

Selenium automates browsers. That's it!

What you do with that power is entirely up to you.

Primarily it is for automating web applications for testing purposes, but is certainly not limited to just that.

Company Profile

We work with Fortune 1000 companies worldwide in many vertical sectors to provide the effective solutions using our services, consulting and products division. To stay competitive in today's fast-paced electronic world, it's crucial to plan for your technology to not only keep pace with - but to enhance - your business growth.

We have extensive experience in state-of-the-art networking, technology infrastructure and business growth strategies. We can design a step-by-step, cost-effective plan for you to achieve optimum ongoing productivity for your company.

We offer



DIGITAL Workforce

...reduce the cost of acquiring and training IT staff by bringing in subject matter experts ready to start the project and deliver



DIGITAL Consulting

...re-invent your team by bringing in the right partner with the expertise to help create and deploy the right technology



DIGITAL Services

... reshape your business model and customer experience to exceed customer expectations and enhance the user

Committed to Build *Solutions* and Create Rewarding Results!

We strive to excel in the invention and development of the industry's most advanced technologies into value for our clients and customers giving them professional and best class services; thereby helping businesses throughout the world harness their full potential.

We solve our clients' toughest challenges by providing matched services in strategy, consulting, technology and operations.

Selenium Capabilities

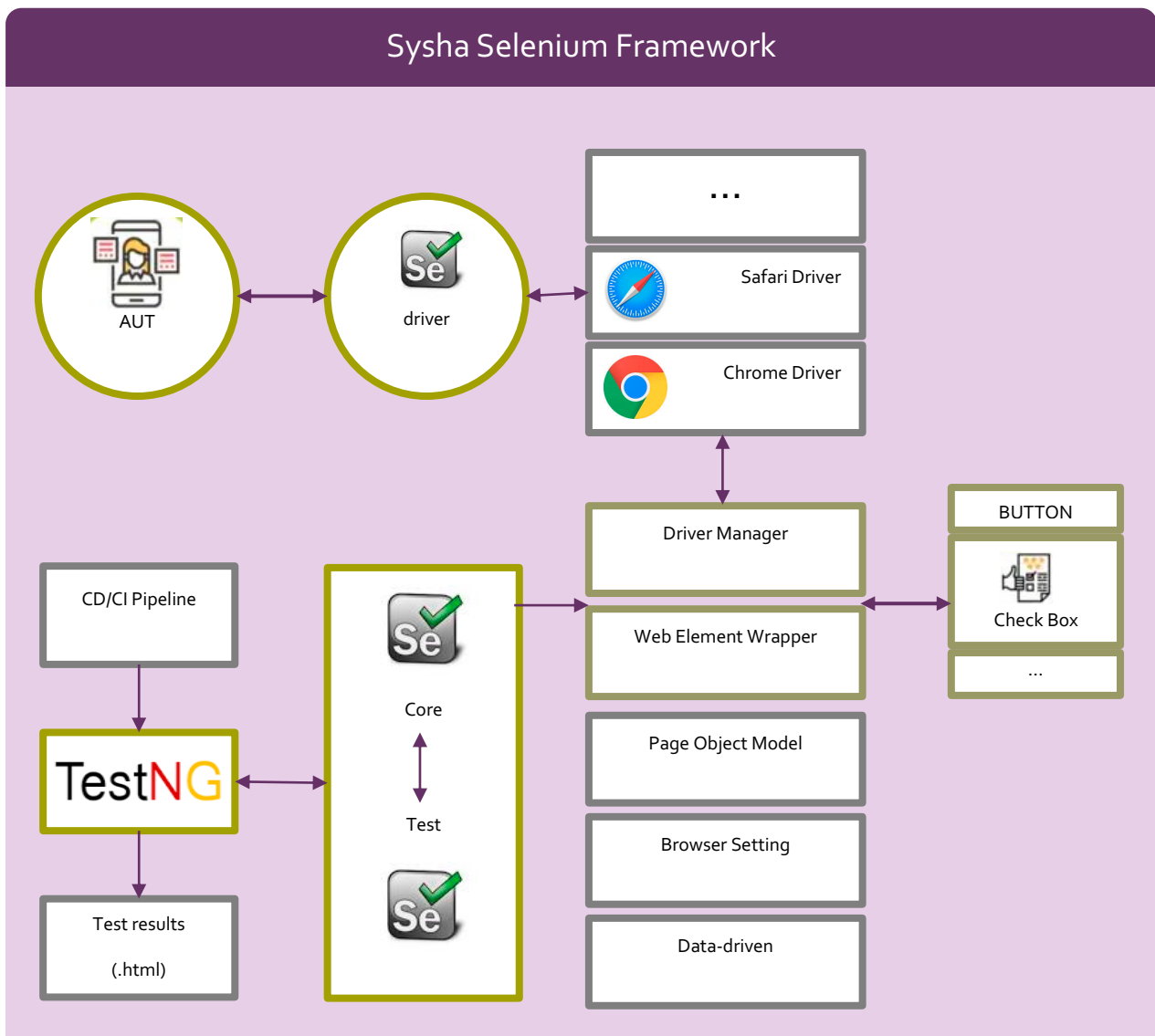
Selenium testing is integral to development today as it is



