

Implementing Keyword-Based Test Automation for a Large Insurance Brokerage Firm

The Client

The Client is a leading American insurance and financial services company offering a comprehensive suite of services, including insurance brokerage, benefits consulting, wealth management, and retirement plan advisory. They enable customer success through specialized expertise, innovative technologies, and enduring relationships with highly rated insurers, vendors, and financial institutions across the globe. The Client has offices across the United States, Canada, Puerto Rico, and the UK.

The Challenge

The Client was looking to streamline their web application testing process amid frequent feature releases and enhancements for one of their critical applications. The manual regression and smoke testing cycles were becoming unsustainable, consuming significant time and resources with each application update. Manual testers spent up to 2-3 days executing these basic test suites, creating a bottleneck in the release cycle.

As the application grew in complexity, the testing scope expanded proportionally, making it increasingly difficult to maintain testing coverage without extending release timelines. The Client needed a solution that would scale with their growing application while maintaining testing thoroughness.

The Client sought a lightweight automation framework that would:

- Enable quick implementation without disrupting existing processes
- Allow their current manual testing team to transition smoothly to automation
- Support rapid test case creation and maintenance
- Integrate seamlessly with their existing testing workflow

Their primary goal was to reduce regression and smoke testing cycles from days to hours while improving test coverage and reliability.

The Solution

Opteamix developed an automation framework built on keyword-driven testing principles. The solution was designed to maximize efficiency and minimize implementation overhead. The solution consisted of:

- **Excel-Based Test Management Interface**
 - Implemented an intuitive Excel interface that served as the central hub for test case management and execution
 - Enabled testers to create and modify test cases using a familiar spreadsheet functionality
 - Provided a simplified command structure through predefined keywords that mapped to complex testing operations

- **Function Reusability and Integration**
 - Leveraged existing application functions from the development team's codebase
 - Eliminated redundant code development by mapping keywords directly to pre-built functions
 - Created a bridge between test scenarios and application functions through a robust keyword-function mapping system
 - Implemented a modular design that allowed for easy expansion of the keyword library
- **Automated Testing Workflow**
 - Developed a seamless process for converting manual test cases into automated scripts using keywords
 - Implemented batch execution capabilities for running multiple test scenarios
 - Created an automated test scheduling system for unattended execution
- **Comprehensive Reporting System**
 - Designed detailed test execution reports highlighting pass/fail status
 - Implemented error logging with specific failure points and error messages
 - Created summary dashboards for quick analysis of test results
 - Generated automated notifications for failed test cases with detailed debugging information

This solution effectively transformed the Client's testing process while maintaining a low technical barrier to entry, allowing the manual testing team to adapt to automated testing quickly.

Value Delivered

The implementation of the Keyword Driven automation framework delivered substantial, measurable benefits to the Client across multiple dimensions:

- **Testing Efficiency and Cost Reduction**
 - Achieved a 50% reduction in overall regression testing efforts and costs
 - Decreased testing resource allocation requirements by half
 - Significantly reduced manual testing overhead, allowing team members to focus on exploratory and new feature testing
- **Enhanced Test Coverage and Quality**
 - Expanded test automation coverage to 95% of regression and smoke test suites
 - Improved testing consistency and reliability through standardized, automated procedures
 - Reduced human error in repetitive testing scenarios
 - Enabled comprehensive testing of critical business workflows
- **Accelerated Testing Cycles**
 - Reduced smoke test execution time from 60 minutes to under 10 minutes (83% improvement)
 - Shortened regression testing cycles from days to hours
 - Enabled rapid validation of new feature deployments
 - Increased testing frequency without additional resource requirements

- **Team Empowerment and Adoption**
 - Successfully transitioned manual testers to automation with minimal training
 - Eliminated the technical barrier typically associated with test automation
 - Achieved high team adoption rates through an intuitive Excel-based interface
 - Enabled testers to create and maintain automated tests without programming knowledge
 - Reduced dependency on specialized automation engineers

About Opteamix

Opteamix is an AI-powered technology services company specializing in AI, Application Development, Robotic Process Automation (RPA), DevOps, Enterprise Mobility, Test Automation, and Global Capability Center (GCC) operations. Guided by our higher purpose- **“Simplifying Success”**-we deliver transformative solutions that help organizations scale efficiently and thrive. Headquartered in Denver, Colorado, we operate a wholly owned delivery center in Bengaluru, India.

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