

12. Practical Exercise: Build a Test Suite with End-to-End Automation in Selenium (Java)

1. Create Eclipse Java Project
 - a. In Eclipse: Click File → New → Other → Select **Java Project**
 - b. Set Project name **saucedemo-automation** . and select **Use an execution environment** as java1.8, Click finish
 - c. **Right-click your project → Build Path → Configure Build Path**
 - d. Go to the **Libraries** tab → Click **Add External JARs**
 - e. Now Add selenium-server
 - f. Click Apply and Save
2. Right Click on src on the project, → New → Class
 - a. Set class name **AddToCartTest** click finish
 - b. Add Program

```
import org.openqa.selenium.By;
public class AddToCartTest extends LoginTest {
    public void addItemToCart() throws InterruptedException {
        login();
        Thread.sleep(1000);
        driver.findElement(By.id("add-to-cart-sauce-labs-backpack")).click();
        System.out.println("🛒 Item added to cart.");
    }
}
```

3. Right Click on src on the project, → New → Class
 - a. Set class name **BaseTest** finish
 - b. Add Program

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
public class BaseTest {
    protected WebDriver driver;
    public void setup() {
        driver = new ChromeDriver();
        driver.manage().window().maximize();
    }
    public void teardown() {
        if (driver != null) {
            driver.quit();
        }
    }
}
```

4. Right Click on src on the project, → New → Class
 - a. Set class name **CheckoutTest** finish

- b. Add Program

```
import org.openqa.selenium.By;
public class CheckoutTest extends LoginTest {
    public void completeCheckout() throws InterruptedException {
        login();
        driver.findElement(By.id("add-to-cart-sauce-labs-backpack")).click();
        driver.findElement(By.className("shopping_cart_link")).click();
        driver.findElement(By.id("checkout")).click();
        driver.findElement(By.id("first-name")).sendKeys("John");
        driver.findElement(By.id("last-name")).sendKeys("Doe");
        driver.findElement(By.id("postal-code")).sendKeys("12345");
        driver.findElement(By.id("continue")).click();
        driver.findElement(By.id("finish")).click();
        System.out.println("✅ Checkout completed successfully.");
    }
}
```

- 5. Right Click on src on the project, → New → Class
 - a. Set class name **InventoryObjectCount** finish
 - b. Add Program

```
import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import java.util.List;
public class InventoryObjectCount extends LoginTest {
    public void countObjects() throws InterruptedException {
        login();
        Thread.sleep(2000);
        List allElements = driver.findElements(By.xpath("//*"));
        System.out.println("🔍 Total elements on inventory page: " + allElements.size());
    }
}
```

- 6. Right Click on src on the project, → New → Class
 - a. Set class name **LoginTest** finish
 - b. Add Program

```
import org.openqa.selenium.By;
public class LoginTest extends BaseTest {
    public void login() {
        setup();
        driver.get("https://www.saucedemo.com/");
        driver.findElement(By.id("user-name")).sendKeys("standard_user");
        driver.findElement(By.id("password")).sendKeys("secret_sauce");
        driver.findElement(By.id("login-button")).click();
    }
}
```

7. Right Click on src on the project, → New → Class
 - a. Set class name **LogoutTest** finish
 - b. Add Program

```
import org.openqa.selenium.By;
public class LogoutTest extends LoginTest {
    public void logout() throws InterruptedException {
        login();
        Thread.sleep(1000);
        driver.findElement(By.id("react-burger-menu-btn")).click();
        Thread.sleep(1000);
        driver.findElement(By.id("logout_sidebar_link")).click();
        System.out.println(" 🍷  Logged out.");
    }
}
```

8. Right Click on src on the project, → New → Class
 - a. Set class name **Main** finish
 - b. Add Program

```
public class Main {
    public static void main(String[] args) throws InterruptedException {
        InventoryObjectCount objCount = new InventoryObjectCount();
        objCount.countObjects();
        objCount.teardown();
        AddToCartTest add = new AddToCartTest();
        add.addItemToCart();
        add.teardown();
        CheckoutTest checkout = new CheckoutTest();
        checkout.completeCheckout();
        checkout.teardown();
        LogoutTest logout = new LogoutTest();
        logout.logout();
        logout.teardown();
    }
}
```

9. Run class **Main**

Output:- Opened wikipedia and closed

Output (Console)

Total elements on inventory page: 140



Item added to cart.



Checkout completed successfully.



Logged out.

