



# Selenium

Class 10

# Agenda

How to handle Web Tables

How to handle Calendars

# What is Table?

Web tables are basically group of elements that are logically stored in a row and column format. It is used to organize similar information in a web page.

In HTML, table is created using `<table>` tag. Web table is a HTML structure for creating rows and columns on a Web page.

A web table can consists below parts:

- Header(s): It is created using `<th>` tag.
- Row(s): It is created using `<tr>` tag.
- Columns(s): It is created using `<td>` tag.

There are two types of HTML tables:

- Static tables: Data is static i.e. Number of rows and columns are fixed.
- Dynamic tables: Data is dynamic i.e. Number of rows and columns are NOT fixed.

When the table is dynamic in nature, we cannot predict its number of rows and columns. Selenium Webdriver allows us to access dynamic web tables by their X-path

# Fetch number of rows and columns from WebTable

```
public static void main(String[] args) {
    String url="https://www.toolsqa.com/automation-practice-table/";
    setUpDriver("chrome", url);
    //getting number of columns from the header
    List<WebElement> cols=driver.findElements(By.xpath("//table[@summary='Sample Table']/thead/tr/th"));
    System.out.println("Number of columns is="+cols.size());
    System.out.println("Printing column headers");
    for(WebElement col: cols) {
        System.out.println(col.getText());
    }
    //getting number of rows
    List<WebElement> rows=driver.findElements(By.xpath("//table[@summary='Sample Table']/tbody/tr"));
    System.out.println("Number of columns is="+rows.size());
    Iterator <WebElement> it=rows.iterator();
    System.out.println("---Printing row data---");
    while(it.hasNext()) {
        String rowText=it.next().getText();
        System.out.println(rowText);
    }
    driver.quit();
}
```

# Test Case

## **TC 1: Table headers and rows verification**

1. Open chrome browser
2. Go to “<https://the-internet.herokuapp.com/>”
3. Click on “Click on the “Sortable Data Tables” link
4. Verify tables consist of 4 rows and 6 columns
5. Print name of all column headers
6. Print data of all rows

# Fetch cell value of a particular row & column of Dynamic Table

```
List<WebElement> rows=driver.findElements(By.xpath("//table[@id='resultTable']/tbody/tr"));
List<WebElement> cols=driver.findElements(By.xpath("//table[@id='resultTable']/thead/tr/th"));

System.out.println("Number of rows is - " + rows.size() + " and columns is - " + cols.size());

    for(int i=1; i<=rows.size(); i++) {
        WebElement
row=driver.findElement(By.xpath("//table[@id='resultTable']/tbody/tr["+i+"]"));
        String rowData = row.getText();
        System.out.println("Row "+i+" data is "+rowData);

        if(rowData.contains("0003")) {
            driver.findElement(By.xpath("//table[@id='resultTable']/tbody/tr["+i+"]/td/input")).cli
ck();

            System.out.println("Clicked");
            break;
        }
    }
```

# Test Case

## **TC 1: Table headers and rows verification**

1. Open chrome browser
2. Go to  
“<http://secure.smartbearsoftware.com/samples/testcomplete11/WebOrders/login.aspx>”
3. Login to the application
4. Verify customer “Susan McLaren” is present in the table
5. Click on customer details
6. Update customers last name
7. Verify updated customers name is displayed in table
8. Close browser

# Select Date from DatePicker in Selenium [calendar]

When we need to automate an airway, hotel, or similar websites we need to deal with Date Pickers.

Enter Date & Time:

June, 2016 ▾

◀

●

▶

Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	31	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	1	2

## What Is A Date Time Picker Control?

A date-time picker (**aka DTP**) control provides a simple and user-friendly interface for exchanging date and time information with a user.

For example, you can use a DTP control for asking the user to input a date and then quickly fetch the selection. Most of the time, it appears as an input field in an HTML form.

When the user selects a date, the feedback gets shown as the input's value.



# Approach to handle calendar in Selenium Webdriver

Step 1- Click on calendar

Step 2- Get all td of table using findElements method

Step 3- using for loop get text of all td elements

Step 4- using if else condition we will check specific date

Step 5- If date is matched then click and break the loop.

# Select Date from Calendar

```
CalendarDemo.java
11
12 public static void main(String[] args) throws InterruptedException {
13     String url="https://jqueryui.com/datepicker/";
14     setUpDriver("chrome", url);
15
16     //store frame element and then switch
17     WebElement frame=driver.findElement(By.cssSelector("iframe.demo-frame"));
18     switchToFrame(frame);
19
20     //click to bring calendar view
21     driver.findElement(By.id("datepicker")).click();
22
23     String expectedDate="30";
24
25     //get all cells
26     List <WebElement> cells=driver.findElements(By.xpath("//table[@class='ui-datepicker-calendar']/tbody/tr/td"));
27     for (WebElement cell: cells) {
28         //get text of each cell
29         String cellText=cell.getText();
30         if (cellText.equals(expectedDate)) {
31             cell.click();
32         }
33     }
34     Thread.sleep(7000);
35     driver.quit();
36 }
```

```
9 public class Test3 {
10     public static void main(String[] args) throws InterruptedException {
11         // set up
12         System.setProperty("webdriver.chrome.driver", "src/Drivers/chromedriver");
13         WebDriver driver = new ChromeDriver();
14         // driver.manage().window().fullscreen();
15         driver.manage().timeouts().pageLoadTimeout(30, TimeUnit.SECONDS);
16         driver.manage().timeouts().implicitlyWait(20, TimeUnit.SECONDS);
17         String url = "https://www.spirit.com/";
18         driver.get(url);
19         //click to open calendar
20         driver.findElement(By.id("departDate")).click();
21         //Capture month that currently displayed
22         String xpath="//div[@class='ui-datepicker-header ui-widget-header ui-helper-clearfix ui-corner-left']//span[@class='ui-datepicker-month']";
23         String month=driver.findElement(By.xpath(xpath)).getText();
24         System.out.println(month);
25         //Loop untill specific month is selected
26         if(!month.equals("January")) {
27             do {
28                 driver.findElement(By.xpath("//span[text()='Next']")).click();
29             }while(!driver.findElement(By.xpath(xpath)).getText().equals("January"));
30         }
31         //get all cells from table
32         String xpathCells="//div[@class='ui-datepicker-group ui-datepicker-group-first']/table[@class='ui-datepicker-calendar']/tbody//td";
33         List<WebElement> cells = driver.findElements(By.xpath(xpathCells));
34         //loop through each cell, get text and compare to specific date
35         for (WebElement cell : cells) {
36             String data = cell.getText();
37             if(data.equals("17")) {
38                 cell.click();
39                 break;
40             }
41         }
42         driver.quit();
43     }
44 }
```

# Test Case

## **TC 1: Users Application Form Fill**

1. Open chrome browser
2. Go to “<http://uitestpractice.com/>”
3. Click on “Forms” link
4. Fill out the entire form
5. Close the browser

**MUST USE Functions:**

# Test Case

## TC 1: Table headers and rows verification

1. Open browser and go to  
“<http://secure.smartbearsoftware.com/samples/testcomplete11/WebOrders/login.aspx>”
2. Login to the application
3. Create an Order
4. Verify order of that person is displayed in the table “List of All Orders”
5. Click on edit of that specific order
6. Verify each order details
7. Update street address
8. Verify in the table that street has been updated
9. Close browser

# Test Case

## **TC 1: Table headers and rows verification**

1. Open chrome browser
2. Go to "https://jqueryui.com/"
3. Click on "Datepicker"
4. Select August 10 of 2019
5. Verify date "08/10/2019" has been entered succesfully
6. Close browser