

Objective:

The objective is to write code to dynamically check all the links under the table.

Task:

Launch the url <https://www.moneycontrol.com>

Click on Stocks link.

It will list Stock Price Quotes List with company name.

Get all the links and link text of the company under the list of Alphabet 'A' and print it on the console.

Assert the title using TestNG Assertion after clicking on 'Ashok Leyland' in the table of company name

Expected title of the 'Ashok Leyland page':

"Ashok Leyland Ltd. Stock Price, Share Price, Live BSE/NSE, Ashok Leyland Ltd. Bids Offers. Buy/Sell Ashok Leyland Ltd. news & tips, & F&O Quotes, NSE/BSE Forecast News and Live Quotes"

Source code:

File1: DisplayLinks.java

```
package com.ibm.dynamictable;

import java.util.concurrent.TimeUnit;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.openqa.selenium.support.ui.ExpectedConditions;
import org.openqa.selenium.support.ui.WebDriverWait;
import org.testng.Assert;
import org.testng.annotations.AfterMethod;
import org.testng.annotations.BeforeMethod;
import org.testng.annotations.Test;
import com.ibm.initialization.LaunchWebDriver;
import com.ibm.tablepages.CompaniesPage;
import com.ibm.tablepages.ContinuePage;
import com.ibm.tablepages.NewsPage;
import com.ibm.tablepages.StockQuotesPage;

public class DisplayLinks extends LaunchWebDriver {

    // To display all the links and link text
    @Test
    public void printLinks() {
        String url = data.get("urlmoneycontrol");
        String expectedTitle = data.get("exptitle");
        // To launch money control web application
        driver.get(url);

        NewsPage newspage = new NewsPage(driver, wait);
```

```

        // To click on stocks link
        newspage.clickOnStocks();

        StockQuotesPage quotespage = new StockQuotesPage(driver, wait);

        // To click on A link
        quotespage.clickOnA();

        CompaniesPage companypage = new CompaniesPage(driver, wait);

        // To print links and link text of companies
        System.out.println(data.get("linksconsole"));
        companypage.printLinks();
        String actualTitle = companypage.clickonCompany();
        System.out.println("Title is " + actualTitle);

        // Assertion of title of the page
        Assert.assertTrue(actualTitle.contains(expectedTitle), "Assertion on
page title");
    }
}

```

File2: NewsPage.java

```

package com.ibm.tablepages;

import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.support.FindBy;
import org.openqa.selenium.support.PageFactory;
import org.openqa.selenium.support.ui.WebDriverWait;

public class NewsPage {

    // Locating continue link
    @FindBy(xpath = "//a[@title='Stocks']")
    WebElement stocksEle;

    By stocks = By.xpath("//a[@title='Stocks']");

    WebDriverWait wait;
    WebDriver driver;

    public NewsPage(WebDriver driver, WebDriverWait wait) {
        PageFactory.initElements(driver, this);
        this.driver = driver;
        this.wait = wait;
    }

    // To click on Stocks link

```

```

        public void clickOnStocks()
        {
            stocksEle.click();
        }
    }
}

```

File3: StockQuotesPage.java

```

package com.ibm.tablepages;

import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.support.FindBy;
import org.openqa.selenium.support.PageFactory;
import org.openqa.selenium.support.ui.WebDriverWait;

public class StockQuotesPage {

    // Locating A link
    @FindBy(xpath = "//a[@title='A']")
    WebElement linkA;
    WebDriverWait wait;
    WebDriver driver;

    public StockQuotesPage(WebDriver driver, WebDriverWait wait) {
        PageFactory.initElements(driver, this);
        this.driver = driver;
        this.wait = wait;
    }

    // To click on A link
    public void clickOnA() {
        linkA.click();
    }

}

```

File4: CompaniesPage.java

```

package com.ibm.tablepages;

import java.util.List;

import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.support.FindAll;
import org.openqa.selenium.support.FindBy;
import org.openqa.selenium.support.PageFactory;

