

PROFESSIONAL TRAINING REPORT

at

**Sathyabama Institute of Science and Technology (Deemed
to be University)**

Submitted in partial fulfillment of the requirements for the award of
Bachelor of Technology in Information Technology

By

Gokul Kumar.S
REG. NO. 39120033



DEPARTMENT OF INFORMATION TECHNOLOGY

SCHOOL OF COMPUTING

**SATHYABAMA INSTITUTE OF SCIENCE AND
TECHNOLOGY**

**JEPPIAAR NAGAR, RAJIV GANDHI SALAI,
CHENNAI – 600119, TAMILNADU**

NOVEMBER 2021



SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE
UNIVERSITY)

Accredited with Grade "A"

(Established under Section 3 of U

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CHENNAI- 600119

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DEPARTMENT OF INFORMATION TECHNOLOGY

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of Gokul Kumar.S(Reg. No: 39120033) who carried out the project entitled "Automation Testing Train Reservation" under my supervision from June 2021 to November 2021.

Internal Guide

Dr.J.JABEZ M.E.,Ph.D.,

Head of the Department

Dr. R. SUBHASHINI M.E., Ph.D.,

Submitted for Viva voce Examination held on _____

Internal Examiner

External Examiner

DECLARATION

I am **Gokul Kumar.S (Reg No:39120033)** hereby declare that the Project Report entitled “**Automation Testing Train Reservation**” done by me under the guidance of **Dr. J.JABEZ M.E.,Ph.D.**, is submitted in partial fulfillment of the requirements for the award of Bachelor of Technology degree in Information Technology.

DATE:

PLACE: CHENNAI

SIGNATURE OF THE CANDIDATE

ACKNOWLEDGEMENT

I am pleased to acknowledge our sincere thanks to Board of management of **SATHYABAMA** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey our thanks to **Dr. T. SASIKALA M.E., Ph.D.**, Dean, School of Computing and **Dr. R. SUBHASHINI M.E., Ph.D.**, Head of the Department, Department of Information technology for providing us the necessary support and details at the right time during the progressive reviews.

I would like to express our sincere and deep sense of gratitude to our Project Guide **Dr. J.JABEZ M.E., Ph.D.**, for her valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work.

I wish to express our thanks to all Teaching and Non-teaching staff members of the Department of **INFORMATION TECHNOLOGY** who were helpful in many ways for the completion of the project.

TRAINING CERTIFICATE

ABSTRACT

Automation Testing Train Reservation is used to automate train booking webpage by the use of Selenium tool and also with TestNG.

Automation is a necessity in the current times as it makes processes more economical and affordable in the long run. It also frees humans from performing banal tasks day in and day out. Once a process is automated the only check that is to be performed is whether it is turned on or not. Automated processes are not prone to errors and even if an error is identified rectification is easy and can be applied system wide without any delay.

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CHAPTER – 1

INTRODUCTION

1.1GENERAL

Software Testing Qualification Board (ISTQB), test automation is defined as using software to either support or perform testing activities. In test automation, software is used not only for test execution per se, but also for activities like management of test cases, design of test cases or the evaluation and reporting of test results. While initially seen as a possibility to increase efficiency and reduce costs, test automation has become an essential part of software development process

1.2 OUTLINE OF THE PROJECT

To test more number of searching site manually it takes days, weeks, papers and human energy to complete it. But by using this project we are able to complete our work in less than an hour. It saves time, money, energy and less paper work. It is also very convenient to check, change the description of the user profile. Many errors are saved in this method.

1.3 ORGANIZATION OF THE REPORT

Chapter 2 deals with Aim, Problem Statement, Literature Review and Scope of the present investigation. Chapter 3 deals with Requirement, Role of Java and Results and Discussion. Chapter 4 deals with Conclusion and Future work.

CHAPTER 2

AIM & SCOPE

2.1 AIM

To test online train reservation system, the given user details should give in the search field while doing this the user shouldn't able to book tickets for previous month then it should shows the availability of train.

2.2 PROBLEM STATEMENT

The problem statement, is to test the online train reservation system in a very short period of time. To give the description to the valid users and error to the invalid users. To do this process manually it takes a lot of time and many paper works. So we are using this automation testing to reduce time and work.

