

# Automation Web

# Agenda :

- ✓ what is testing
- ✓ What is test Automation
- ✓ Why we use test Automation
- ✓ Most famous Automation Software Testing Tools
- ✓ What is selenium
- ✓ What is software design patterns

# What is testing ?

The process of setting up **preconditions**, then **executing** tests , and lastly **comparing** actual results against expected results.

# What is Test Automation ?

The **machine-driven** process of using software tools/frameworks to perform one or more of the following tasks:

- Control and set up test **preconditions**, cases, data, and procedures
- **Execute** tests, and create logs and execution reports
- We often use test automation in regression testing.

**Test Automation does not  
replace Manual testing**

# Why we use Test Automation ?

**Saves Time & Money**

**Improves Accuracy**

**Improves Morale**



**Increases Test Coverage**

**Does What Manual Testing Cannot Do**

**Helps Testers & Developers**





# Test execution tools

Test execution tools execute test objects using automated test scripts. This type of tools often requires significant effort in order to achieve significant benefits.

- **Capturing test approach**

Capturing tests by recording the actions of a manual tester seems attractive, but this approach does not scale to large numbers of test scripts.

- **Data-driven test approach**

It separates out the test inputs and expected results, usually into a spreadsheet, and uses a more generic test script that can read the input data and execute the same test script with different data.

- **Keyword-driven test approach**

its a generic script processes keywords describing the actions to be taken (also called action words), which then calls keyword scripts to process the associated test data.

# Most famous Automation Software Testing Tools

- Selenium



- Appium



- Katalon Studio



- Cucumber



- SoapUI



# What is Selenium ?

Open source tool aimed to automate web testing.

The background of the slide features an abstract design composed of various shades of blue. On the right side, there are overlapping, semi-transparent geometric shapes, primarily triangles and polygons, in different tones of blue, ranging from light sky blue to a deep navy blue. These shapes create a dynamic, layered effect. The left side of the slide is a solid, very light blue, providing a clean backdrop for the text.

# What is software design pattern ?

# Some types of software design pattern :

- The Spaghetti pattern
- The DRY testing pattern
- Data-driven testing pattern
- The page objects pattern (POM)



