

# **1.INTRODUCTION TO SELENIUM WEBDRIVER:**

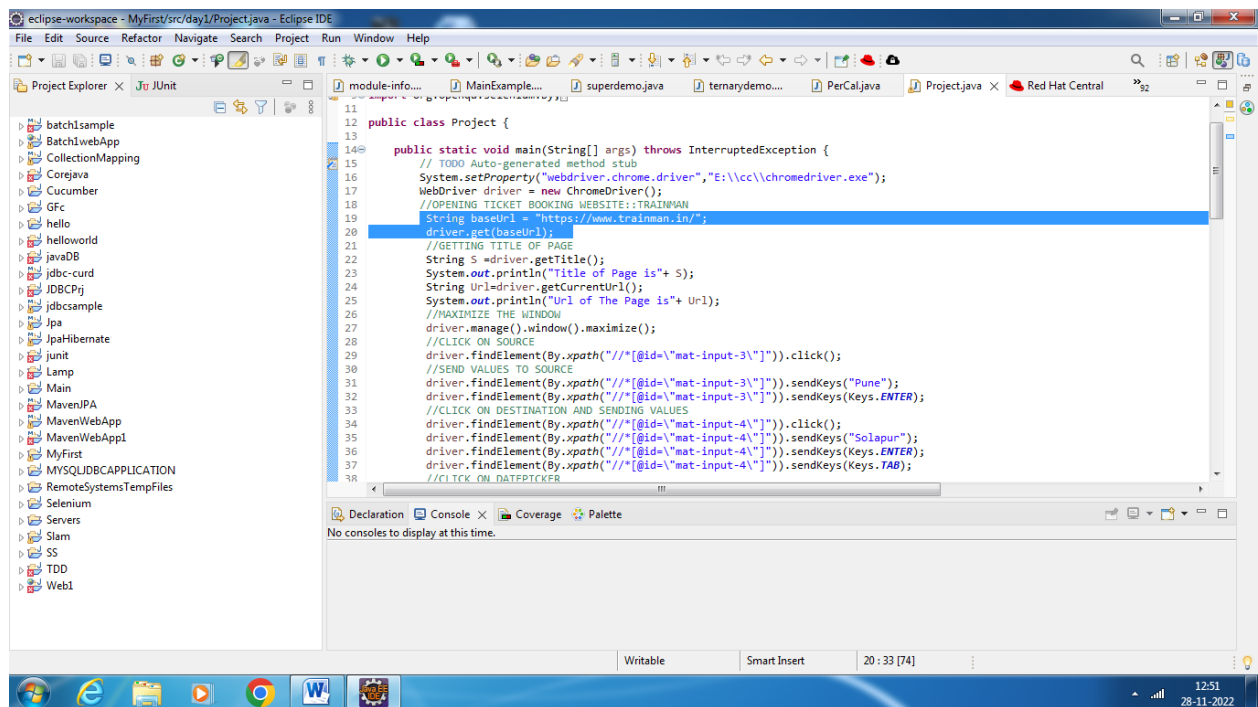
At the core of Selenium is Selenium WebDriver, an interface to write instructions that work interchangeably across browsers. It is the successor to Selenium RC. Selenium WebDriver accepts commands (sent in Selenese, or via a Client API) and sends them to a browser. This is implemented through a browser-specific browser driver, which sends commands to a browser and retrieves results. Most browser drivers actually launch and access a browser application (such as Firefox, Google Chrome, Internet Explorer, Safari, or Microsoft Edge); there is also an Html Unit browser driver, which simulates a browser using the headless browser HtmlUnit.

Instead, the WebDriver directly starts a browser instance and controls it. However, Selenium Grid can be used with WebDriver to execute tests on remote systems (see below). Where possible, WebDriver uses native operating system level functionality rather than browser-based JavaScript commands to drive the browser. This bypasses problems with subtle differences between native and JavaScript commands, including security restrictions.

## **Follwing Selenium WebDriver Command Employed:**

### **A.get() Command:**

1. The command launches a new browser and opens the specified URL in the browser instance.
2. The command takes a single string type parameter that is usually a URL of application under test.
3. To the Selenium IDE users, the command may look very much like open command.



## B.getTitle() Command:

1. The command is used to retrieve the title of the webpage the user is currently working on.
2. A null string is returned if the webpage has no title.
3. The command doesn't require any parameter and returns a trimmed string value.
4. Syntax:: driver.getTitle();

### **C.getCurrentUrl() Command:**

1. The command is used to retrieve the URL of the webpage the user is currently accessing.
2. The command doesn't require any parameter and returns a string value.
3. Syntax:: `driver.getCurrentUrl();`

### **D. driver.manage().window().maximize() Command:**

When browser windows are maximized, it reduces the chances of Selenium scripts missing out on web elements they must interact with during automated tests. It is possible that certain elements may not be visible to or recognized by Selenium if the browser window is not in a maximized state.

Maximizing a browser window at first also provides better visibility to the QAs for the test cases being executed. Thus QAs must consider maximizing the browser window as a best practice.

