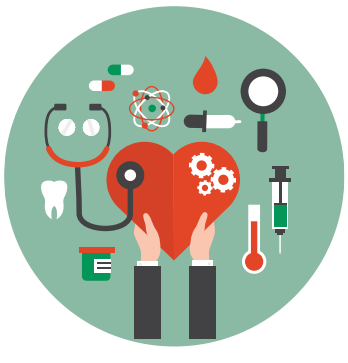
Silicus | Enabling Enterprises in the Cloud



SUCCESS STORY.

Automated Testing Using Selenium & Python For Healthcare ISV

About the Client

Client is a privately-held company dedicated to improving wellness. Working for 15+ years with leading institutions, Client brings the benefits of cutting edge research in nutrition, physical activity and behavior change to breakthrough product development. Client is a premier provider of wellness and nutrition-based software products and solutions for corporate wellness programs, community wellness programs, clinical trials, clinical research, and patient assessments.

Business Challenge

The client's flagship software product was a dietary analysis software used by leading medical research universities and government health agencies such as NIH. Developed in collaboration with industry-leading researchers and with grant funding from the National Institutes of Health (NIH), the software scientifically validates dietary analysis and provides the equivalent of 90 days of nutrition tracking in about 20 minutes.

The dietary analysis software was frequently enhanced and upgraded periodically, which made Smoke and Regression Testing difficult due to manual testing. Following challenges were faced:

- Smoke and Regression Testing is Time Consuming in manual testing
- Processing change requests during software maintenance takes more time

Silicus Solution

Automated testing solution was implemented to test the following functionalities:

- Login
- Add Patient
- Add Organization
- Add Protocol

Since the application was web-based, Silicus proposed Automation testing using Selenium Web Driver with Python language. Silicus selected Selenium Web Driver, since it was open source and easier to implement.

Creating the automation Framework was another critical activity.

The automation scripts were written in Python language, and automation scripts were developed to read the PDF reports generated during new patient creations and surveys.

Silicus followed the Module-Based test automation framework, since it had the following benefits:

- The framework introduced high level of modularization which leads to easier and cost efficient maintenance.
- The framework is scalable
- If the changes are implemented in one part of the application, only the test script representing that part of the application needs to be fixed leaving all the other parts untouched

Technologies Used

PLATFORM
Windows 2000

DATABASE
SQL Server 2008

AUTOMATION TOOL
Selenium Web Driver

SCRIPTING LANGUAGE
Python

IDE
Notepad & IDLE (for Python)

Client Benefits

REDUCED EFFORT AND TIME

Automated testing significantly reduced resource effort and time. Even test data were automatically prepared using the scripts. Manual efforts were limited to the creation of automated scripts.

COMPATIBILITY

Automated test scripts were run across multiple browsers to achieve test conformance and achieve the test objectives.

REUSABILITY

The automated scripts were re-used and were run on different environments by changing the prerequisite of the required test.

INCREASED PRODUCTIVITY

Multiple test scripts were executed in comparison with the manual run. Productivity was increased through less execution downtime and better test coverage.

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