1. Explain Framework in interview?

* As an automation tester I have developed selenium project and it has divided into different section, for an example.
* **Language:** In my Selenium Project I am using Java language. Even though Selenium supports multiple languages, I am using Java language is just because most of the automation developers have knowledge on Selenium with Java.
* **Type of Framework:** In my project, I am using testNG framework by using [Page Object Model design pattern](https://www.softwaretestingmaterial.com/page-object-model/) with Page Factory.
* **POM:** As per the Page Object Model, I have maintained a class for every web page. Each web page has a separate class and that class holds the functionality and members of that web page. Separate classes for every individual test.
* **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. **As** per the as maven project, all the tests are kept in the ‘***src/test/java***‘ and remaining files (such as config.properties,utility files, test data, properties file, customelistener,log4,screenshots and extent report etc.,) kept under ‘***src/main/java***‘.
* **Test Base Class:** Test Base class 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 etc.
* **Utility Class:** Utility class stores and handles the functions 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.
* **Customlistener**: this class is provided by testNG, it is very important whenever we are running more than hundred of test cases or more we don’t know whenever failure will occur, sometimes it is very unpredictable, when failure will happen listener class will catch the failure and it will attach to the html report and testng report.
* **log4.properties**: it will help us to required logs let say we are performing 100 of steps when the scripts are passed or failed you would like to know and you can achieve through logs.
* **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.xml:** 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.