2.3 Scope

It reduces the manpower needed to perform the entire administration task by reducing the paper work needed, all the work is done by the computer there will be no chance of error.

In a nutshell, it can be summarized that the future scope of the project circles around maintaining information regarding.

- * We can add printer in future
- * We can give more advance software for Train Reservation System including more facilities
- * We will host platform on online servers to make it accessible worldwide
- * Implement the backup mechanism for taking backup of codebase and database on regular basis on different servers.

CHAPTER 3

SYSTEM IMPLEMENTATION

3.1 REQUIREMENTS

I. HARDWARE REQUIREMENTS

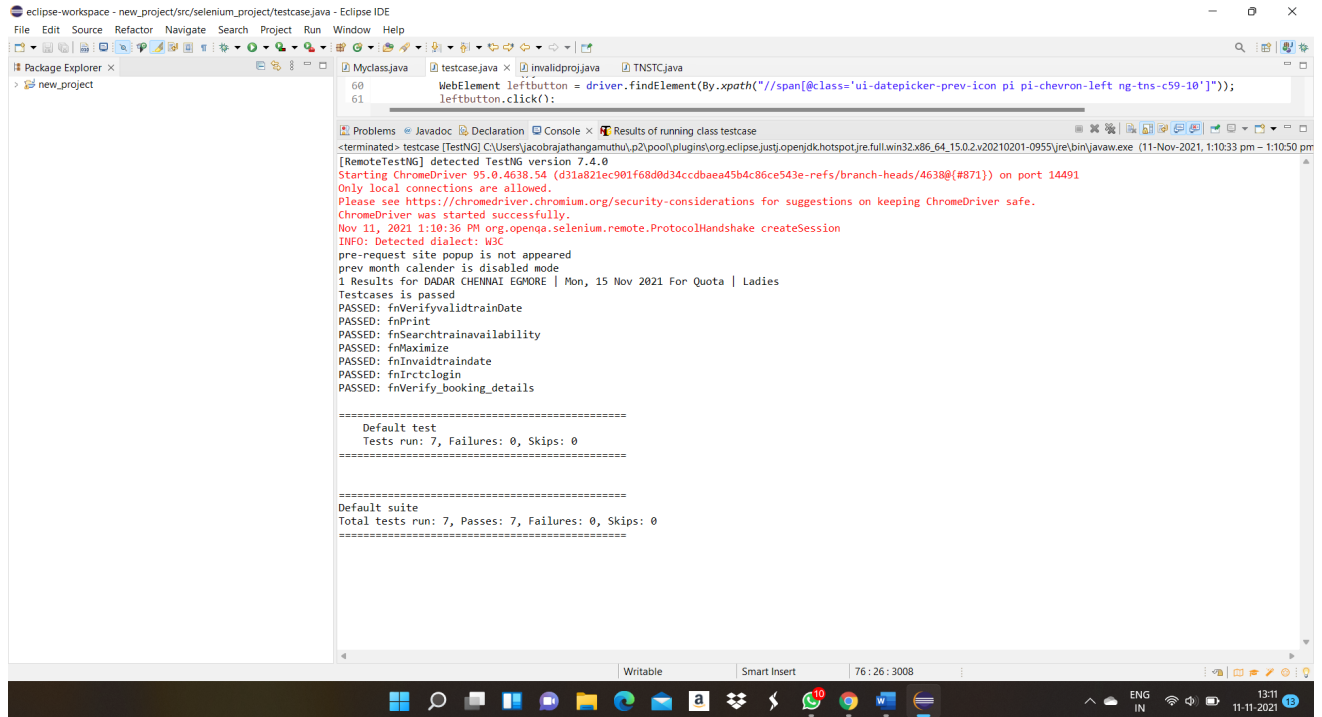
- A 64-bit operating system like Windows 7 or later.
- Microsoft Internet Explorer 9.0 or later.
- Intel Core i5 or Intel Core i7 (the 3rd generation).

