

# Automation Script Explanation

## *Import Required Packages*

```
import java.time.Duration;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import org.testng.annotations.BeforeTest;
import org.testng.annotations.Test;
import io.github.bonigarcia.wdm.WebDriverManager;
```

## *Setup of ChromeDriver*

```
WebDriver driver; //Created an Object of WebDriver Interface
@BeforeTest // It will be executed first before executing any Test
public void setup() {
    String baseUrl= "https://data.grampower.com/hes/"; // Company URL
    WebDriverManager.chromedriver().setup(); // ChromeDriver will be downloaded automatically
    based on Chrome Version
    driver = new ChromeDriver(); //driver object here has access to the methods of Chrome
    driver which are defined in web Driver Interface.
    driver.manage().timeouts().implicitlyWait(Duration.ofSeconds(10));
    driver.manage().window().maximize(); // Window size will be maximised
    driver.get(baseUrl); // Open the Company URL in ChromeBrowser
}
```

## Login TestCase

```
@Test // First TestCase to Login
public void Login() {
    driver.findElement(By.name("username")).sendKeys("sudhanshu");
    //Locator of UserName field in Login Page and "sudhanshu" is passed as an parameter.
    driver.findElement(By.name("password")).sendKeys("grampower");
    //Locator of Password field in Login Page and "grampower" is passed as an parameter.
    driver.findElement(By.xpath("//input[@value='LOG IN']")).click();
    //Clicked on Login Button
}
```

## Navigate to Map and Close the Suggestion Box

```
@Test(priority=2)
public void NavigatetoMap() {
    driver.findElement(By.xpath("//button[@id=\"onesignal-slidedown-allow-button\"]/following-sibling::button")).click();
    //Later in Popup Message is Clicked
    driver.switchTo().frame(driver.findElement(By.xpath("//*[@id=\"retail_dashboard\"]/iframe")));
    // Switched to Frame where widgets are present
    driver.findElement(By.id("div_site_count")).click();
    //Clicked on Sites Count to Navigate to MAP
    driver.switchTo().defaultContent();
    //Came out of Frame

    driver.findElement(By.xpath("//div[@id='page']/section[1]//div/section/div/div[5]/div[1]/div[2]")).click();
    // Suggestion box is closed
}
```

## Search Consumer based on SC NO

```
@Test(priority=3) // Search Consumer based on SC NO.
public void searchConsumer() throws InterruptedException {
    driver.findElement(By.xpath("//input[@id='search_tb']")).sendKeys("ROFANANDAA708");
    // Locator of Search box is searched and "ROFANANDAA708" is entered
    driver.findElement(By.id("search_bt")).click();
    // Clicked on Search Icon
    Thread.sleep(5000); // It will wait for 5 seconds until the Data is Loaded
}
```

## Validate the Consumer Details in ConsumerInfo Tab

```
@Test(priority=4) // Data is Validated for Consumer
public void ValidateConsumerInfo() {
    String assetSeq= "REALESTATE/REALESTATE FEEDER/DT-11174/C1/P1/ROFANANDAA708";
    String consumerName ="A_708";
    String scNo ="ROFANANDAA708";
    String meterIP="5.0.133.86";
    String meterSno= "212049";
    String ctRatio ="1";
    String supplyType= "1-Ph";
    String meterType= "DLMS";
    String sTime= "2021-10-26 14:38:49";
    Assert.assertEquals(driver.findElement(By.xpath("//td[text()=' REALESTATE/REALESTATE
FEEDER/DT-11174/C1/P1/ROFANANDAA708']")).getText(),assetSeq);
    Assert.assertEquals(driver.findElement(By.xpath("//td[text()='
A_708']")).getText(),consumerName);
    Assert.assertEquals(driver.findElement(By.xpath("//td[text()='
ROFANANDAA708']")).getText(),scNo);
    Assert.assertEquals(driver.findElement(By.xpath("//td[text()='
5.0.133.86']")).getText(),meterIP);
    Assert.assertEquals(driver.findElement(By.xpath("//td[text()='
212049']")).getText(),meterSno);
    Assert.assertEquals(driver.findElement(By.xpath("//td[text()=' 1']")).getText(),ctRatio);

    Assert.assertEquals(driver.findElement(By.xpath("//td[text()=' 1-
Ph']")).getText(),supplyType);
    Assert.assertEquals(driver.findElement(By.xpath("//td[text()='
DLMS']")).getText(),meterType);
    Assert.assertEquals(driver.findElement(By.xpath("//td[text()=' 2021-10-26 14:38:49
']")).getText(),sTime);
}
```

