

# Chapter 1:

## Introduction To TestNG

### Introduction

Hello and Welcome To Chapter 1, Introduction To TestNG. In this chapter, we will discuss What Is A Test Framework, Why Test Frameworks Are Important, the xUnit Family of Unit Test Frameworks, and What Separates TestNG From Other Test Frameworks.

### What Is A Test Framework

What Is A Test Framework? A Test Framework is a pattern for writing Test Scripts and running Test Scripts. The purpose is to monitor testing and development of an (AUT) Application Under Test.

A Test Framework is different from an Automation Design Framework. Some of the most popular Automation Design Frameworks are Data Driven Frameworks, Keyword Driven Frameworks, and Hybrid Driven Frameworks. With Selenium, we utilize a Test Framework to create our Automation Design Framework.

### Why Are Test Frameworks Important

Why Are Test Frameworks Important? Test Frameworks are important because it simplifies the process of testing. How? How does it simplify the process? One of the ways, Test Frameworks simplify the process is by giving power to developers and automation engineers to write a quick test. We can add an annotation and assert statement then start our test. Another way Test Frameworks simplify the process is how we run our test. We have the ability to run our test as a collection in a Test Suite.

### The xUnit Family of Frameworks

The xUnit Family of Test Frameworks. xUnit is a name for a compilation of Unit Testing Frameworks. Some of those frameworks are JUnit, PyUnit, and NUnit. JUnit is for Java, PyUnit is for Python, and NUnit is for the .Net Programming languages such as C#. The xUnit family became popular after releasing JUnit. Later, many programming languages embraced the common architecture and joined the xUnit family.

### Core Functions of A Test Framework

Some of the core functions within a Test Framework include

- Creating and Executing Test Scripts
- Generating Test Reports
- Generating Logs

- Last but not least Reading and Writing Test Data. We can use Microsoft Excel or any other Test Artifact for reading and writing Test Data.

However, as their family name implies, xUnit is a Unit Testing Framework. A Unit Testing Framework can test units of an application at a time which is the smallest part of an application.

## What Separates TestNG From Other Frameworks

What Separates TestNG From Other Frameworks? The ability to test more than a unit separates TestNG from all other Test Frameworks. TestNG has the same core functions

- Create and Execute Test Scripts
- Generate Test Reports
- Generate Logs
- Read & Write Test Data

just like the xUnit Family. TestNG can perform the same functions because it was influenced by JUnit 1, JUnit 2, and JUnit 3. In return, JUnit was also influenced by TestNG. JUnit 4 was released after TestNG and picked up a lot of the same concepts from TestNG.

The xUnit Family is good but TestNG have more testing features to perform Parallel Testing, Integration Testing, Dependency Testing, Data Driven Testing, Cross Browser Testing, End To End Testing, and more types of testing. TestNG is a step ahead of the rest when it comes to testing.

Next, in Chapter 2, we will install TestNG.