A Micro Project report on

Automation Testing for Utility Bill Payment Portal

Submitted to the CMR Institute of Technology in partial fulfillment of the requirement for the award of the Laboratory of

Automated Testing Tools (Selenium) Lab (20-CS-PC-317)

of

III-B.Tech. I-Semester

in

Department of Computer Science and Engineering

Submitted by

B. Manasa	(20R01A0571)
Ch. Revanth Kumar	(20R01A0573)
Ch. Pavani	(20R01A0575)
D Chirag Rao	(20R01A0577)
D Maniteja	(20R01A0579)
N Hari Teja	(21R05A0509)

Under the Guidance Of

Mrs. T. Bhavani

Associate Professor, Department of Computer Science and Engineering

CMR INSTITUTE OF TECHNOLOGY

(UGC AUTONOMOUS)

(Approved by AICTE, Affiliated to JNTU, Kukatpally, Hyderabad)

Kandlakoya, Medchal Road, Hyderabad

2022-2023

CMR INSTITUTE OF TECHNOLOGY

(UGC AUTONOMOUS)

(Approved by AICTE, Affiliated to JNTU, Kukatpally, Hyderabad)

Kandlakoya, Medchal Road, Hyderabad.

Department of Computer Science and Engineering

CERTIFICATE

This is to certify that a Micro Project entitled with: **Automation Testing for Utility Bill Payment Portal** is Being

Submitted By

B. Manasa	(20R01A0571)
Ch. Revanth Kumar	(20R01A0573)
Ch. Pavani	(20R01A0575)
D Chirag Rao	(20R01A0577)
D Maniteja	(20R01A0579)
N Hari Teja	(21R05A0509)

In partial fulfillment of the requirement for award of the Automated Testing Tools (Selenium) Lab (20-CS-PC-317) of III-B.Tech I - Semester in Department of Computer Science and Engineering towards a record of a bonafide work carried out under our guidance and supervision.

Signature of Faculty **Signature of HOD**

Course Coordinator

ACKNOWLEDGEMENT

We are extremely grateful to **Dr. M. Janga Reddy**, **Director**, **Dr. B. Satyanarayana**, **Principal** and **Mr. A. Prakash**, **Head of Department**, Department of Computer Science and Engineering, CMR Institute of Technology for their inspiration and valuable guidance during entire duration.

We are extremely thankful to our Artificial Intelligence Lab faculty in-charge, **Mrs.T.Bhavani,** Assistant Professor, Department of Computer Science and Engineering, CMR Institute of Technology for her constant guidance, encouragement and moral support throughout the project.

We express our thanks to all staff members and friends for all the help and coordination extended in bringing out this Project successfully in time.

Finally, we are very much thankful to our parents and relatives who guided directly or indirectly for successful completion of the project.

B. Manasa	(20R01A0571)
Ch. Revanth Kumar	(20R01A0573)
Ch. Pavani	(20R01A0575)
D Chirag Rao	(20R01A0577)
D Maniteja	(20R01A0579)
N Hari Teja	(21R05A0509)

CONTENTS

INTRODUCTION

What is Selenium?

Selenium is a free (open-source) automated testing framework used to validate web applications across different browsers and platforms. You can use multiple programming languages like Java, C#, Python, etc to create Selenium Test Scripts. Testing done using the Selenium testing tool is usually referred to as **Selenium Testing**.

Selenium Tool Suite:

Selenium Software is not just a single tool but a suite of software, each piece catering to different Selenium QA testing needs of an organization. Here is the list of tools

- Selenium Integrated Development Environment (IDE)
- Selenium Remote Control (RC)
- WebDriver
- Selenium Grid

CLASSES AND IMPORTS

WebDriver:

WebDriver is an open source tool for automated testing of webapps across many browsers. It provides capabilities for navigating to web pages, user input, JavaScript execution, and more. ChromeDriver is a standalone server that implements the W3C WebDriver standard.

WebElements :

- Anything that is present on the web page is a WebElement such as text box, button, etc. WebElement represents an HTML element. ***Selenium WebDriver*** encapsulates a simple form element as an object of the WebElement**.** It basically represents a DOM element and all the HTML documents are made up by these HTML elements.
- **findElement() –** finds a single WebElement and returns it as a WebElement object.

sendKeys() Method:

Selenium provides sendKeys() method to input content in editable text fields or password fields in a webpage. These fields are like the typical web elements present on the web page that can be identified using any of the Selenium locators. You can refer to our article on Selenium locators to learn more about the different locators you can use.

ChromeOptions:

ChromeOptions is a class in Selenium which is used to set the capability and customization and configuration of the ChromeDriver session as well. This class inherits the MutableCapabilities class.