II. SOFTWARE REQUIREMENTS

- Eclipse
- TestNG
- Java

3.2 RESULTS AND DISCUSSION

Using TestNG, successfully launched the browser and the Online train reservation website, the valid code executed successfully.
All testcases are passed



The screenshot shows the Eclipse IDE interface with the 'Results of running class testcase' console output. The console displays the following information:

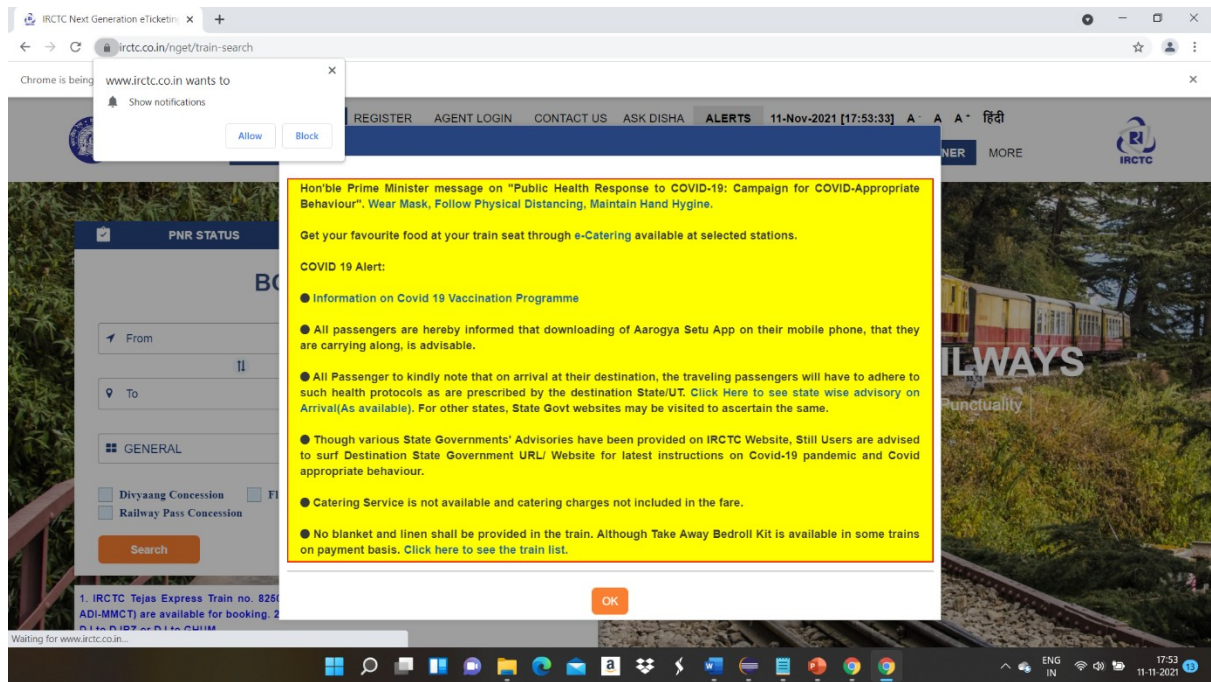
```
<terminated> testcase [TestNG] C:\Users\Jacobrajathangamuthu\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.15.0.2.v20210201-0955\jre\bin\javaw.exe (11-Nov-2021, 1:10:33 pm - 1:10:50 pm)
[RemoteTestNG] detected TestNG version 7.4.0
Starting ChromeDriver 95.0.4638.54 (d31a821ec901f68d0d34ccdbaa45b4c86ce543e-refs/branch-heads/4638@{#871}) on port 14491
Only local connections are allowed.
Please see https://chromedriver.chromium.org/security-considerations for suggestions on keeping ChromeDriver safe.
ChromeDriver was started successfully.
Nov 11, 2021 1:10:36 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
pre-request site popup is not appeared
prev month calender is disabled mode
1 Results for DADAR CHENNAI EGNORE | Mon, 15 Nov 2021 For Quota | Ladies
Testcases is passed
PASSED: fnVerifyvalidtrainDate
PASSED: fnPrint
PASSED: fnSearchtrainavailability
PASSED: fnMaximize
PASSED: fnInvalidtraindate
PASSED: fnInrtcllogin
PASSED: fnVerify_booking_details

=====
Default test
Tests run: 7, Failures: 0, Skips: 0
=====

Default suite
Total tests run: 7, Passes: 7, Failures: 0, Skips: 0
=====
```