## Fetch Data from Meter Tab

```
@Test(priority=5)// Data is Fetched from Meter Tab and printed on Console
public void ValidateMeter() throws InterruptedException {
    driver.findElement(By.xpath("//a[@id='info']")).click();
    Thread.sleep(2000);
    System.out.println("*****Fetching Data From Meter Tab*****");
    System.out.println("Current Reading kWh:
"+driver.findElement(By.xpath("//span[@id='current_reading']")).getText());
    System.out.println("Current Reading kVAh:
"+driver.findElement(By.xpath("//span[@id='current_reading_kvah']")).getText());
    System.out.println("Current Reading kVArh:
"+driver.findElement(By.xpath("//span[@id='current_reading_kvarh']")).getText());
    System.out.println("Consumed Energy:
"+driver.findElement(By.xpath("//label[@id='consumed_energy']")).getText());
    System.out.println("Instantaneous Load:
"+driver.findElement(By.xpath("//span[@id='connected_load']")).getText());
    System.out.println("Last Data Point:
"+driver.findElement(By.xpath("//span[@id='ldp1']")).getText());
    System.out.println("Tamper:
"+driver.findElement(By.xpath("//span[@id='tamper1']")).getText());
    System.out.println("*****");
}
```

## Verifying Command Tab is Opened

```
● ● ●  
  
@Test(priority=6)// Validation of Command Tab  
public void ValidateCommand() throws InterruptedException {  
    driver.findElement(By.xpath("//a[@id='id_load_command']")).click();  
    Thread.sleep(5000);  
    String cmd= "Select a command-";  
    Assert.assertEquals(driver.findElement(By.xpath("//h4[contains(text(),'Select a command')]]  
[1]")).getText(),cmd);  
    //It will verify that the Command Tab is Opened and find the text "Select a command"  
  
}
```

## Validate the Realtime Tab

```
● ● ●  
  
@Test(priority=7)//Validate Realtime Tab is Opened  
public void ValidateRealtime() throws InterruptedException {  
    driver.findElement(By.xpath("//a[@id='rt']")).click();  
    Thread.sleep(2000);  
    String txt= "Showing energy consumption from";  
    if(driver.findElement(By.id("realtime_title")).getText().contains(txt)) {  
        System.out.println("Text Matched");  
        //Search the Text Present in Realtime Tab so that it can be validated that the Tab is Opened.  
    }  
  
}
```

## Validate More Tab

```
● ● ●  
  
@Test(priority=8)  
public void ValidateMore() throws InterruptedException {  
    driver.findElement(By.xpath("//a[@id='alerts']")).click();  
    String alertMessage= "No alerts found !";  
    Thread.sleep(2000);  
    Assert.assertEquals(driver.findElement(By.xpath("//div[contains(text(),'No alerts found  
!')]")).getText(),alertMessage);  
    driver.findElement(By.xpath("//a[contains(text(),'Uptime')]")).click();  
    Thread.sleep(2000);  
    driver.findElement(By.xpath("//a[text()='Images'][1]")).click();  
  
}
```



## Report is Generated: - test-output -> emailable report



## Generated Report:-

Test	# Passed	# Skipped	# Retried	# Failed	Time (ms)	Included Groups	Excluded Groups
Default suite							
<a href="#">Default test</a>	8	0	0	0	27,736		

Class	Method	Start	Time (ms)
Default suite			
Default test — passed			
sudhanshu.grampower.GramPowerAutomation	<a href="#">Login</a>	1662360398780	3844
	<a href="#">NavigateToMap</a>	1662360402631	609
	<a href="#">ValidateCommand</a>	1662360411137	5108
	<a href="#">ValidateConsumerInfo</a>	1662360408436	335
	<a href="#">ValidateMeter</a>	1662360408772	2363
	<a href="#">ValidateMore</a>	1662360418365	4258
	<a href="#">ValidateRealtime</a>	1662360416245	2118
	<a href="#">searchConsumer</a>	1662360403242	5189