`driver.manage()` is a method that returns instance of options interface, now the options interface has method `window()` that returns instance of window interface, this window interface has method `maximize()` which maximizes the window.

## **E. FindElement(By.xpath) Command:**

1. The findElement(By.xpath) method is used to identify an element which matches with the xpath locator passed as a parameter to this method.
2. The findElements(By.xpath) method is used to identify a collection of elements which match with xpath locator passed as a parameter to that method.
3. The method findElement(By.xpath) returns a web element whereas the method findElements (By.xpath) returns a list of web elements.
4. An exception is thrown by the method findElement (By.xpath) if there is no matching element.
5. An empty list of elements is returned if there is no matching element obtained from the findElements (By.xpath) method.

## **F. Keys.(Enter/Tab)Command:**

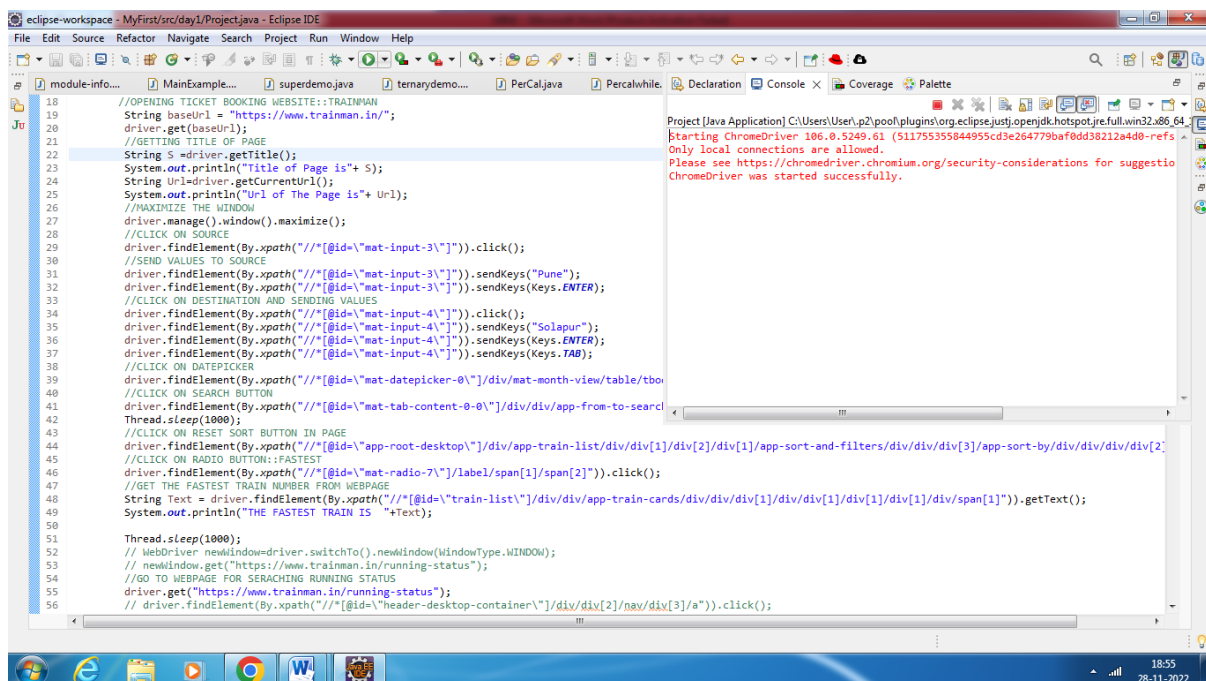
1. To specify ENTER button functionality in Selenium webdriver we have to use the method sendKeys. To simulate pressing the ENTER button, we have to add the statement `import org.openqa.selenium.Keys` to our code.
2. Then pass the parameter – `Keys.TAB` or `Keys.ENTER` to the sendKeys method.

## Steps Of Execution:

### 1. RUN THE PROGRAM ON ECLIPSE:

String baseUrl For Site Trainman Booking Site Is Being Declared as We Can See In Below Image. Driver.get Method Will Open Launch The Webpage In Browser.

String S is Declared To Get Title Of Page. String Url Is Declared For Getting Current Url Of Page. The Both Title and Url Is Displayed On Console.

