



# AUTOMATED TESTING FOR WEB BASED APPLICATIONS

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# INTRODUCTION

Web Applications Are Complex:

- Modern websites are full of interactive features like dynamic forms, responsive designs, and real-time updates. Testing these manually becomes challenging because it requires a lot of effort and time to ensure everything works correctly across all browsers and devices.

Need for Faster Testing:

- In today's fast-paced development cycles, companies release updates frequently—sometimes multiple times a day. Manual testing cannot keep up with this speed. Automation is essential to run tests quickly and efficiently without compromising quality.

Better Accuracy:

- Manual testing can lead to human errors, especially in repetitive tasks like filling out forms or clicking buttons in the same pattern. Automation ensures that the same tests are executed the same way every time, reducing mistakes and increasing reliability.



# WHAT PROBLEM ARE WE SOLVING?



## Manual Testing Issues

Testing by hand is not only slow but also inefficient when dealing with complex websites. It often leads to delays in finding bugs or issues, which can further slow down the release of new features. Manual testing also becomes impractical when you have to test the same thing repeatedly for every update.

## Tools required

We are using Selenium, a popular tool for automating browser actions, to address these challenges. Selenium makes it possible to test websites faster and more accurately. It can handle complex test cases like clicking buttons, navigating pages, or verifying content—tasks that would take much longer to do manually.

# PROPOSED SOLUTION



## Automate BestBuy Website Testing:

- Use Selenium to automate testing and ensure the BestBuy website functions correctly across various features.

## Simulate User Actions:

- Write test scripts to simulate common actions such as:
- Searching for Products
- Adding Items to the Cart
- Completing a Purchase

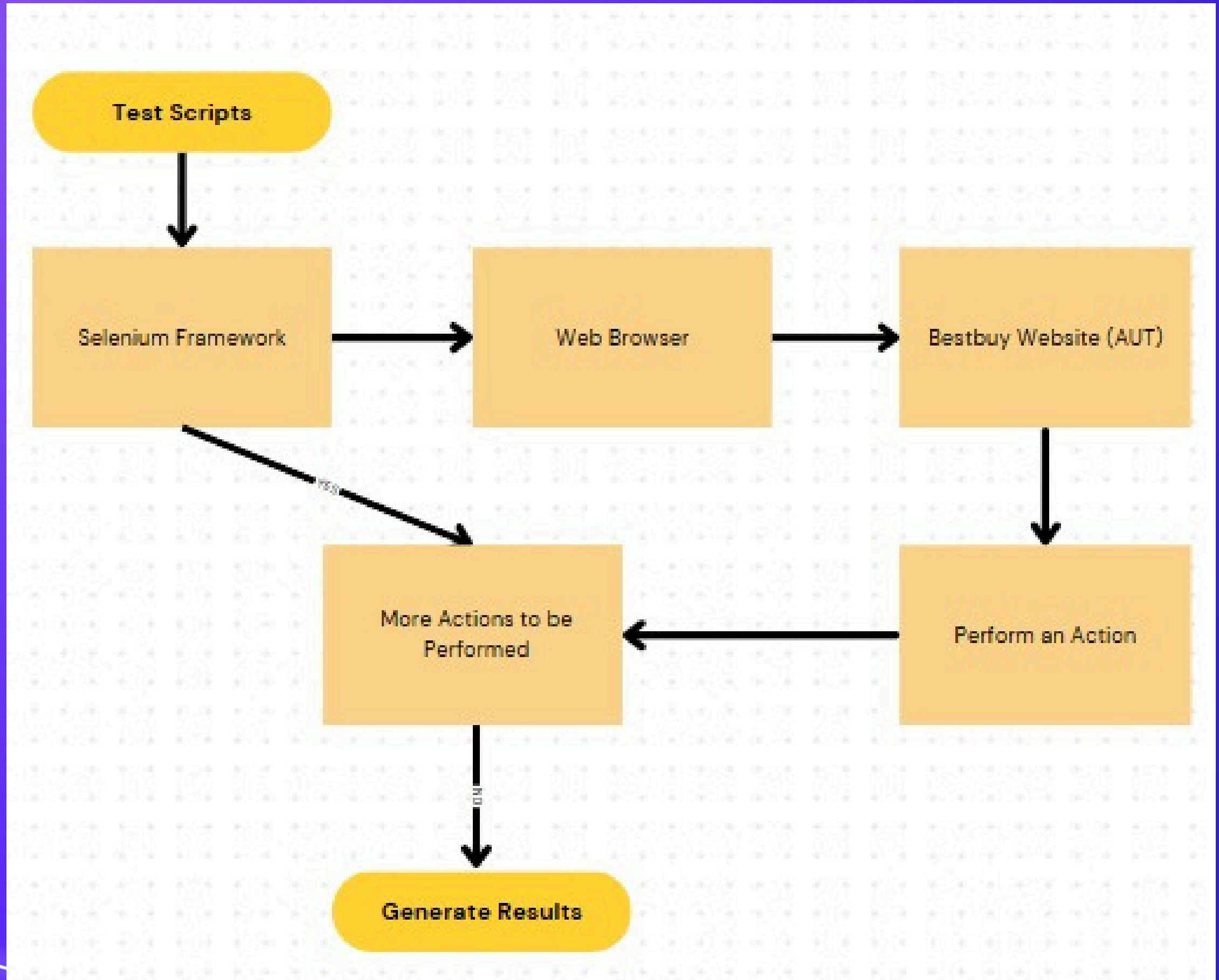
## Comprehensive Testing:

- Ensure the website works smoothly across different browsers and scenarios like slow internet or page navigation.

## Generate Reports:

- Create detailed reports with logs and screenshots to quickly identify and fix issues.

# WORKFLOW DIAGRAM



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# RESULTS

## Enhanced Efficiency:

- Automated key testing scenarios for BestBuy (search, cart, checkout), reducing manual effort and test execution time.

## Improved Accuracy:

- Automated tests reduced human error, ensuring consistent results across browsers and identifying bugs that manual testing might miss

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## Comprehensive Coverage:

- Achieved extensive test coverage, including multi-browser compatibility and diverse user interactions.

## Faster Feedback and Debugging:

- Generated detailed test reports with logs and screenshots, enabling quicker identification and resolution of issues

THANK YOU!