Language and Framework Support - Open Source Availability - Multi-Browser Support - Support Across Various Operating Systems - Ease Of Implementation - Reusability and Integrations - Flexibility - Parallel Test Execution and Faster Go-to-Market - Less Hardware Usage - Easy to Learn and Use - Constant Updates

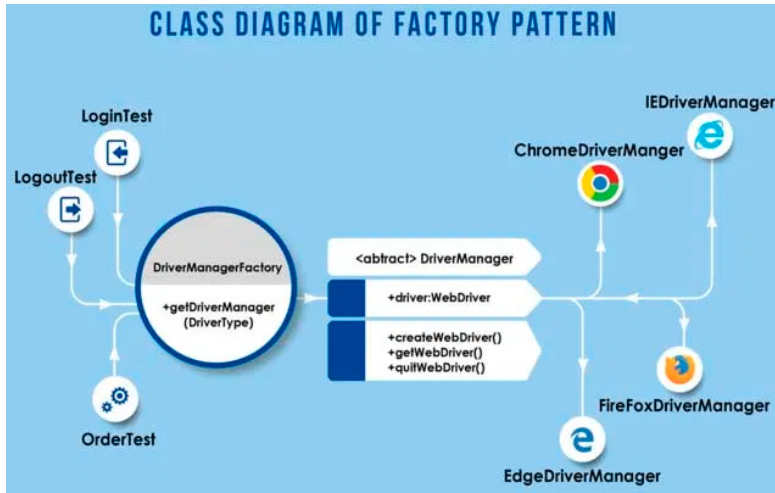
Sysha Selenium Framework

Sysha selenium framework is a combination of set protocols, rules, standards and guidelines that can be incorporated or followed as a whole so as to leverage the benefits of it. This framework can be applied independently that is it can be used with any application irrespective of the complications (like Technology stack, architecture etc.) of application under test. Easy scalable and maintainable. Low cost, open source-based and is used for mobile testing services as well. It is an independent framework and can be easy customizable according to customer needs



Sysha Selenium Strategy

The main reasons for leveraging design patterns in test automation is increasing of stability, maintainability, flexibility, reliability and clarity. They can be classified as



- Structural patterns
- Data patterns
- Technical patterns
- Business involvement patterns

Some of the design patterns that we use in Sysha are Page Object, Fluent / Chain of Invocations, Page Factory, Loadable Component, Strategy, Assert Object/Matchers, etc.,

Hybrid framework

- **Adaptability** – this is a criterion delineating the ease of use, deployment and user learning curve (focusing on the complexity of the framework and development language)
- **Re-usability** – a key value of test automation frameworks
- **Reporting** – the ability of a framework to produce reports, but also logging, granularity of reporting and ability to transform reports to other storage or format
- **Extensibility** – whether the framework can be extended in case it lacks a key feature, how it integrates with other frameworks or components under test, how many libraries are available and whether it's easy to create various scenarios or test cases for scenarios
- Supported environments and platforms
- Integration with CI
- Readability yet Easy maintenance
- **Support** – the community surrounding a particular test automation framework and whether there's existing documentation to help leverage all benefits of the framework.