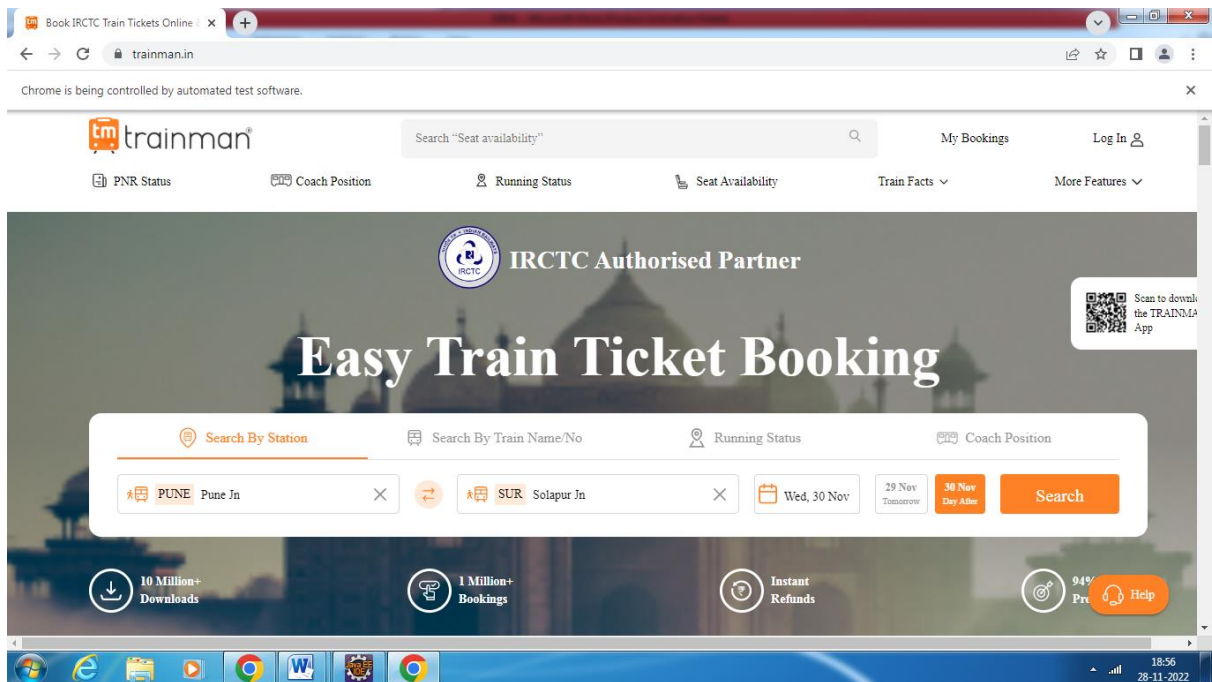


### 2.DRIVER COMMANDS ARE EXECUTING:

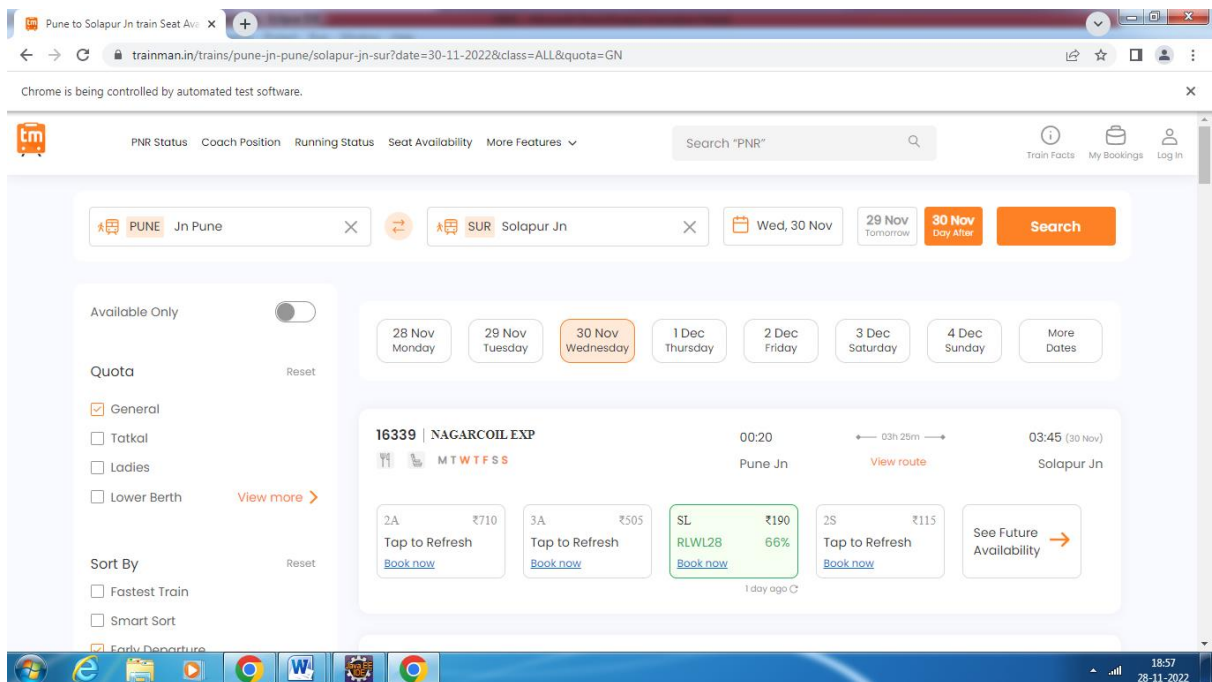
Driver.manage().window().maximize(); Command Is used For Maximizing The Current Window.

The Source Which Is Start Point Of Journey Found By Its Xpath. Xpath Stands For XML Path Language.It Uses Non XML Syntax To Provide A Flexible Way Of Addressing To Different Parts Of An XML Document. The Value “Pune” Is Sent For Element Source.

