# Selenium

Class 8

# Agenda

How to handle Web Tables

# 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

```java
public class WebTableDemo extends CommonMethods {

    public static void main(String[] args) {

        setUp("chrome", "http://jiravm.centralus.cloudapp.azure.com:8081/table-search-filter-demo.html");
        // GET NUMBER OF ROWS
        List<WebElement> rows = driver.findElements(By.xpath("//table[@class='table']/tbody/tr"));
        System.out.println("Number of rows =" + rows.size());

        System.out.println("-----------ROW DATA-----------------");
        Iterator<WebElement> it = rows.iterator();
        while (it.hasNext()) {
            String rowText = it.next().getText();
            System.out.println(rowText);
        }
        // GET NUMBER OF COLUMNS
        List<WebElement> cols = driver.findElements(By.xpath("//table[@class='table']/thead/tr/th"));
        System.out.println("Number of colums =" + cols.size());

        System.out.println("-----------COLUMNS HEADERS-----------------");
        for (WebElement col : cols) {
            String colText = col.getText();
            System.out.println(colText);
        }
        driver.quit();
    }
}
```

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

```java
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")).click();

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