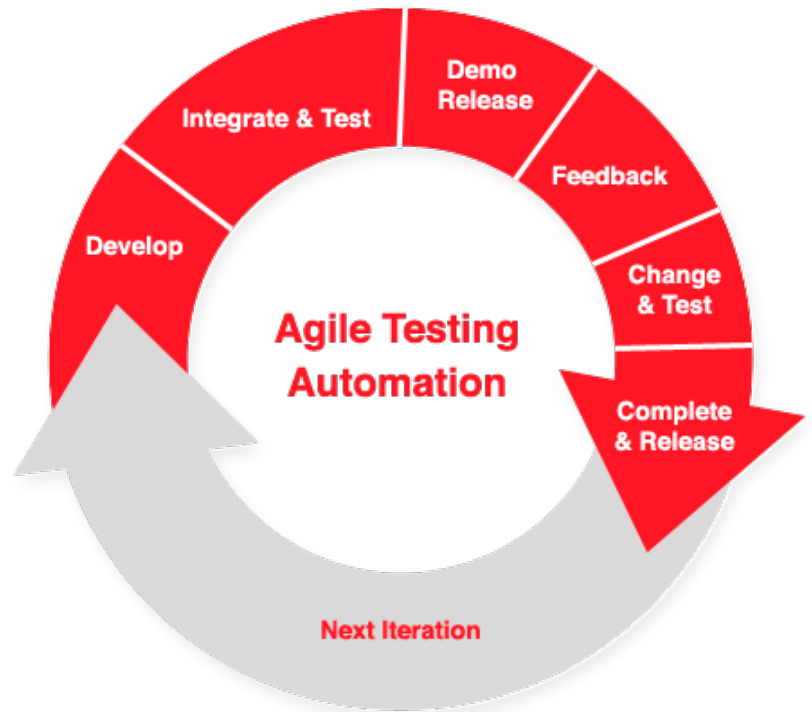
Key Differentiator

- Our dedicated team of researchers, comprising technology and domain experts, are focused on identifying trends and developing technologies that are relevant to enterprises, not only today but also in the long run.
- We focus on developing significant intellectual property (IP) to create new and differentiated products, platforms, solutions, and services that are customized to suit the needs of various industries.
- We also enable collaboration and facilitate co-creation of ideas and innovative solutions between thought leaders and technology architects.
- We strive to deliver value to clients in the areas of optimization, transformation, and innovation.
- We are also focused on developing new capabilities along the lines of design thinking, creating new innovative solutions, and assembling new kinds of platforms based on open source technology.



Agile Test Automation

- Automation based on coverage
- System level automation
- Development driven by testing
- Automated testing before its manual counterpart
- Choice of Tool
- Verifying test automation code
- Sharing code to encourage code usage across teams



Case Study

THE CHALLENGE

A US based leading energy and natural gas/oil corporation has decades-old legacy systems to support 13 service lines across the organization.

These interconnected systems made automation a distant dream, as product releases for one service line impacted the others.

A recent introduction of chat to end user adds complexity to the existing application as the opened chat should persist even after the pages are navigated within the web portal

THE SOLUTION

We began the automation journey by transforming 70 percent of the regression testing scripts automated. This increased both test productivity and test execution.

However the challenge of multi browser/portal couldn't be able to resolved using generic local script based automated testing. Introduction of selenium helped in navigating to different pages yet ensuring the persistence of chat session.

This completely avoids the repetitive manual testing and within no time it could identify the chat session disconnect and report the page and navigated link.

THE RESULT

Apart from the below benefit, the selenium repetitive testing wins the customer confident towards the chat session that any end customer is always connected while the pages are being navigated.

15% to 7% reduction in QA to IT costs

50% ability to leverage automation opportunities

<2% product defect leakage

20% y-o-y increase in test productivity

30% y-o-y increase in test execution

THE CHALLENGE

A US leading telecom company's data analytics application is a multi-vendor, real-time customer-centric analytics product for mobile operators to capitalize on the network performance. Design & delivery / operations management of a Next-Gen analytics application showcasing Customer Experience Insight, Hot Spots, Locations, Commonalities, Quality Indicators, Incident Summary & Incidents Details of customer GSM mobile network

THE SOLUTION

Rollout of test automation framework and create individual silo automation scripts which operates in a coordinated way. Introduction of selenium grid to virtualize the multiple server environments and usage of Jenkins to trigger automated testing scripts by inheriting the common available frameworks like JUnit and/TestNG resulted in continuous testing in the DevOps pipeline. No additional cost involved in building integration components for test management tools.

THE RESULT

Shift-left, early automation and early life cycle validation. **40-60%** reduction in effort for automated test case generation over manual testing. **Detailed error reporting** reduces defect reporting effort considerably. Easy maintenance of requirements, stories, features and the **automated test suite**. Enhanced business user participation and satisfaction due to the live documentation of features and user stories, available at fingertips. High defect detection rates (**95-99%**) due to high test coverage

Looking Forward

The investments made in IT ecosystem and marketing can take businesses only so far, particularly if they do not have a holistic approach to build the IT ecosystem. As IT system expands beyond the periphery into the mainstream of consumer and enterprise markets, integrations with multiple components must gear up to help their organizations take advantage of the tremendous opportunities created by the ongoing business digitization. It's time for organizations to empower their companies with reliable IT products and services that make good on the promise of smart, connected devices that elevate everything from personal wellness/hygiene and driving, through manufacturing, logistics management and air travel. With ever-greater blending of IT into business, it is necessary for the testing teams to upskill beyond traditional functional testing and gear up for integrated testing of embedded software, IT solutions and big data and to understand their influence on one another.

For more information and view all case studies visit: <http://www.syshagroup.com>



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