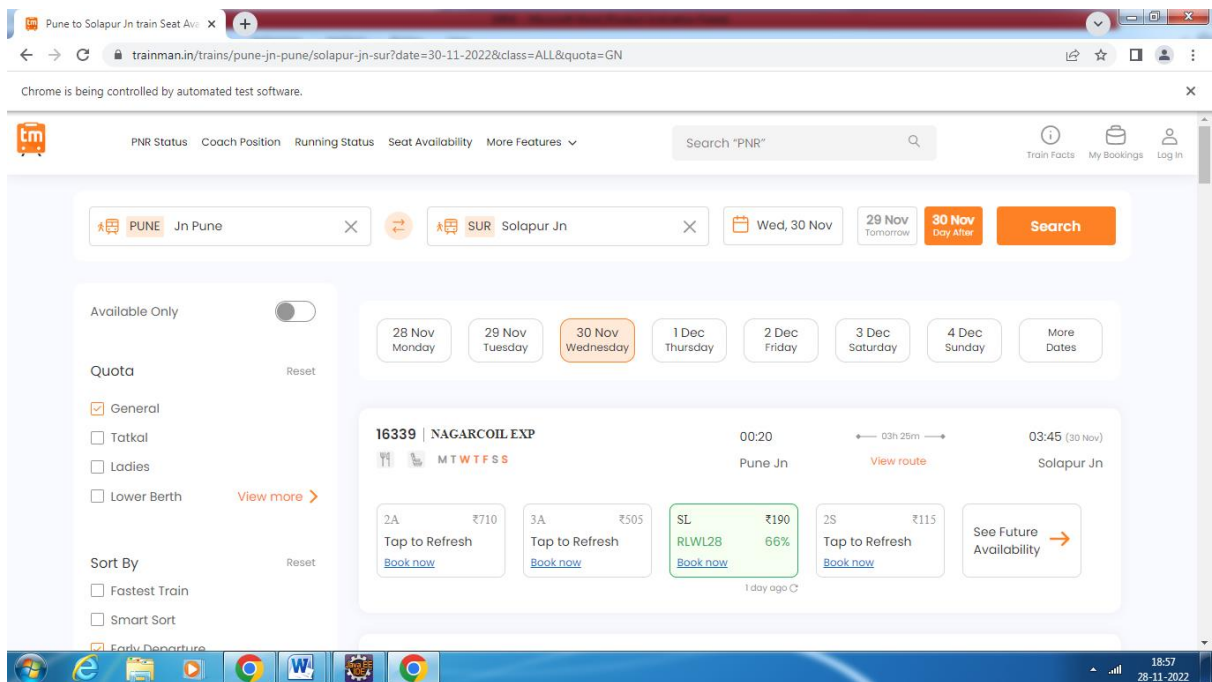
The Destination Which Is End Of Journey Found By Its Xpath. The Value “Solapur” is Sent. The Date Is Being Picked From DatePicker. Clicked On Search Button.



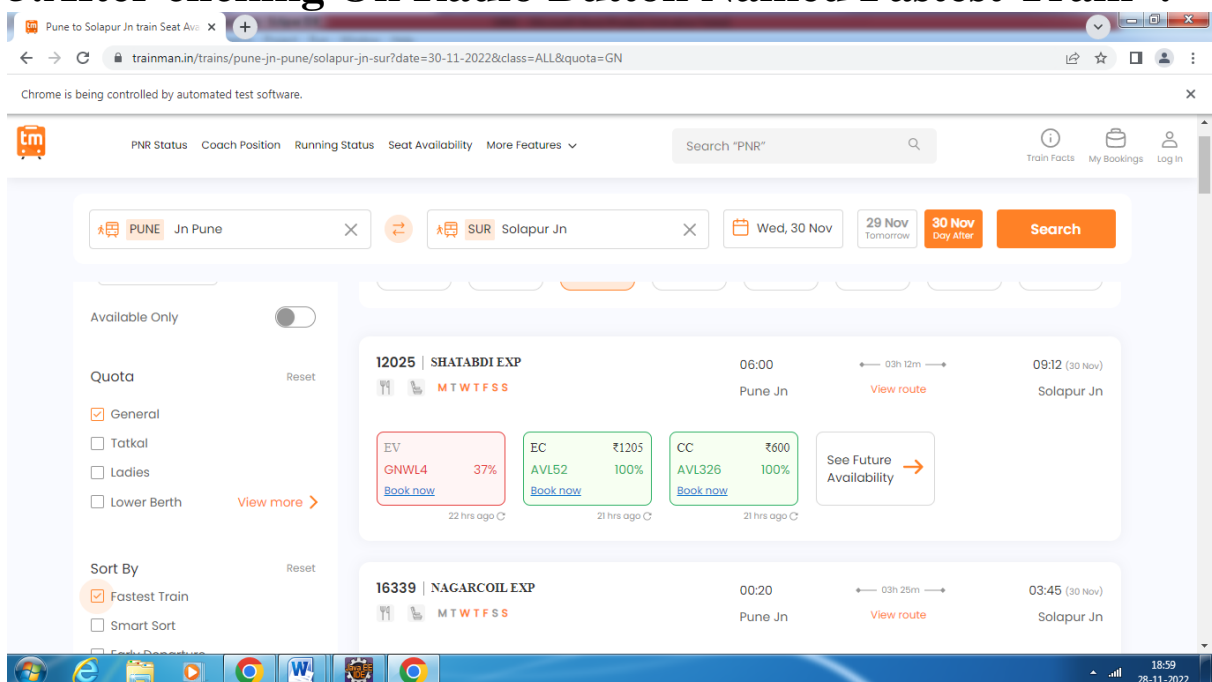
### 3.THE SEARCH WINDOW BETWEEN SOURCE AND DESTINATION WILL OPEN:



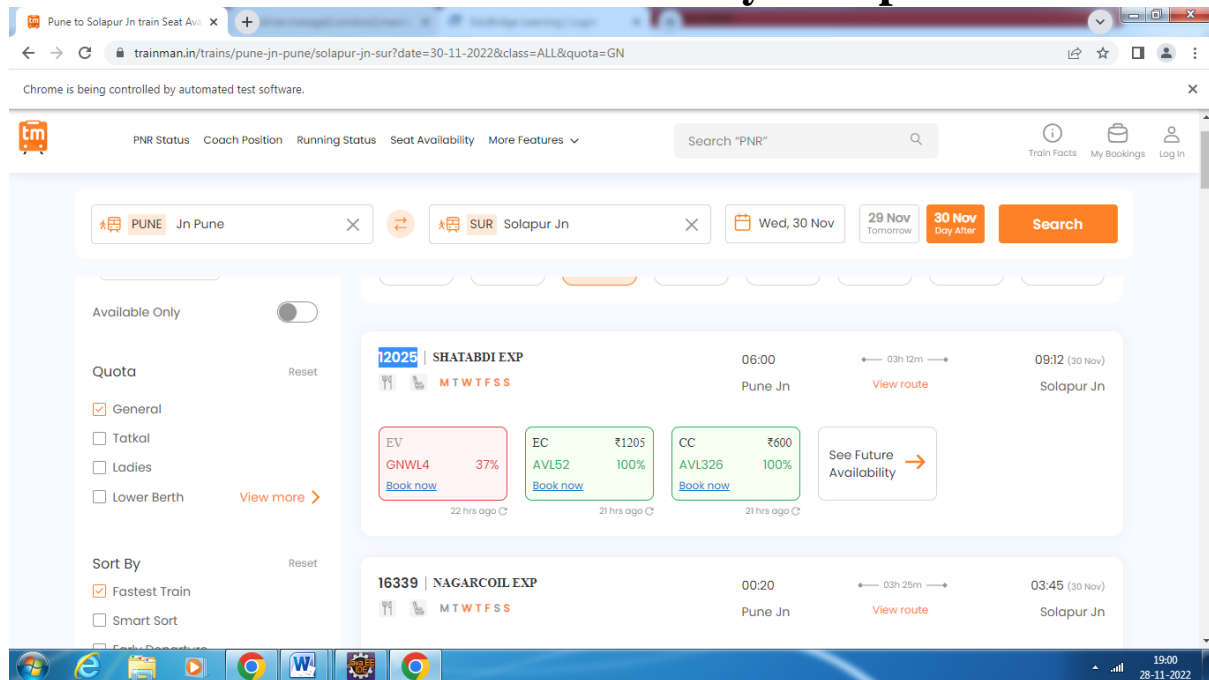
#### 4. After Clicking ON Reset By Using Its xpath:



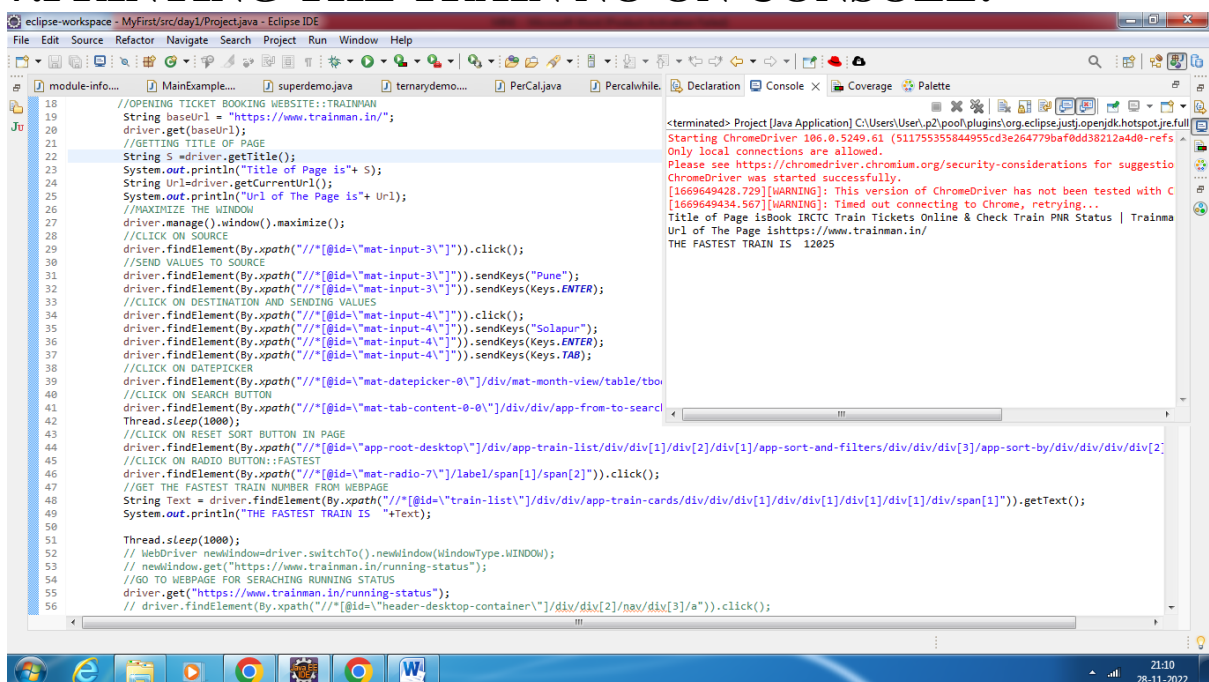
### 5.After clicking On Radio Button Named Fastest Train :



