**Page Object Design Pattern:** A page object is an object-oriented class that servers as an interface to a page of the Application under test (AUT). The tests then uses the methods of this page object class whenever they need to interact with the UI of that page.

The benefit is that if the UI changes for the page, the tests themselves don’t need to change, only the code within the page object needs to change. Subsequently all changes to support that new UI are located in one place.

**Advantages:**

Code reusability, Code maintainability readability.

There is a clean separation between test code and page specific code such as locators and layout.

There is a single repository for the services or operations offered by the page rather than having these services scattered throughout the tests.

**Page Factory:** is a way to initialize the web elements we want to interact with within the page object when we create an instance of it.

Page Factory is Selenium Factory class.