- setExperiementalOption()

Steps to create new Java project:

- File >NewFile >Package >PackageName.
- Rightclick on src >JavaProject >ProjectName.
- Right click on project >Class > Classname.
- Select the check box publicstaticvoidmain.

- Right click on package choose BuildPath in that choose Configure BuildPath
- Libraries > ClassPath > AddExtenal Jars > choose selenium server >Apply And Close.

Procedure For Project:

- Open Google.com inspect the search bar
- Send key i.e taj hotels" to the search bar and click it.
- Inspect the link which is related to the key and click that link
- Inspect the one element in that website which is common for all the hotels that are present in that .
- Checking which hotel is convenient and procedure for booking.

AWT Exception:

This exception is used when you try to do something with a Component that is not yet appropriate. AWTError is a subclass of Error that is thrown when a serious problem occurs in AWT—for example, the environment is unable to get the platform's Toolkit.

Keys:

sendkeys() in Selenium is a method used to enter editable content in the text and password fields during test execution. These fields are identified using locators like name, class, id, etc. It is a method available on the web element. Unlike the type method, sendkeys() method does not replace existing text in any text box.

pageLoadTimeout:

This sets the time to wait for a page to load completely before throwing an error. If the timeout is negative, page loads can be indefinite

Class By:

By class name can be used as a locating strategies in Selenium webdriver. We can identify an element utilizing class attribute with locators like class name, css and xpath. To locate webelement with css, the syntax is tagname[class='value'] and the method to be used is By.cssSelector.

To locate webelement with xpath, the syntax is //tagname[@class='value']. Then, we have to use the method By.xpath to locate it. To locate an element with a locator class name, we have to use the By.className method.

AUTOMATION CODE

Source Code:

```
import java.util.Iterator;
import java.util.Set;

import org.openqa.selenium.By;
import org.openqa.selenium.Keys;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class Project {
	public static void main(String[] args) throws InterruptedException {
		//TODO Auto-generated method stub
		System.setProperty("webdriver.chrome.driver","C:\\Users\\chira\\Downloads\\chromedrive
		r_win32\\chromedriver.exe");
		WebDriver ob=new ChromeDriver();
		ob.get("https://google.com");
		ob.manage().window().maximize();
		WebElement search=ob.findElement(By.name("q"));
		search.sendKeys("tsspdcl");
		search.sendKeys(Keys.ENTER);
		WebElement link=ob.findElement(By.xpath("(//a[text()='Pay Your Bill'])[1]"));
		link.click();
		WebElement billdesk=ob.findElement(By.xpath("/html/body/section/div/div[2]
		/div/div[3]/figure/a/img"));
		billdesk.click();
		Set<String> win=ob.getWindowHandles();
		Iterator<String> it=win.iterator();
		while(it.hasNext()) {
			String child=it.next();
			if(!win.equals(child)) {
				ob.switchTo().window(child);
			}
		}
		WebElement uscno=ob.findElement(By.name("uscno"));
		uscno.sendKeys("101316764");
		WebElement mail=ob.findElement(By.name("txtEmailID"));
		mail.sendKeys("selenium@yahoo.com");
		WebElement mkp=ob.findElement(By.name("makePayment"));
		mkp.click();
		WebElement btn=ob.findElement(By.name("button2"));
		btn.click();
		ob.switchTo().alert().accept();
```

```
                WebElement cnumber=ob.findElement(By.name("cnumber"));
                cnumber.sendKeys("4732574274537994");
                WebElement expmon=ob.findElement(By.name("expmon"));
                expmon.sendKeys("1");
                WebElement expyr=ob.findElement(By.name("expyr"));
                expyr.sendKeys("2");
                WebElement cvv=ob.findElement(By.name("cvv2"));
                cvv.sendKeys("577");
                WebElement cname=ob.findElement(By.name("cname2"));
                cname.sendKeys("Sele Nium");
                ob.close();
        }
}
```

