63 ms · #test-id=1
DELETE_User_Should_Return_200	Pass	09-12-2025 10:53:36	09-12-2025 10:53:37	682.79 ms
GET_All_Users_Should_Return_List	Pass	09-12-2025 10:53:36	09-12-2025 10:53:37	641.79 ms
PATCH_User_Should_Update_Username	Pass	09-12-2025 10:53:36	09-12-2025 10:53:37	557.73 ms
PUT_User_Should_Update	Pass	09-12-2025 10:53:36	09-12-2025 10:53:37	538.88 ms

POST_User_Should_Create

09-12-2025 10:53:36 09-12-2025 10:53:37 1130.63 ms · #test-id=1

STATUS TIMESTAMP DETAILS

Dec 09, 2025 1 0:53:37 Test Passed

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```
CartAPI_Testing/  
|  
|   └── Models/  
|       └── User.cs  
|  
└── Tests/  
    ├── CreateUserTests.cs  
    ├── GetUsersTests.cs  
    ├── UpdatePutUserTests.cs  
    ├── UpdatePatchUserTests.cs  
    └── DeleteUserTests.cs
```



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1. GET

Fetches data from the server (read-only).

2. POST

Creates a new resource on the server.

3. PUT

Updates/replaces an entire resource.

4. PATCH

Partially updates a resource.

5. DELETE

Removes a resource from the server.



Test Execution Report

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Amazon Execution Screenshot

The screenshot shows the Amazon.in homepage with a "Wardrobe Refresh Sale" banner for items under ₹399. Other banners include "Revamp your home in style", "Starting ₹49 | Deals on home essentials", "Bulk order discounts + Up to 18% GST savings", and "Appliances for your home | Up to 55% off". The navigation bar at the top includes links for All, Fresh, MX Player, Sell, Bestsellers, Mobiles, Today's Deals, Customer Service, Prime, New Releases, Amazon Pay, Electronics, Fashion, and Home & Kitchen.

The screenshot shows the search results for "iPhone" on Amazon.in. It displays a sidebar with filters for Delivery Day (Get it in 2 Days), Price (₹140 - ₹123,100+), Brands (Apple, Samsung), Storage Capacity (256 GB, 512 GB & above), Item Condition (New), and Discount. The main area shows a grid of iPhone models with a "Sponsored" tag next to one result. The result for the Apple iPhone 15 (128 GB) - Green is highlighted, showing a price of ₹50,990 (M.R.P.: ₹69,900, 27% off).

The screenshot shows the product detail page for the Apple iPhone 15 (128 GB) - Green. Key details include a 4.5-star rating from 9,045 reviews, "Amazon's Choice", and "300+ bought in past month". The price is listed as ₹50,990 (M.R.P.: ₹69,900). The page also features sections for "With Exchange" (Up to ₹47,450.00 off), "Without Exchange" (₹50,990.00 ₹69,900.00), and "FREE delivery". Shipping information indicates delivery to Chennai 600001. The product is marked as "In stock" and ships from Clicktech Retail Private Ltd. Payment options include Cashback, Cost EMI, and Partner Offers like GST invoice savings and AppleCare protection plans.

The screenshot shows the sign-in or create account page on Amazon.in. It features a large input field for "Enter mobile number or email" with a "Continue" button. Below the input field, there is a note about agreeing to the Conditions of Use and Privacy Notice. A "Buying for work?" section is present, encouraging users to create a free business account. The bottom of the page includes links for Conditions of Use, Privacy Notice, Help, and a copyright notice from 1996-2025.

Execution Result

The screenshot shows the Ascendion execution result interface. On the left, there's a sidebar with icons for tests, reports, and logs. The main area has a header with a search icon, a 'Buy Laptop Flow' button, and a timestamp '08-12-2025 20:06:55'. The main content is divided into two sections: 'Tests' and a detailed log table.

TEST	STATUS	TIMESTAMP	DETAILS
Buy Iphone Flow 20:06:58 / 28893.46 ms	Pass		
	Info	Dec 08, 2025 2 0:07:03	Navigated to Amazon
	Pass	Dec 08, 2025 2 0:07:05	Navigate to Amazon dashboard completed successfully
	Info	Dec 08, 2025 2 0:07:11	Searched for Iphone
	Pass	Dec 08, 2025 2 0:07:13	Search Product completed successfully
	Info	Dec 08, 2025 2 0:07:14	Clicked first product
	Pass	Dec 08, 2025 2 0:07:16	Click First Product of Iphone completed successfully
	Info	Dec 08, 2025 2 0:07:17	Switched to product tab
	Pass	Dec 08, 2025 2 0:07:19	Click Buy Now option completed successfully
	Pass	Dec 08, 2025 2 0:07:21	Click Buy Now option completed successfully
	Info	Dec 08, 2025 2 0:07:23	Clicked Buy Now
	Info	Dec 08, 2025 2 0:07:23	Enter email address
	Info	Dec 08, 2025 2 0:07:25	Clicked the continue Button
	Pass	Dec 08, 2025 2 0:07:27	Buy Laptop Flow completed successfully

Conclusion

- Selenium C# ensures reliable UI automation for Amazon's key user journeys.
- RestSharp provides efficient validation of backend APIs using GET, POST, PUT, PATCH, and DELETE.
- Combining UI and API tests offers stronger coverage and faster defect detection.
- This integrated approach improves test quality, stability, and overall system reliability.



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Thank You