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

```java
@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

```java
@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]")).cl
ick();
  // Suggestion box is closed
    }
```

Search Consumer based on SC NO

```java
@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();
}
```