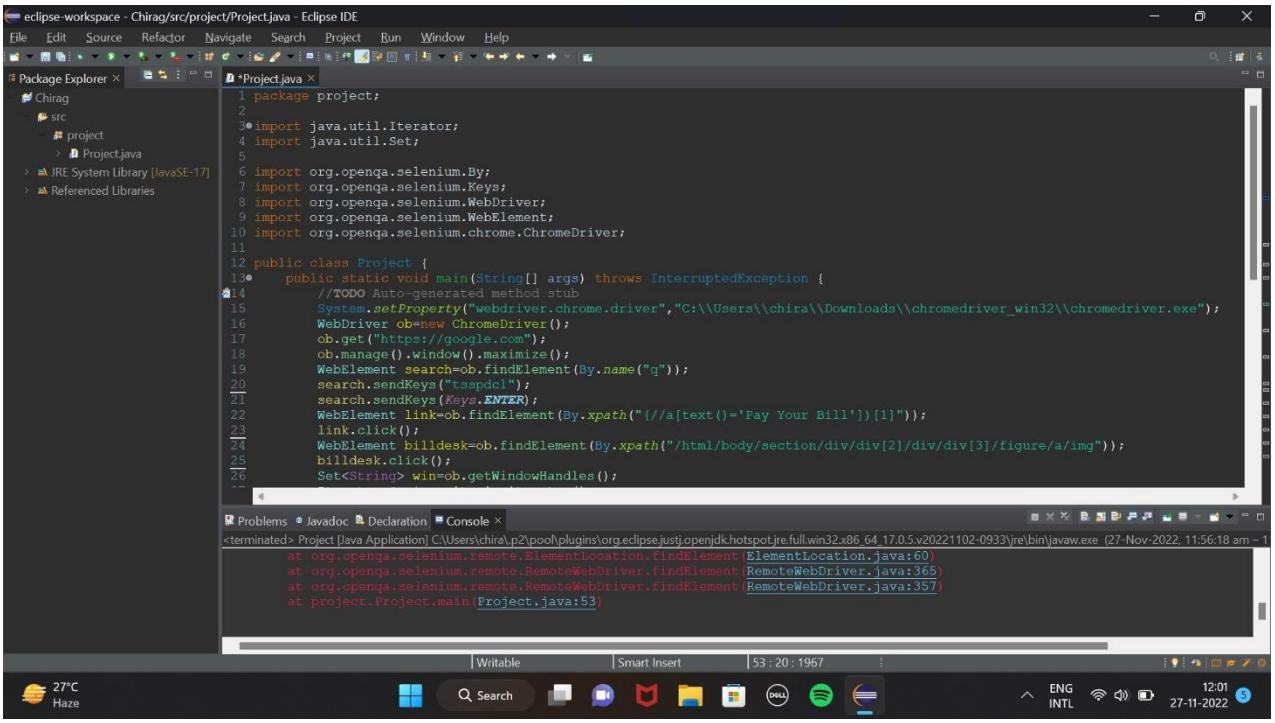

Fig: Source Code

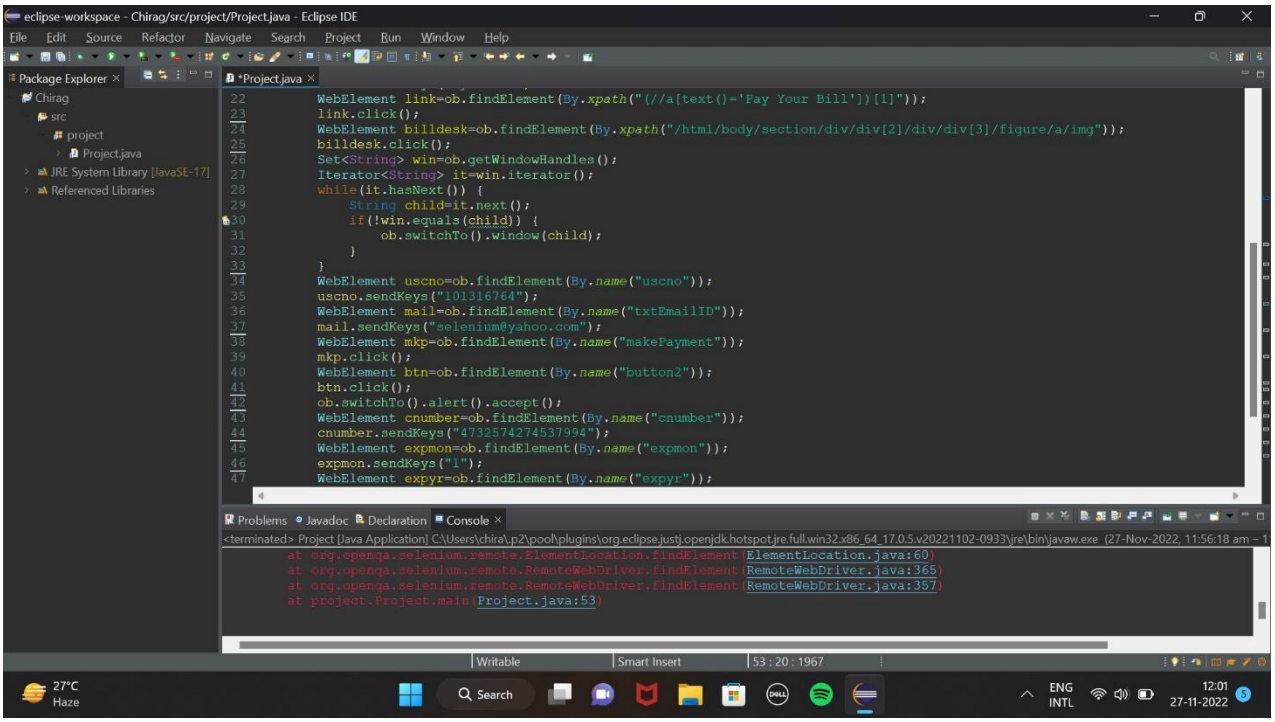

