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How to explain Test Automation Framework to the interviewer.

Coming to the actual topic “How to explain test automation framework to the interviewer”. Here I will explain you every component of the architecture based on the below mentioned screenshot. Frame your answer in your own words while explaining framework to the interviewer.

We need to specify in and out of our Test Automation Framework such as programming **language** used, **Type of framework** used, Test Base Class (Initializing WebDriver, Implicit Waits), How we separate Element locators and tests (Page Objects, Page Factory), Utility functions file, Property files, TestNG annotations, How we parameterize tests using Excel files, How we capture error screenshots, Generating reports(Extent Reports), Emailing reports, Version Control System used and Continues Integration Tool used.

**Language:**In our Selenium Project we are using Java language. Even though Selenium supports multiple languages, we are using Java language is just because most of the automation developers have knowledge on Selenium with Java.

**Type of Framework:** In our project, we are using [Data-driven Framework](https://www.softwaretestingmaterial.com/data-driven-framework-selenium-webdriver/) by using [Page Object Model design pattern](https://www.softwaretestingmaterial.com/page-object-model/) with Page Factory.

**Packages:** We have separate packages for Pages and Tests. All the web page related classes come under **Pages**package and all the tests related classes come under **Tests** package.

For example, Home Page and Login Page have a separate classes to store element locators. For the login test there would be a separate class which calls the methods from the Home Page class and Login Page class.

**Test Base Class:**Test Base class (TestBase.java) deals with all the common functions used by all the pages. This class is responsible for loading the configurations from properties files, Initializing the WebDriver, Implicit Waits, Extent Reports and also to create the object of FileInputStream which is responsible for pointing towards the file from which the data should be read.

**Utility Class (AKA Functions Class):**Utility class (TestUtil.java) stores and handles the functions (The code which is repetitive in nature such as waits, actions, capturing screenshots, accessing excels, sending email etc.,) which can be commonly used across the entire framework. The reason behind creating utility class is to achieve reusability. This class extends the TestBase class to inherit the properties of TestBase in TestUtil.

**Properties file:**This file (**config.properties**) stores the information that remains static throughout the framework such as browser specific information, application URL, screenshots path etc.

All the details which change as per the environment and authorization such as URL, Login Credentials are kept in the config.properties file. Keeping these details in a separate file makes easy to maintain.

**Screenshots:** Screenshots will be captured and stored in a separate folder and also the screenshots of a failed test cases will be added in the extent reports.

**Test Data:** All the historical test data will be kept in excel sheet (controller.xlsx). By using ‘controller.xlsx’, we pass test data and handle data driven testing. We use [Apache POI](https://www.softwaretestingmaterial.com/handling-excel-files-using-apache-poi/) to handle excel sheets.

**TestNG:** Using TestNG for Assertions, Grouping and Parallel execution.

**Maven:** Using Maven for build, execution and dependency purpose. Integrating the TestNG dependency in POM.xml file and running this POM.xml file using Jenkins.

**Version Control Tool:** We use Git as a repository to store our test scripts.

**Jenkins:** By using Jenkins CI (Continuous Integration) Tool, we execute test cases on daily basis and also for nightly execution based on the schedule. Test Result will be sent to the peers using Jenkins.

**Extent Reports:** For the reporting purpose, we are using Extent Reports. It generates beautiful HTML reports. We use the extent reports for maintaining logs and also to include the screenshots of failed test cases in the Extent Report.

## Software Testing as a career – why I chose?

Simple answer is :I love to be a Software Tester. So, I chose Software Testing as career. I would like to mention few more points why I love to be a Software tester and chose Software Testing as career.

**I love solving logical puzzles.** Testing is kind of solving logical puzzle. We will be given a software which will go straight to the market if we nod our head that there are no bugs in the software and ready to release. We, the Testers are the protectors at the gateway. We not only find the bugs. We break the system too in terms of stress testing.

**I love helping others.** 🙂 I proudly say that as a Software Tester, I do help in releasing a quality product to the market. I can help in finding bugs  which are hidden in the software. Even though Developers do their best to release a good product, there will be some mistakes.

**I love to take challenges.** In many projects we need to do testing without having specification documents. It’s a big challenge to explore the system and find the bugs. Domain knowledge is also one of the biggest challenge a tester faces. We, the testers do explore the system and struggle to understand and finding bugs and report to fix and deliver a quality product to the market.

**I love to write code too.** Yeah, I am an Automation Tester. Who said one who can’t code can choose a career in software testing. As an Automation Tester I write code to find the bugs in the system and involving in deliver the quality product.

**I love to interact with people.** As a Software Tester, I could get a lot of opportunities to interact with people (not only peers, I could discuss with Stakeholder). Testers need to know all parts of the application which they are going to test. So we need to discuss with clients too to get more information on domain knowledge. This way we could meet many people to share knowledge.

**I love to be in a team where quality products will be delivered.** Customers spend lots of money to buy a product. No customer will be happy, if the product doesn’t work as intended. I play a role where I can deliver a quality product which not only make customer just happy, it makes customer delight.