The IDE also shows the source code of the test case in the editor, with the following snippet visible:

```
WebElement leftbutton = driver.findElement(By.xpath("//span[@class='ui-datepicker-prev-icon pi-chevron-left ng-tns-c59-10']"));
leftbutton.click();
```



IRCTC Next Generation eTicketing

www.irctc.co.in wants to show notifications

REGISTER AGENT LOGIN CONTACT US ASK DISHA ALERTS 11-Nov-2021 [17:53:12] हिंदी

TRAINS BUSES FLIGHTS HOTELS HOLIDAYS LOYALTY MEALS PROMOTIONS PREMIUM PARTNER MORE

BOOK TICKET

From: DADAR - DR To: CHENNAI EGMORE - MS

DD/MM/YYYY * 11/11/2021

GENERAL

☐ Divyaang Concession ☐ Flexible With Date ☐ Railway Pass Concession

Search

1. IRCTC Tejas Express Train no. 82501/82502 (LJN-NDLS-LADI-MMCT) are available for booking. 2. Book tickets on Darj to DJRZ or DJ to GHUM.

INDIAN RAILWAYS

Safety | Security | Punctuality

October 2021

Su	Mo	Tu	We	Th	Fr	Sa
26	27	28	29	30	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

ENG IN 17:53 11-11-2021

IRCTC Next Generation eTicketing: x

www.irctc.co.in wants to show notifications

REGISTER AGENT LOGIN CONTACT US ASK DISHA ALERTS 11-Nov-2021 [17:53:20] A A हिंदी

TRAINS BUSES FLIGHTS HOTELS HOLIDAYS LOYALTY MEALS PROMOTIONS PREMIUM PARTNER MORE

DADAR - DR CHENNAI EGMORE 15/11/2021 AC 2 Tier (2A) LADIES Modify Search

Flexible With Date Train with Available Berth Divyaang Concession Railway Pass Concession

Refine Results Reset Filters

JOURNEY CLASS Select All

AC 2 Tier (2A) Second Sitting (2S)
AC 3 Tier (3A) Sleeper (SL)

TRAIN TYPE Select All

SPECIAL
SPECIAL TATKAL

DEPARTURE TIME Select All

00:00 - 06:00 Early Morning
06:00 - 12:00 Morning
12:00 - 18:00
18:00 - 24:00

1 Results for DADAR → CHENNAI EGMORE | Mon, 15 Nov 2021 For Quota | Ladies

Sort By | Duration Show Available Trains

< Previous Day Next Day >

LTT MAS SF SPL (01479) Runs On: M T W T F S S Train Schedule

13:20 | LOKMANYATILAK T | Mon, 15 Nov 21:40 11:00 | MGR CHENNAI CTL | Tue, 16 Nov

Second Sitting (2S) NOT AVAILABLE ₹ 355	Sleeper (SL) AVAILABLE-0001 ₹ 590	AC 3 Tier (3A) NOT AVAILABLE ₹ 1540	AC 2 Tier (2A) NOT AVAILABLE ₹ 2200
---	---	---	---

Book Now OTHER DATES

Waiting for ssum-sec.casalemedia.com...

ENG IN 17:53 11-11-2021

CHAPTER 4

CONCLUSION AND FUTURE WORK

4.1 CONCLUSION

Selenium is a cost-effective and flexible tool developers can use in the automation testing of their web applications. The most intriguing feature of this software is the ability to test applications across various web browsers