```

```

import org.openqa.selenium.support.ui.WebDriverWait;

public class CompaniesPage {

    WebDriverWait wait;
    WebDriver driver;

    @FindAll(@FindBy(tagName = "a"))
    List<WebElement> linksAll;

    @FindBy(xpath = "//a[@title='Ashok Leyland']")
    WebElement companylink;

    public CompaniesPage(WebDriver driver, WebDriverWait wait) {
        PageFactory.initElements(driver, this);
        this.driver = driver;
        this.wait = wait;
    }

    // To print links and link text
    public void printLinks() {
        // Finding the total number of rows in the table.
        List<WebElement> rows = (List<WebElement>) driver
            .findElements(By.xpath("//table[@class='pcq_tbl
MT10']/tbody/tr"));
        int rowTotal = rows.size();

        List<WebElement> columns = (List<WebElement>) driver
            .findElements(By.xpath("//table[@class='pcq_tbl
MT10']/tbody/tr[2]/td"));
        int colTotal = columns.size();

        System.out.println();
        for (int i = 2; i <= rowTotal; i++) {

            for (int j = 1; j <= colTotal; j++) {

                WebElement companyElt = driver.findElement(
                    By.xpath("//table[@class='pcq_tbl
MT10']/tbody/tr[" + i + "]/td[" + j + "]/descendant::a"));

                System.out.println(companyElt.getText().toString());
                System.out.println(companyElt.getAttribute("href"));

            }

        }

    }

    // To click on Ashok Leyland company
    public String clickonCompany()

    {

```

```

        companylink.click();
        return driver.getTitle();
    }
}

```

File5 :LaunchWebDriver.java

```

package com.ibm.initialization;
import java.io.IOException;
import java.util.HashMap;
import java.util.concurrent.TimeUnit;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.openqa.selenium.support.ui.WebDriverWait;
import org.testng.annotations.AfterMethod;
import org.testng.annotations.BeforeMethod;
import org.testng.annotations.BeforeSuite;
import com.ibm.utilities.PropertiesFileHandler;

public class LaunchWebDriver {
    public WebDriver driver;
    public WebDriverWait wait;
    public PropertiesFileHandler propFileHandler;
    public HashMap<String, String> data;

    @BeforeSuite
    public void preSetForTest() throws IOException {
        String file = "./TestData/dynamictable.properties";
        propFileHandler = new PropertiesFileHandler();
        data = propFileHandler.getPropertiesAsMap(file);
    }

    //Setting path for webdriver and launching web application
    @BeforeMethod
    public void initializeDriver()

    {
        //Setting path for Firefox Driver
        System.setProperty("webdriver.gecko.driver",
"./drivers/geckodriver.exe");
        driver = new FirefoxDriver();
        driver.manage().timeouts().implicitlyWait(30,
TimeUnit.SECONDS);

        wait = new WebDriverWait(driver, 60);
        driver.manage().window().maximize();

    }

    //To close the webdriver
    @AfterMethod

```

```

        public void close()
        {

            driver.close();

        }

    }
}

```

File6: PropertiesFileHandler.java

```

package com.ibm.utilities;

import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;
import java.util.HashMap;
import java.util.Properties;
import java.util.Set;

public class PropertiesFileHandler {

    public HashMap<String, String> getPropertiesAsMap(String file) throws
IOException {
        HashMap<String, String> dynamicMap = new HashMap<String, String>();

        FileInputStream fileIn = new FileInputStream(file);
        Properties prop = new Properties();
        prop.load(fileIn);

        Set<Object> keysProp = prop.keySet();
        for (Object key : keysProp) {
            dynamicMap.put(key.toString(), prop.getProperty(key.toString()));
        }
        prop.clear();
        return dynamicMap;
    }

    public void setKeyAndValue(String file,String key,String value) throws
IOException
    {
        FileInputStream fileIn = new FileInputStream(file);
        Properties prop = new Properties();
        prop.load(fileIn);

        prop.setProperty(key, value);

        FileOutputStream fOut=new FileOutputStream(file);
        prop.store(fOut, "Test Result");
        fOut.close();
        fileIn.close();
    }
}

```

```
}
```

File7:dynamictable.properties

```
url=https://datatables.net
message=The list of employees with age >=50 and salary >=200000
urlmoneycontrol=https://www.moneycontrol.com
linksconsole=The links and link text of the company under the list of Alphabet 'A':
exptitle=Ashok Leyland Ltd. Stock Price, Share Price, Live BSE/NSE, Ashok Leyland
Ltd. Bids Offers. Buy/Sell Ashok Leyland Ltd. news & tips, & F&O Quotes, NSE/BSE
Forecast News and Live Quotes
```

