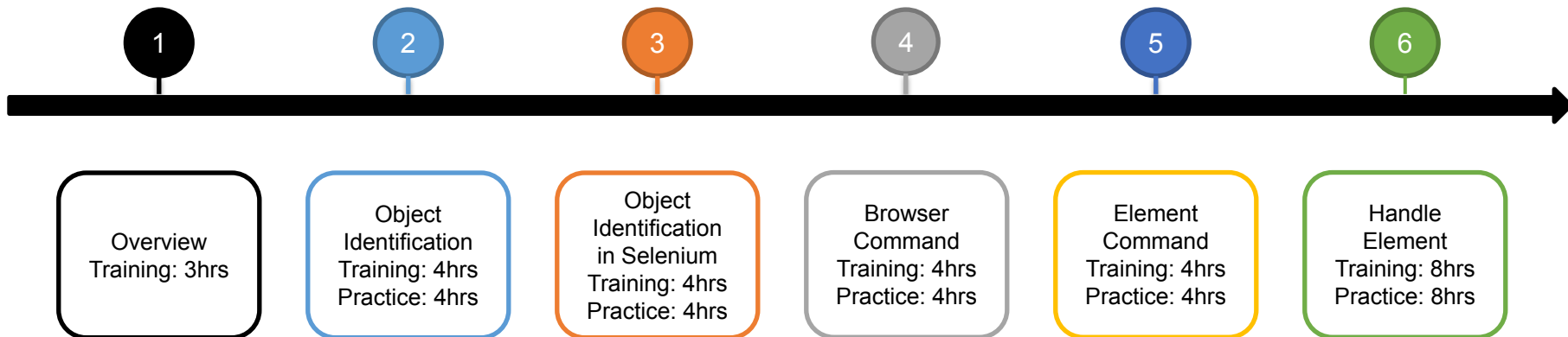


Test Automation Overview



Test Automation Roadmap



Total: 51hrs

- Training: 27hrs

- Practice: 24hrs

Agenda

- ❖ What is Test Automation and Why do we need it?
- ❖ Test Automation Activities
- ❖ How to Master Test Automation

What is Test Automation and Why do we need it?

The use of software or tools to perform the testing



Pros

Reduce the time required for regression

Quick report

Automate complex test cases

Conduct regression testing more often

More time for testers doing exploratory tests

Can be run earlier and nightly; run tests more often

Reusability

Cons

High cost of implementation

Should have knowledge of programming languages and testing technologies

Take time

Mistakes in automated tests lead to errors

Can find a part of the mistakes

Test Automation Activities

1. Analyze and Design
2. Planning
3. Test Script Development
4. On-going Development

Collect Client's Requirements & Test cases

Evaluate Tools & Technology

Tool Selection

- ✓ Use tool evaluation matrix
- ✓ Ask the expert team

Estimation

- ✓ Capture historical data of your own
- ✓ Consider hidden & uncountable cost

Get Full Set of Test Cases

Create Automation Test Cases

Estimate Test Automation Effort

Test Case Selection

- ✓ Check testability first
- ✓ Define detailed Test steps and corresponding Expected Results for every step

Test Case Selection

SHOULD

- **Repeatability & reusability**
- **Main flows & high risk function**
- Cross Compatibility
- Reliability
- Time intensive execution

SHOULD NOT

- Dealing with images, videos, flash
- Scheduling configuration
- Checking animation
- Accessing back-end server
- A mixture of steps: web + desktop

Automation Test Case

Manual Test Case

- Login

Test Step	Expected Result
Input username	Login successfully
Input password	
Click Login button	

Automation Test Case

- Login

Automation Test Step	Expected Result
Input username	Validate username field
Input password	Validate password field
Click Login button	<ul style="list-style-type: none">• Wait for...• If message is displayed• If navigate to home page• ...

Learn Framework (keywords, libraries, object identification)

Update & Prioritize Test Cases

Create Test Scripts and Test Suites

Execute Test Scripts & Test Suites

Review Test Scripts, Analyze & Report Test Results

Practices

- ✓ Avoid dependencies
- ✓ Prepare your test environment
- ✓ Don't forget waits
- ✓ Optimizing object identification
- ✓ Test Constantly
- ✓ Keep up-to-date & review regularly

Maintain Implemented Test Framework

Maintain Test Scripts

Execute, Analyze & Report

Execute Test Scripts & Test Suites

Review Test Scripts, Analyze & Report Test Results

Practices

- Parallel & Distributed Tests
- CI Integration
- Keep up-to-date & review regularly
- Collaboration

- Manual Testing
- Basic Test Automation
- Understand HTML, CSS, XPath, Web Development, Browsers
- Learn Add-ons: Firebug, FirePath, XPath Helper, Developer Tool(F12)
- Learn a Test Automation Tool – Selenium, Appium, etc...
- Learn Java/Python/C# or another programming language
- Learn development environment: Maven, Eclipse, TestNG, Specflow, etc...
- Learn POM
- Learn Design Patterns and Test Automation Patterns
- Learn other tools, frameworks and related knowledge
- Share and participate in communities and discussions
- **PRACTICE, PRACTICE & PRACTICE**

Take Away

BASIC CONCEPTS

What?
Why?

1

2

3

4

ACTIVITIES

Analysis & Design
Planning
Framework Development
Script Development

PRACTICES

Tool Selection
Test Case Selection
Coding Standards
Object Identification
Test Scripts

NON-STOP LEARNING

Passion with your career and
keep self-improvement.



Q/A?