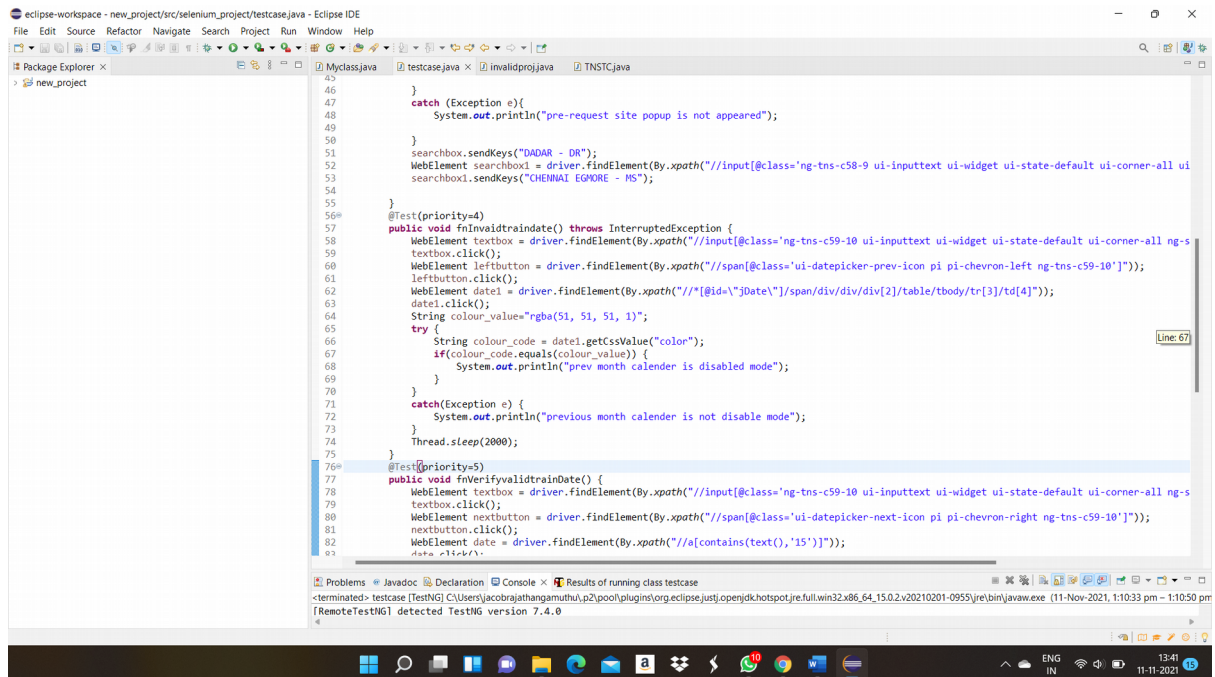
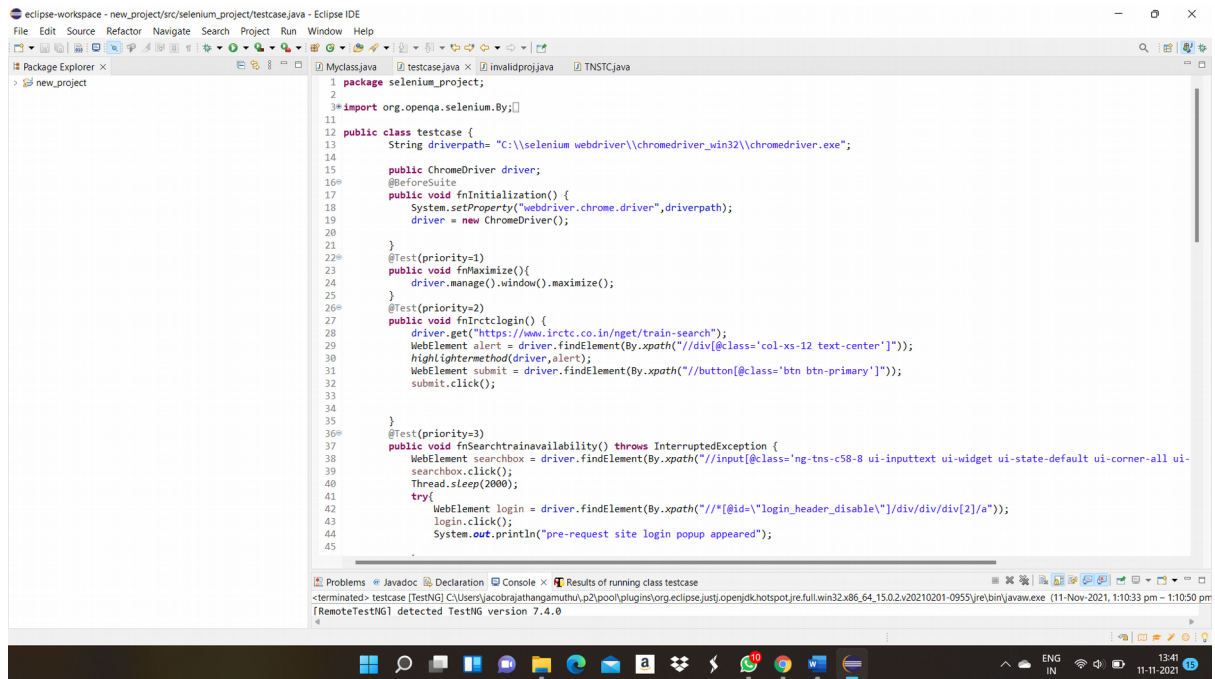
I say that this project has given me a great experience. Thanks to this project, I learned a lot of technical skill as well as I was personally benefited.