File8 :testngDisplaylinks.xml

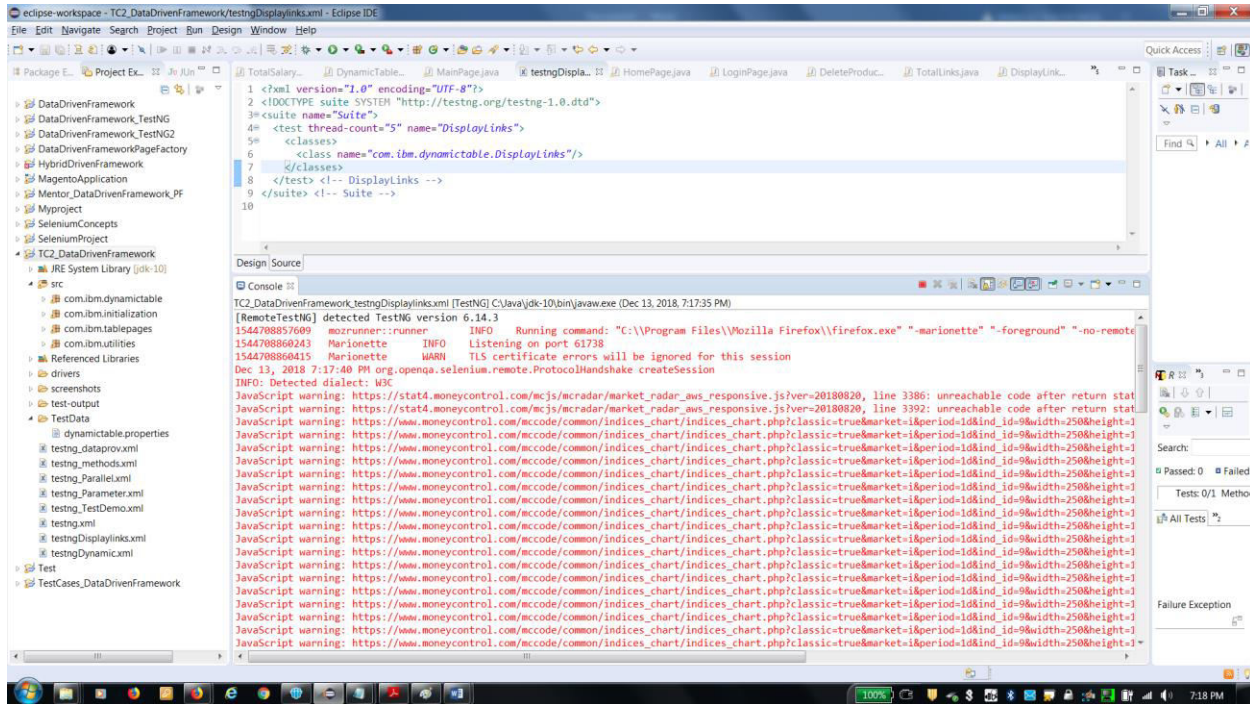
```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE suite SYSTEM "http://testng.org/testng-1.0.dtd">
<suite name="Suite">
  <test thread-count="5" name="DisplayLinks">
    <classes>
      <class name="com.ibm.dynamictable.DisplayLinks"/>
    </classes>
  </test> <!-- DisplayLinks -->
</suite> <!-- Suite -->
```

Result:

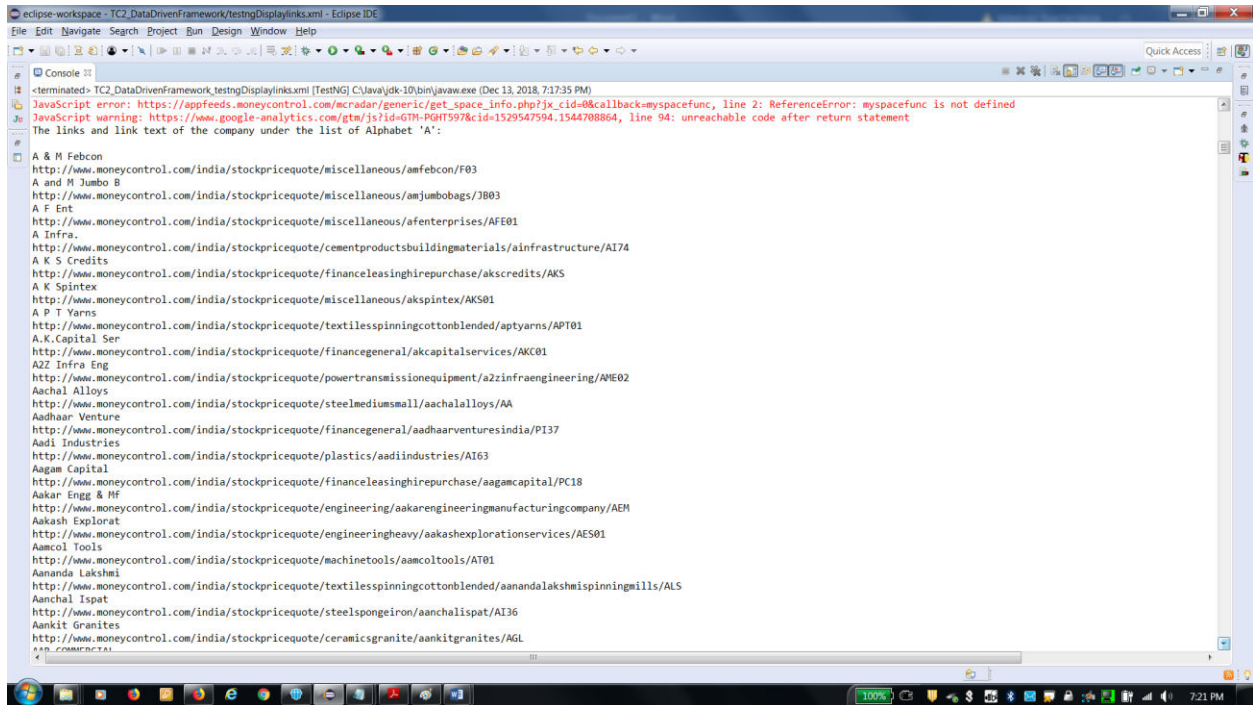
All the links and link text of the company under the list of Alphabet 'A' are printed on console and assertion is performed on expected page title.

Screenshots:

Output on console:

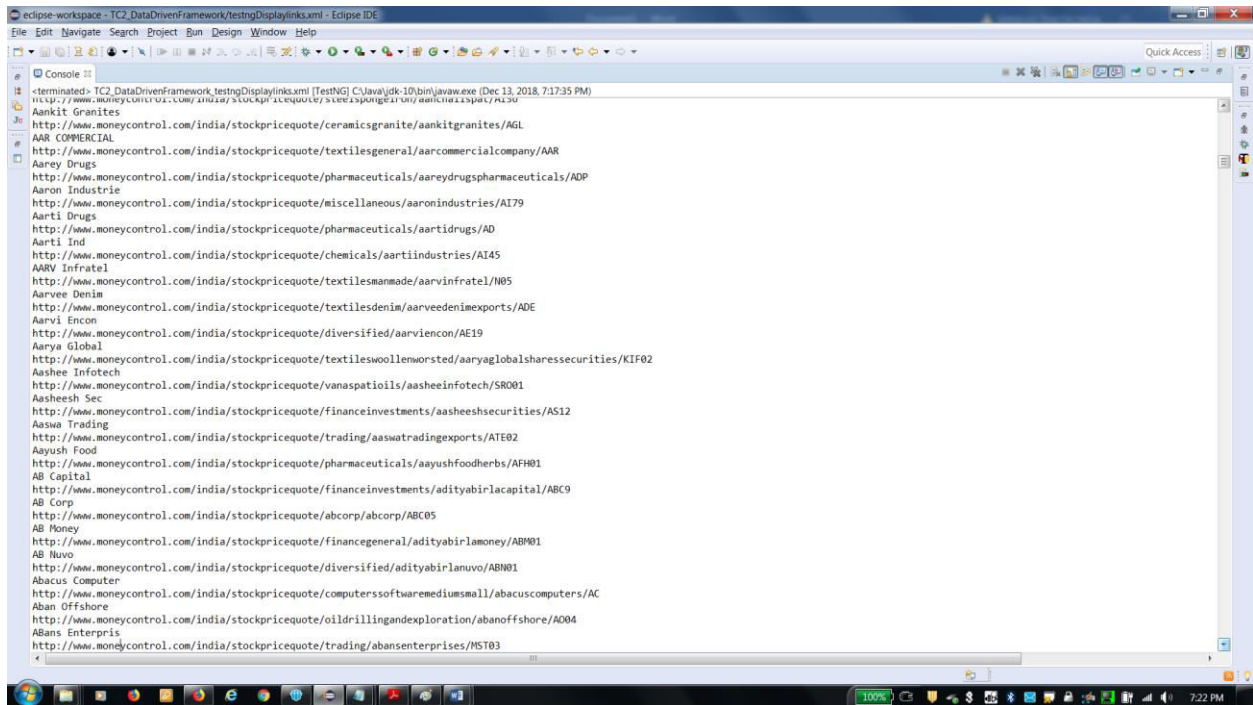


The links and link text of the company under the list of Alphabet 'A'



```
<terminated> TC2_DataDrivenFramework.testngDisplaylinks.xml [TestNG] C:\Java\jdk-10\bin\java.exe (Dec 13, 2018, 7:17:35 PM)
JavaScript error: https://appfeeds.moneycontrol.com/mcradar/generic/get_space_info.php?jw_cid=8&callback=myspacefunc, line 2: ReferenceError: myspacefunc is not defined
JavaScript warning: https://www.google-analytics.com/gtm/js?id=GTM-PGHT597&cid=1529547594.1544708864, line 94: unreachable code after return statement
The links and link text of the company under the list of Alphabet 'A':

A & M Febron
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/amfebron/F03
A and M Jumbo B
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/amjumbobags/J003
A F Ent
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/afenterprises/AFE01
A Infra
http://www.moneycontrol.com/india/stockpricequote/cementproductsbuildingmaterials/ainfrastructure/AI74
A K S Credits
http://www.moneycontrol.com/india/stockpricequote/financeleasinhirepurchase/akscrcdits/AKS
A K Spintex
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/akspintex/AKS01
A P T Yarns
http://www.moneycontrol.com/india/stockpricequote/textilesspinnigcottonblended/aptyarns/APT01
A.K.Capital Ser
http://www.moneycontrol.com/india/stockpricequote/financegeneral/akcapitalser/AKC01
A2Z Infra Eng
http://www.moneycontrol.com/india/stockpricequote/powertransmissionequipment/a2zinfraeng/AIE02
Aachal Alloys
http://www.moneycontrol.com/india/stockpricequote/steelmediumsmall/aachalalloys/AA
Aadhaar Venture
http://www.moneycontrol.com/india/stockpricequote/financegeneral/aadhaarventuresindia/PI37
Aadi Industries
http://www.moneycontrol.com/india/stockpricequote/plastics/aadiindustries/AI63
Aagam Capital
http://www.moneycontrol.com/india/stockpricequote/financeleasinhirepurchase/aagamcapital/PC18
Aakar Engg & HF
http://www.moneycontrol.com/india/stockpricequote/engineering/aakarengineeringmanufacturingcompany/AEM
Aakash Explorat
http://www.moneycontrol.com/india/stockpricequote/engineeringheavy/aakashexplorationservices/AES01
Aamcol Tools
http://www.moneycontrol.com/india/stockpricequote/machinetools/aamcoltools/AT01
Aananda Lakshmi
http://www.moneycontrol.com/india/stockpricequote/textilesspinnigcottonblended/aanandalakshmisspinnigmills/ALS
Aanchal Ispat
http://www.moneycontrol.com/india/stockpricequote/steelspongeiron/aanchalispas/AI36
Aankit Granites
http://www.moneycontrol.com/india/stockpricequote/ceramicsgranite/aankitgranites/AGL
AAR COMMERCIAL
http://www.moneycontrol.com/india/stockpricequote/textilesgeneral/aarcommercialcompany/AAR
Aarey Drugs
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/aareydrugspharmaceuticals/ADP
Aaron Industrie
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/aaronindustries/AI79
Aarti Drugs
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/aartidrugs/AD
Aarti Ind
http://www.moneycontrol.com/india/stockpricequote/chemicals/aartiindustries/AI45
AARV Infratel
http://www.moneycontrol.com/india/stockpricequote/textilesmannmade/aarvinfratel/W05
Aarvee Denim
http://www.moneycontrol.com/india/stockpricequote/textilesdenim/aarveedenimexports/ADE
Aarvi Encon
http://www.moneycontrol.com/india/stockpricequote/diversified/aarviencon/AE19
Aarya Global
http://www.moneycontrol.com/india/stockpricequote/textileswoolenworsted/aaryaglobalsharessecurities/KIF02
Aashee Infotech
http://www.moneycontrol.com/india/stockpricequote/vasanapatil/aasheefinfotech/SR001
Aasheesh Sec