## 6.FINDING FASTEST TRAIN NO By Its Xpath:

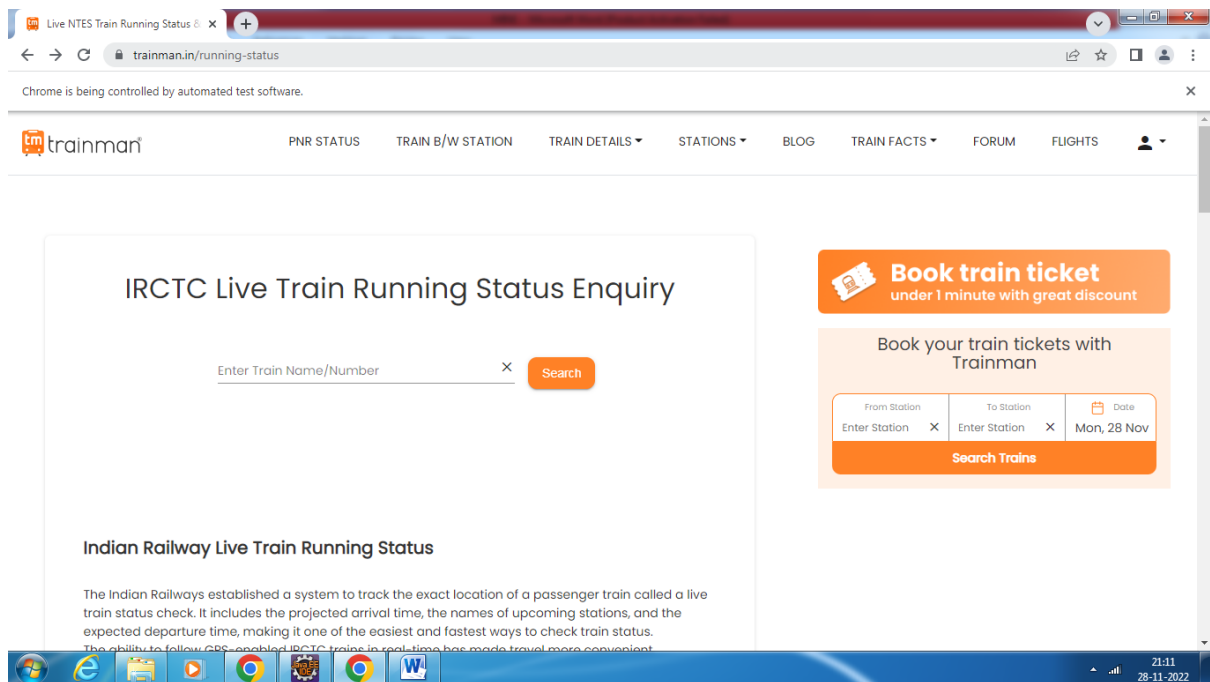


## 7.PRINTING THE TRAIN NO ON CONSOLE:

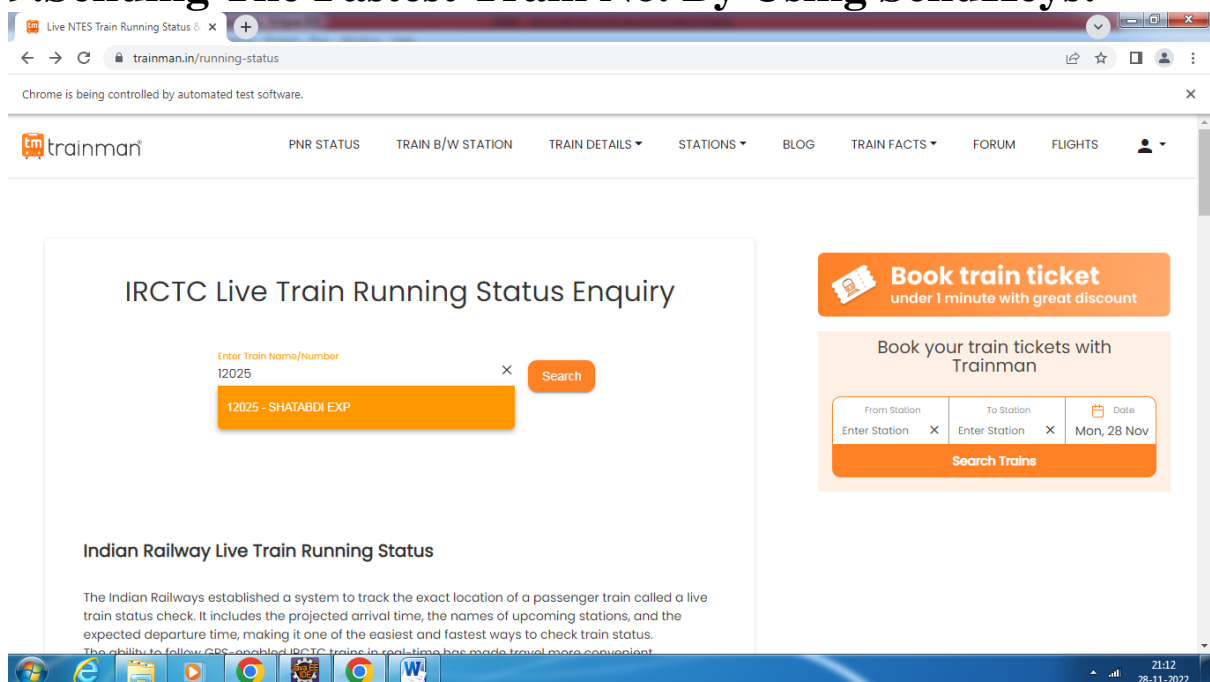




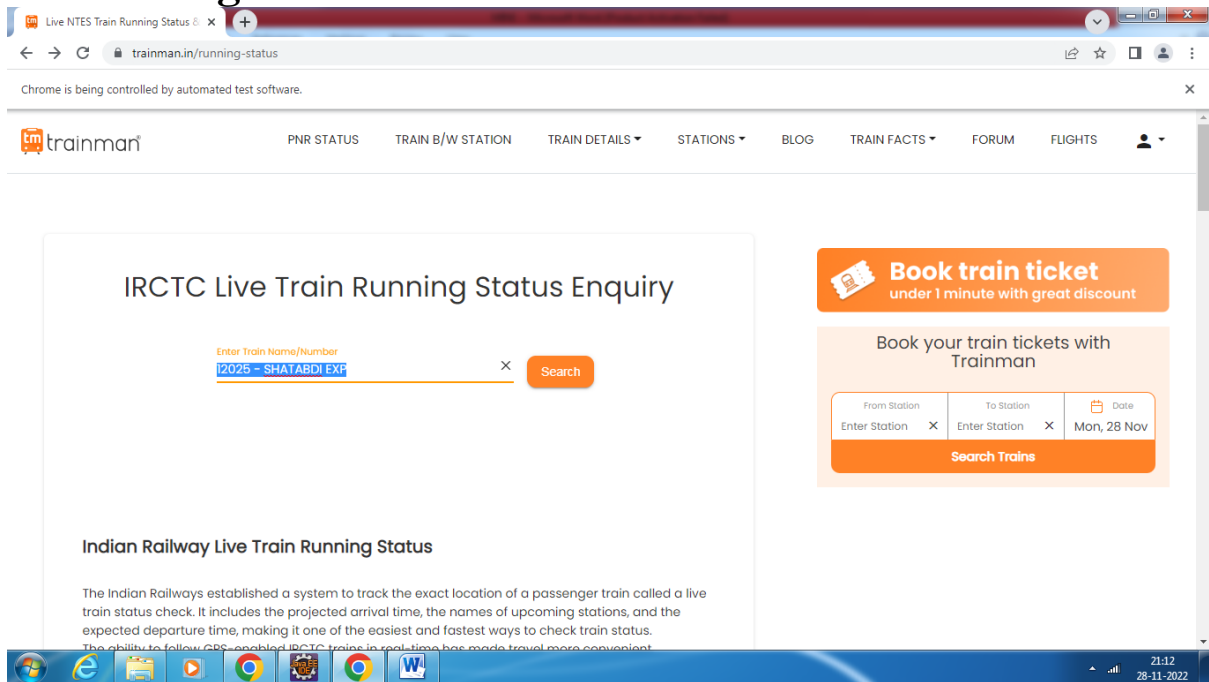
## 8.Navigate To Train Running Status Page:



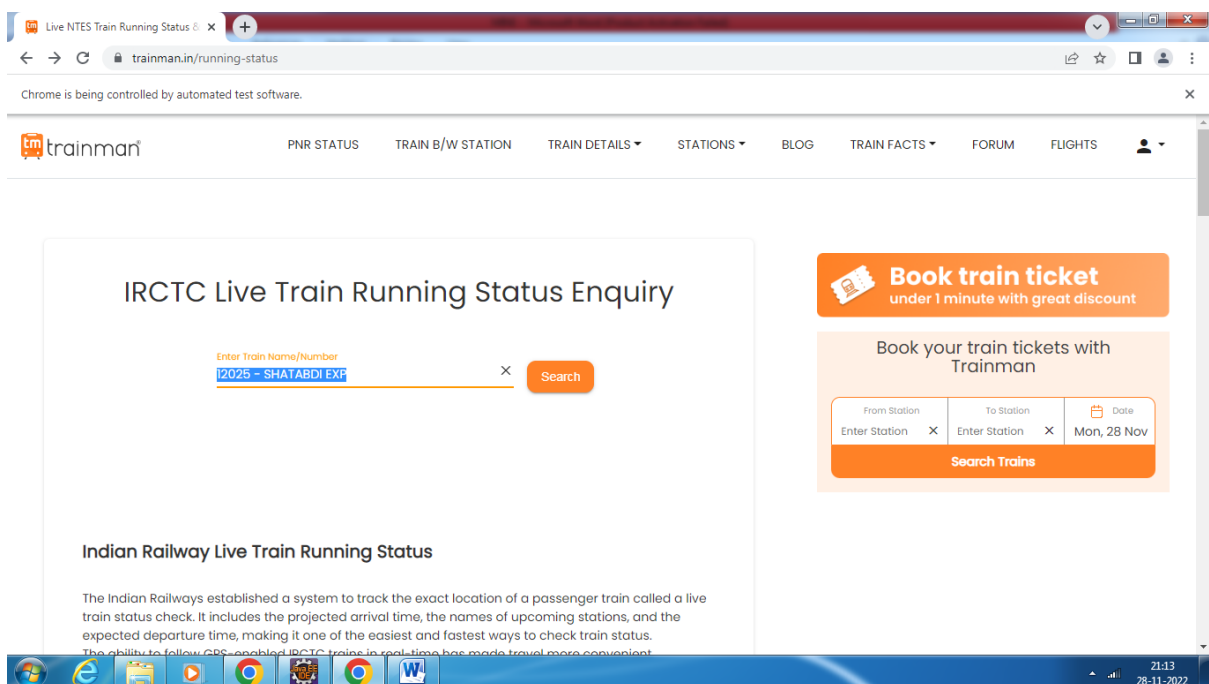
## 9.Sending The Fastest Train No. By Using SendKeys:



## 10. Clicking Enter To Get The Same Train No:



## 11. Clicking Search Button By Using xpath:



## 12.The Page Which Is Showing Live Status Of Train Is:

The screenshot shows the Trainman website interface. The browser address bar displays 'trainman.in/running-status/12025'. The website header includes the Trainman logo and navigation links: PNR STATUS, TRAIN B/W STATION, TRAIN DETAILS, STATIONS, BLOG, TRAIN FACTS, FORUM, and FLIGHTS. A notification at the top states 'Chrome is being controlled by automated test software.' The main content area features a sidebar with icons for Seat Availability, Running Status (selected), Time Table, Coach Position, and Fare Calculator. The central section is titled 'SHATABDI EXP 12025 train running status'. It includes a search bar with '12025 - SHATABDI EXP' and a 'Search' button. Below the search bar, it indicates the train 'Runs On - Mon Wed Thu Fri Sat Sun'. A date selector shows 'Start Date From PUNE' with options for 23 Nov, 24 Nov, 25 Nov, 26 Nov, 27 Nov, and 28 Nov. A table displays the train's status at Pune Jn (PUNE), showing it is the 'Source' and has a delay of '1 min'. The table headers are Station, Scheduled Time, Actual, and Delay. A sidebar on the right promotes booking train tickets with a 'Book train ticket under 1 minute with great discount' banner and a 'Search Trains' button. The Windows taskbar at the bottom shows various application icons and the system clock indicating 21:13 on 28-11-2022.

NTES Train Running Status & En... x

trainman.in/running-status/12025

Chrome is being controlled by automated test software.

trainman

PNR STATUS TRAIN B/W STATION TRAIN DETAILS STATIONS BLOG TRAIN FACTS FORUM FLIGHTS

Seat Availability Running Status Time Table Coach Position Fare Calculator

SHATABDI EXP 12025 train running status

Search train  
12025 - SHATABDI EXP Search

Runs On - Mon Wed Thu Fri Sat Sun

Start Date From PUNE 23 Nov 24 Nov 25 Nov 26 Nov 27 Nov 28 Nov

Station	Scheduled Time	Actual	Delay
Pune Jn (PUNE) 0 km (day 1)	Arr Starts Dep 06:00	Source 06:01	1 min

38 intermediate stations

Book train ticket under 1 minute with great discount

Book your train tickets with Trainman

From Station	To Station	Date
Enter Station	Enter Station	Mon, 28 Nov

Search Trains

21:13  
28-11-2022