4.2 FUTURE WORK

There is a future scope of this facility that many more features such as online lectures video tutorials can be added by teachers as well as online assignments submission facility, a feature of group chat where students can discuss various issues of engineering can be added to this project thus making it more interactive more user friendly and project which fulfills each users need in the best way possible.

APPENDICES

SCREENSHOTS



```

83      date.click();
84    }
85    @Test(priority=6)
86    public void fnVerify_booking_details() throws InterruptedException {
87      WebElement dropdown1 = driver.findElement(By.xpath("//span[text()='All Classes']"));
88      dropdown1.click();
89      WebElement generic = driver.findElement(By.xpath("//span[text()='AC 2 Tier (2A)']"));
90      generic.click();
91      WebElement dropdown2 = driver.findElement(By.xpath("//span[text()='GENERAL']"));
92      dropdown2.click();
93      WebElement option = driver.findElement(By.xpath("//span[text()='LADIES']"));
94      option.click();
95      WebElement label_box = driver.findElement(By.cssSelector("label[form='availableBerth']"));
96      label_box.click();
97      WebElement search = driver.findElement(By.xpath("//button[@class='search_btn_train_Search']"));
98      search.click();
99      Thread.sleep(1000);
100     WebElement result = driver.findElement(By.xpath("//div[@class='hidden-xs']"));
101     String Txt= result.getText();
102     System.out.println(Txt);
103   }
104
105   @Test(priority=7)
106   public void fnPrint() {
107     System.out.println("Testcases is passed");
108   }
109   @AfterSuite
110   public void fnClosebrowser() {
111     driver.close();
112   }
113
114   private static void highlighterMethod(WebDriver driver, WebElement alert) {
115     JavascriptExecutor js = (JavascriptExecutor) driver;
116     js.executeScript("arguments[0].setAttribute('style', 'background: yellow; border: 2px solid red;');", alert);
117   }
118 }
119
120 }

```

Problems Javadoc Declaration Console x Results of running class testcase
 <terminated> testcase [TestNG] C:\Users\jacobrajathangamuthu\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.15.0.2.v20210201-0955\jre\bin\javaw.exe (11-Nov-2021, 1:10:33 pm - 1:10:50 pm)
 [RemoteTestNG] detected TestNG version 7.4.0

SOURCE CODE

```
package selenium_project;

import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.testng.annotations.AfterSuite;
import org.testng.annotations.BeforeSuite;
import org.testng.annotations.Test;

public class testcase {

    String driverpath= "C:\\selenium
webdriver\\chromedriver_win32\\chromedriver.exe";

    public ChromeDriver driver;

    @BeforeSuite

    public void fnInitialization() {

        System.setProperty("webdriver.chrome.driver",driverpath);

        driver = new ChromeDriver();
```

```
}
```

```
@Test(priority=1)
```

```
public void fnMaximize(){
```

```
    driver.manage().window().maximize();
```

```
}
```

```
@Test(priority=2)
```

```
public void fnIrctclogin() {
```

```
    driver.get("https://www.irctc.co.in/nget/train-search");
```

```
    WebElement alert =
```

```
driver.findElement(By.xpath("//div[@class='col-xs-12 text-center']"));
```

```
    highlightermethod(driver,alert);
```

```
    WebElement submit =
```

```
driver.findElement(By.xpath("//button[@class='btn btn-primary']"));
```

```
    submit.click();
```

```
}
```

```
@Test(priority=3)
```

```
public void fnSearchtrainavailability() throws  
InterruptedException {
```

```
    WebElement searchbox =
```

```
driver.findElement(By.xpath("//input[@class='ng-tns-c58-8 ui-inputtext ui-  
widget ui-state-default ui-corner-all ui-autocomplete-input ng-star-  
inserted']"));
```

```

        searchbox.click();

        Thread.sleep(2000);

        try{

            WebElement login =
driver.findElement(By.xpath("//*[@id=\"login_header_disable\"]/div/div/div[2]/
a"));

            login.click();

            System.out.println("pre-request site login popup
appeared");

        }

        catch (Exception e){

            System.out.println("pre-request site popup is not
appeared");

        }

        searchbox.sendKeys("DADAR - DR");

        WebElement searchbox1 =
driver.findElement(By.xpath("//input[@class='ng-tns-c58-9 ui-inputtext ui-
widget ui-state-default ui-corner-all ui-autocomplete-input ng-star-
inserted']"));

        searchbox1.sendKeys("CHENNAI EGMORE - MS");

    }

    @Test(priority=4)

    public void fnInvalidtraindate() throws InterruptedException{