# Spaghetti pattern



# DRY pattern

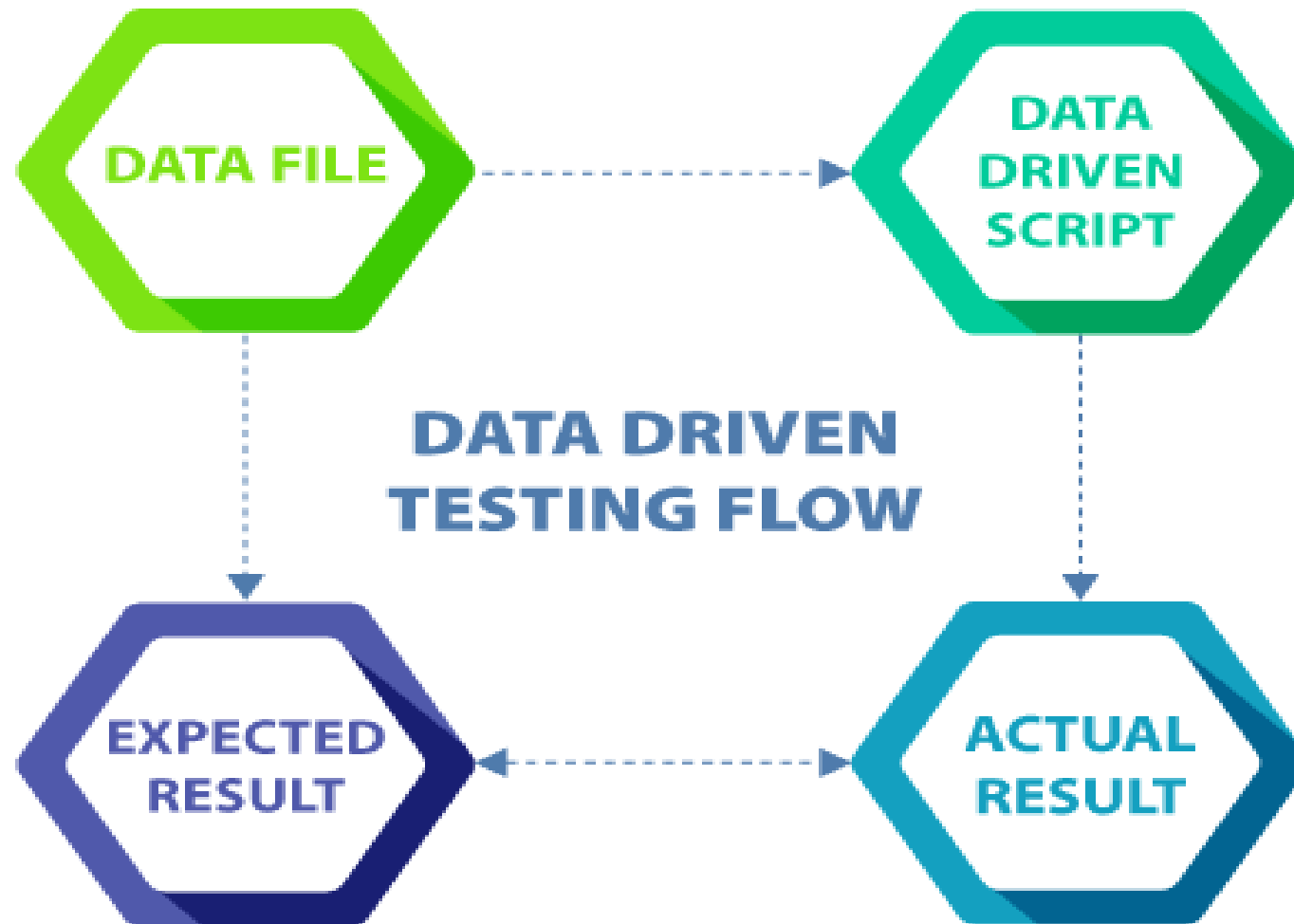
**DONT REPEAT YOURSELF**



First rule of coding



# Data Driven pattern



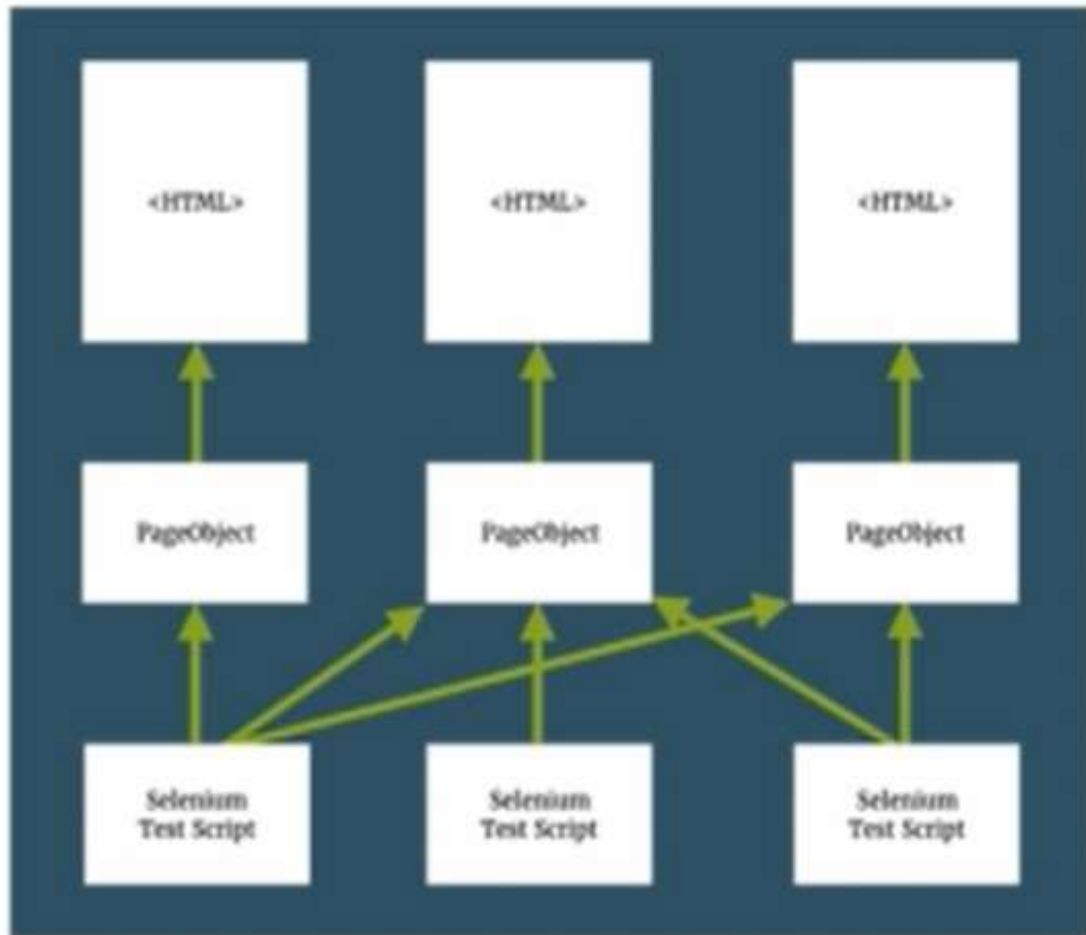
# Page Object Model (POM)

ArtOfTesting

# Page Object Model



- The Page Objects pattern describes any web page in terms of a hierarchical **Domain Specific Language (DSL)**.
- **The application specific DSL** helps to hide the page implementation; the test is no longer allowed to directly interact with a given page, but instead uses a framework of classes and methods to accomplish the same goal.
- This pattern abstracts the implementation details, such as element IDs, into a framework specifically designed for the application being tested.



# Resources:

- [ISTQB-CTFL\\_Syllabus\\_2018\\_V3.1](#)
- [https://www.guru99.com/introduction-to-selenium.html](#)
- [https://www.udemy.com/course/selenium-webdriver-from-foundation-to-framework-in-arabic/learn/lecture/5777584#overview](#)
- [https://www.katalon.com/resources-center/blog/what-is-automation-testing/](#)
- [https://www.bmc.com/blogs/spaghetti-code/](#)
- [https://www.guru99.com/page-object-model-pom-page-factory-in-selenium-ultimate-guide.html](#)
- [https://www.scientecheasy.com/2019/12/page-object-model-in-selenium.html/](#)