Fig: Source Code

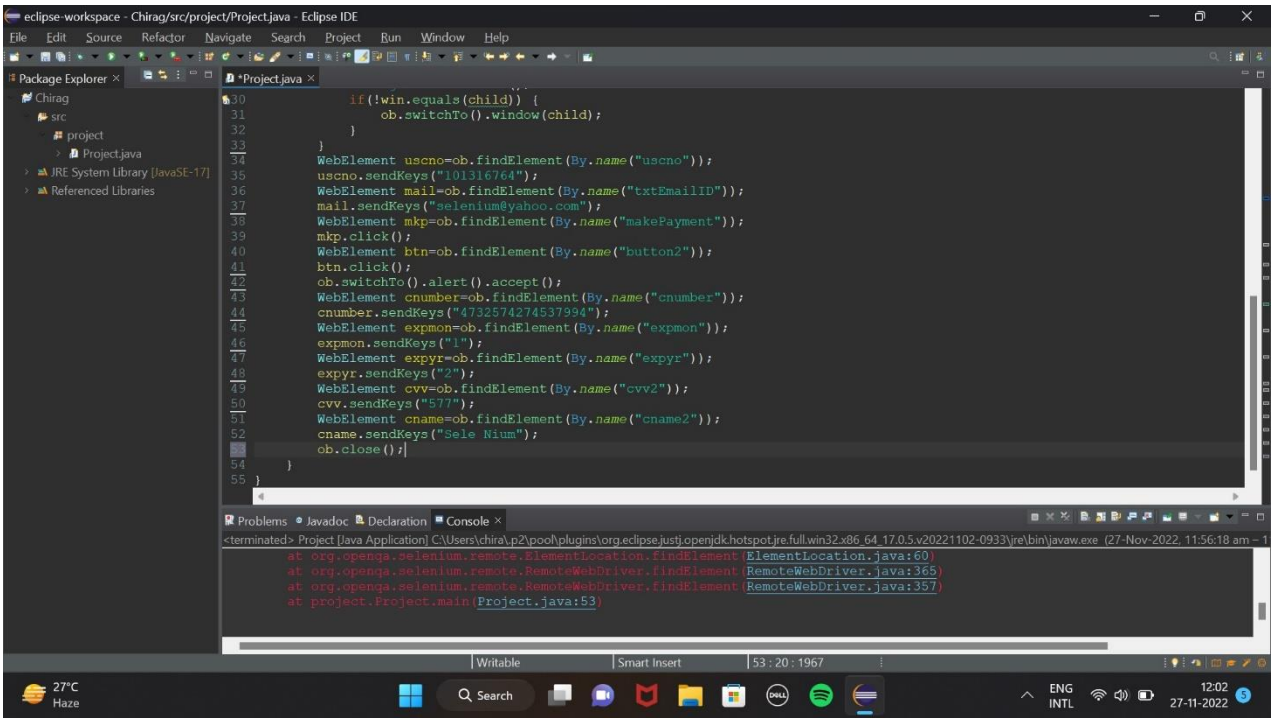

Fig: Source Code

OUTPUT:

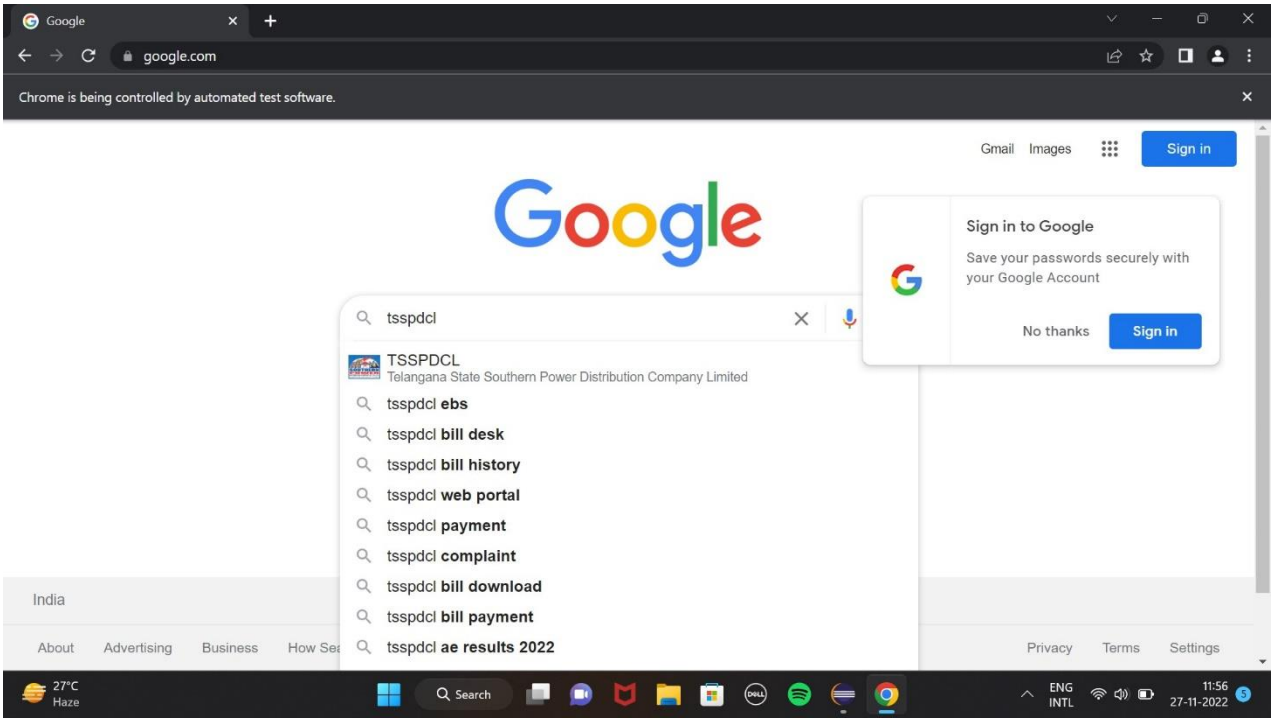

Fig: Output Screen

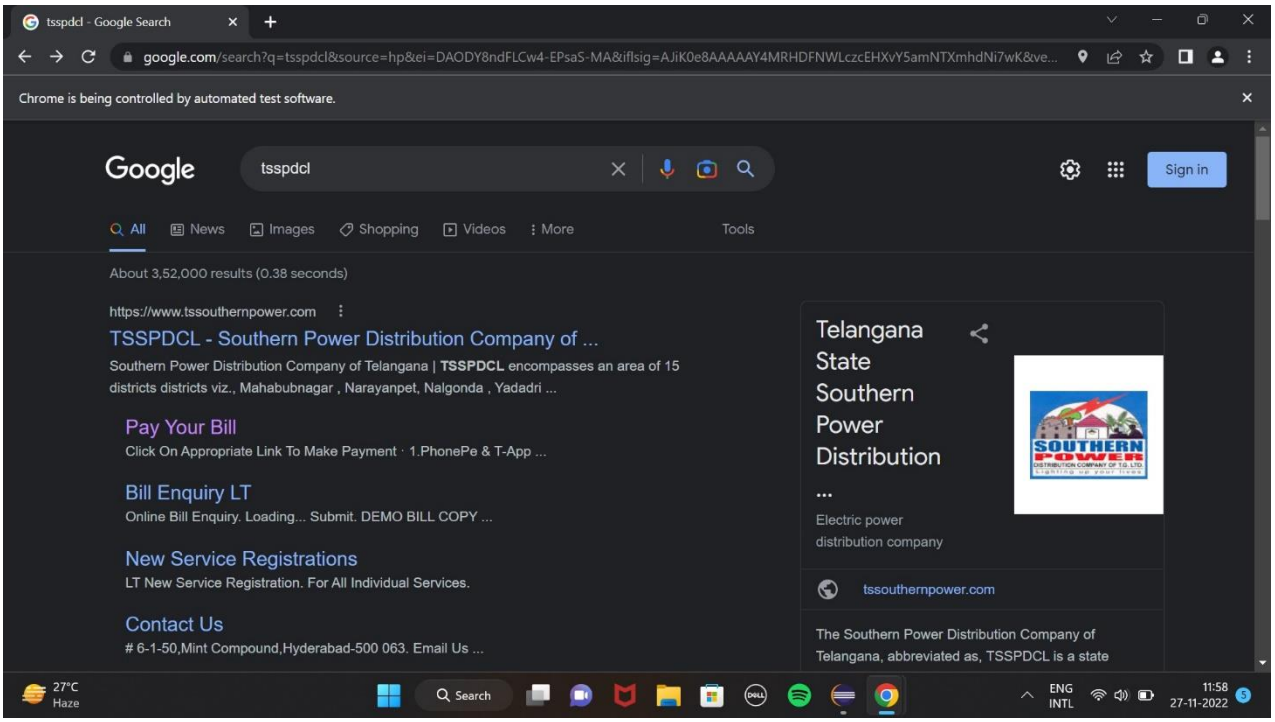

Fig: Output Screen

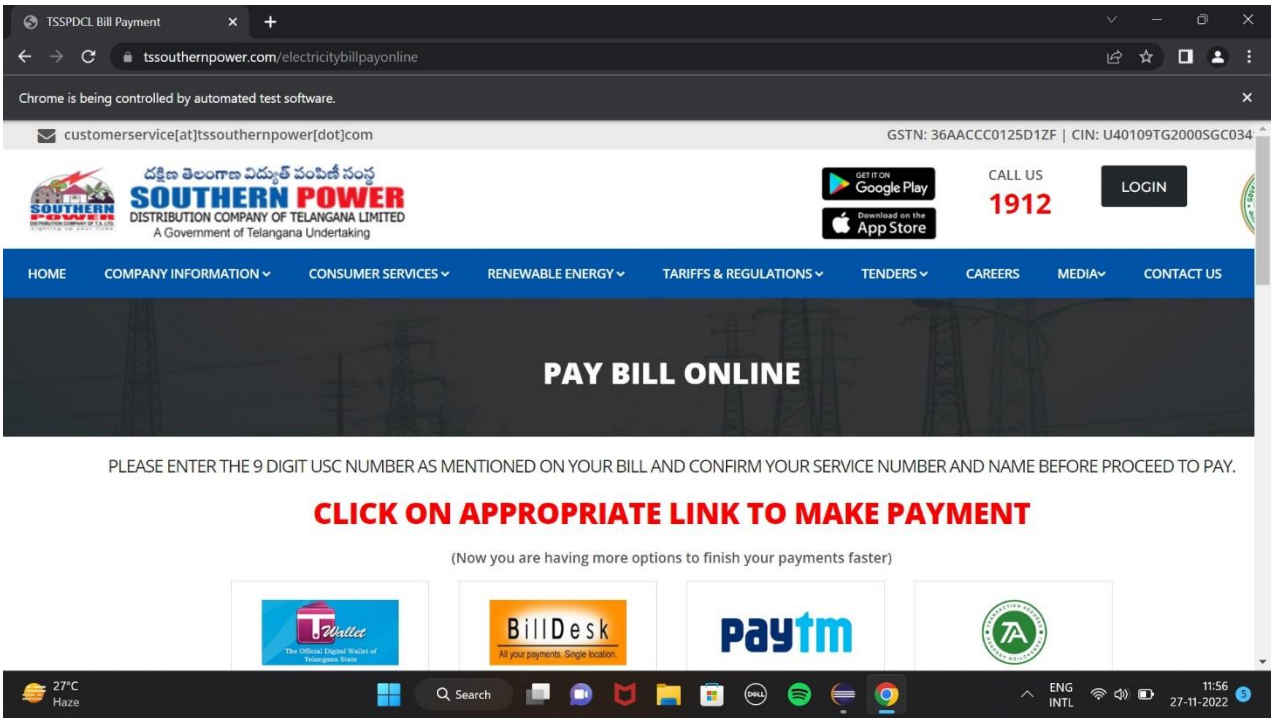

Fig: Output Screen

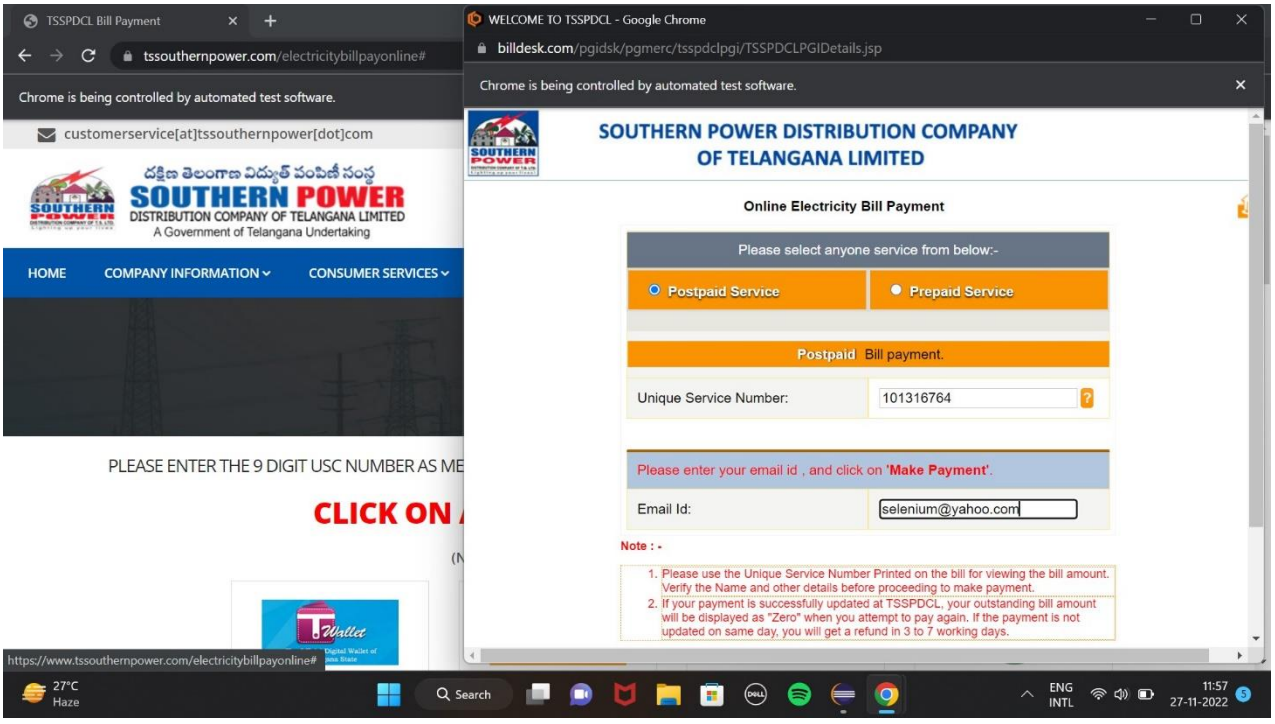

Fig: Output Screen