```

```

WebElement textbox = driver.findElement(By.xpath("//input[@class='ng-tns-c59-10 ui-inputtext ui-widget ui-state-default ui-corner-all ng-star-inserted']"));

        textbox.click();

        WebElement leftbutton =
driver.findElement(By.xpath("//span[@class='ui-datepicker-prev-icon pi pi-chevron-left ng-tns-c59-10']"));

        leftbutton.click();

        WebElement date1 =
driver.findElement(By.xpath("//*[@id='jDate']/span/div/div/div[2]/table/tbody/tr[3]/td[4]"));

        date1.click();

        String colour_value="rgba(51, 51, 51, 1)";

        try {

            String colour_code = date1.getCssValue("color");

            if(colour_code.equals(colour_value)) {

                System.out.println("prev month calender is
disabled mode");

            }

        }

        catch(Exception e) {

            System.out.println("previous month calender is
not disable mode");

        }

```

```

        Thread.sleep(2000);

    }

    @Test(priority=5)

    public void fnVerifyvalidtrainDate() {

        WebElement textbox =
driver.findElement(By.xpath("//input[@class='ng-tns-c59-10 ui-inputtext ui-
widget ui-state-default ui-corner-all ng-star-inserted']"));

        textbox.click();

        WebElement nextbutton =
driver.findElement(By.xpath("//span[@class='ui-datepicker-next-icon pi pi-
chevron-right ng-tns-c59-10']"));

        nextbutton.click();

        WebElement date =
driver.findElement(By.xpath("//a[contains(text(),'15')]"));

        date.click();

    }

    @Test(priority=6)

    public void fnVerify_booking_details() throws
InterruptedException {

        WebElement dropdown1 =
driver.findElement(By.xpath("//span[text()='All Classes']"));

        dropdown1.click();

        WebElement generic =
driver.findElement(By.xpath("//span[text()='AC 2 Tier (2A)']"));

```

```

        generic.click();

        WebElement dropdown2 =
driver.findElement(By.xpath("//span[text()='GENERAL']"));

        dropdown2.click();

        WebElement option =
driver.findElement(By.xpath("//span[text()='LADIES']"));

        option.click();

        WebElement label_box =
driver.findElement(By.cssSelector("label[for='availableBerth']"));

        label_box.click();

        WebElement search =
driver.findElement(By.xpath("//button[@class='search_btn train_Search']"));

        search.click();

        Thread.sleep(1000);

        WebElement result =
driver.findElement(By.xpath("//div[@class='hidden-xs']"));

        String Txt= result.getText();

        System.out.println(Txt);

    }

@Test(priority=7)

public void fnPrint() {

        System.out.println("Testcases is passed");

```

```
}
```

```
@AfterSuite
```

```
public void fnClosebrowser() {
```

```
    driver.close();
```

```
}
```

```
private static void highlightermethod(WebDriver driver,  
WebElement alert) {
```

```
    JavascriptExecutor js = (JavascriptExecutor) driver;
```

```
    js.executeScript("arguments[0].setAttribute('style',  
'background: yellow; border: 2px solid red;');", alert);
```

```
}
```

```
}
```

REFERENCES

- <https://www.w3schools.in/software-testing/overview/>
- <https://www.guru99.com/>
- <https://www.javatpoint.com/automation-testing-tool>