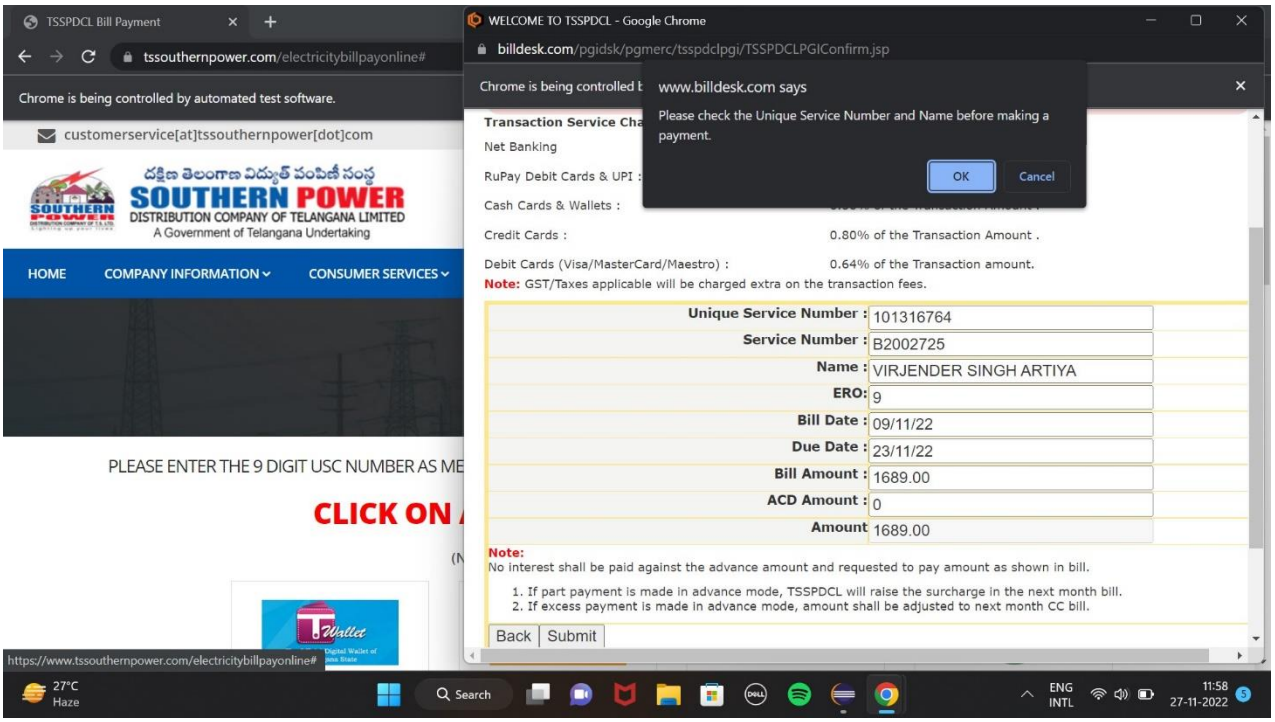

Fig: Output Screen

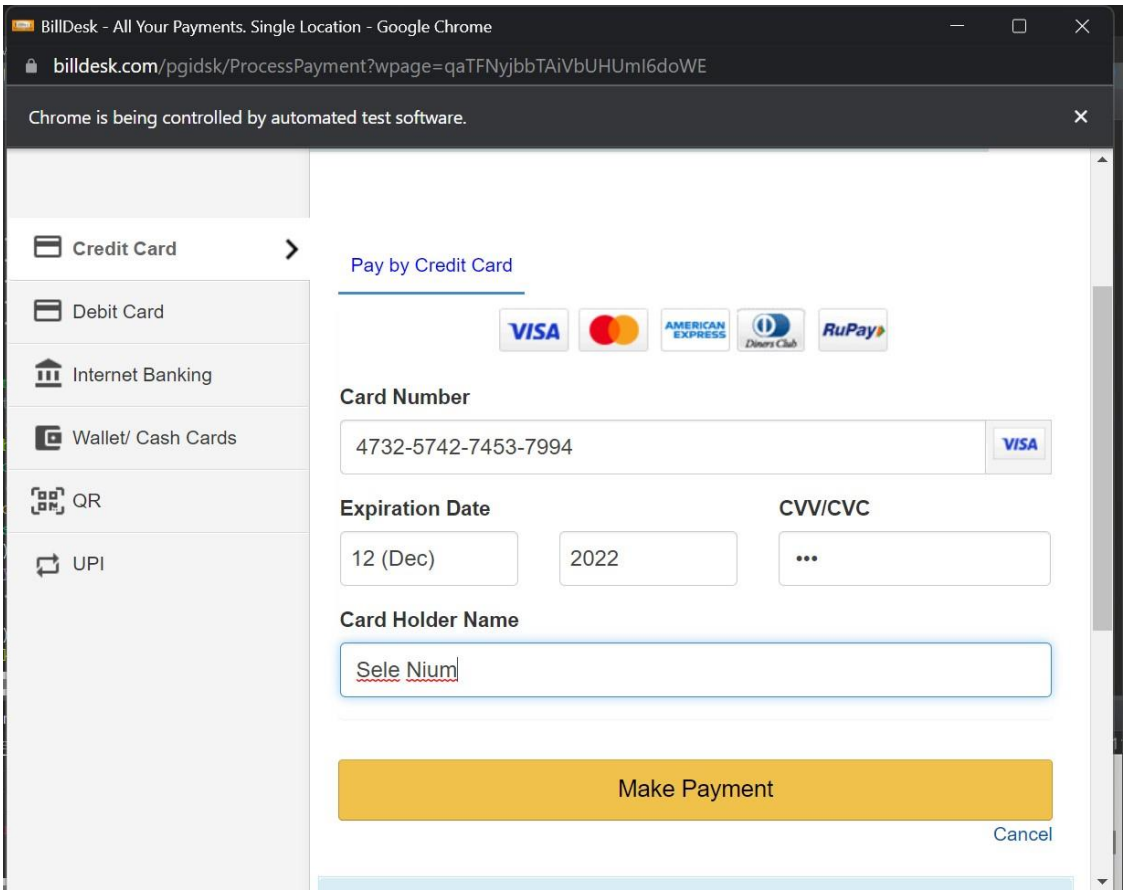

Fig: Output Screen

CONCLUSION

Our report is on Automation testing for utility bill payment portal through electricity bill payment.

The process of paying electricity (utility) bill of Telangana State Southern Power Distribution Company Limited (TSSPDCL) through automation was performed in and the test case was successfully executed till the payment page.

REFERENCES

- TSSPDCL website: https://www.tssouthernpower.com
- www.eclipse.org
- www.selenium.dev

The above links are used for gathering information about classes used in selenium and their uses, steps involving and the procedure for doing this project.

Eclipse IDE for java developers is used to write the source code by inspecting on the web pages.