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/aasheeshsecurities/AS12
Aasma Trading
http://www.moneycontrol.com/india/stockpricequote/trading/aaswatradindexports/ATE02
Aayush Food
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/aayushfoodherbs/AFH01
AB Capital
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/adityabirlacapital/ABC9
AB Corp
http://www.moneycontrol.com/india/stockpricequote/abcorp/abcorp/ABC05
AB Money
http://www.moneycontrol.com/india/stockpricequote/financegeneral/adityabirlamoney/ABM01
AB Nuvo
http://www.moneycontrol.com/india/stockpricequote/diversified/adityabirlanuvo/ABN01
Abacus Computer
http://www.moneycontrol.com/india/stockpricequote/computerssoftwaremediumsmall/abacuscomputers/AC
Aban Offshore
http://www.moneycontrol.com/india/stockpricequote/oildrillingandexploration/abanoffshore/ABO04
ABans Enterpris
http://www.moneycontrol.com/india/stockpricequote/trading/abansenterprises/MST03
```



```
<terminated> TC2_DataDrivenFramework.testngDisplaylinks.xml [TestNG] C:\Java\jdk-10\bin\java.exe (Dec 13, 2018, 7:17:35 PM)
http://www.moneycontrol.com/india/stockpricequote/steelspongeiron/aanchalispas/AI36
Aankit Granites
http://www.moneycontrol.com/india/stockpricequote/ceramicsgranite/aankitgranites/AGL
AAR COMMERCIAL
http://www.moneycontrol.com/india/stockpricequote/textilesgeneral/aarcommercialcompany/AAR
Aarey Drugs
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/aareydrugspharmaceuticals/ADP
Aaron Industrie
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/aaronindustries/AI79
Aarti Drugs
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/aartidrugs/AD
Aarti Ind
http://www.moneycontrol.com/india/stockpricequote/chemicals/aartiindustries/AI45
AARV Infratel
http://www.moneycontrol.com/india/stockpricequote/textilesmannmade/aarvinfratel/W05
Aarvee Denim
http://www.moneycontrol.com/india/stockpricequote/textilesdenim/aarveedenimexports/ADE
Aarvi Encon
http://www.moneycontrol.com/india/stockpricequote/diversified/aarviencon/AE19
Aarya Global
http://www.moneycontrol.com/india/stockpricequote/textileswoolenworsted/aaryaglobalsharessecurities/KIF02
Aashee Infotech
http://www.moneycontrol.com/india/stockpricequote/vasanapatil/aasheefinfotech/SR001
Aasheesh Sec
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/aasheeshsecurities/AS12
Aasma Trading
http://www.moneycontrol.com/india/stockpricequote/trading/aaswatradindexports/ATE02
Aayush Food
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/aayushfoodherbs/AFH01
AB Capital
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/adityabirlacapital/ABC9
AB Corp
http://www.moneycontrol.com/india/stockpricequote/abcorp/abcorp/ABC05
AB Money
http://www.moneycontrol.com/india/stockpricequote/financegeneral/adityabirlamoney/ABM01
AB Nuvo
http://www.moneycontrol.com/india/stockpricequote/diversified/adityabirlanuvo/ABN01
Abacus Computer
http://www.moneycontrol.com/india/stockpricequote/computerssoftwaremediumsmall/abacuscomputers/AC
Aban Offshore
http://www.moneycontrol.com/india/stockpricequote/oildrillingandexploration/abanoffshore/ABO04
ABans Enterpris
http://www.moneycontrol.com/india/stockpricequote/trading/abansenterprises/MST03
```

```
eclipse-workspace - TC2_DataDrivenFramework/testingDisplaylinks.xml - Eclipse IDE
File Edit Navigate Search Project Run Design Window Help

<terminated> TC2_DataDrivenFramework_testingDisplaylinks.xml [TestNG] C:\Java\jdk-10\bin\javaw.exe (Dec 13, 2018, 7:17:35 PM)
http://www.moneycontrol.com/india/stockpricequote/oildrillingandexploration/abanoftshore/A004
Abans Enterprises
http://www.moneycontrol.com/india/stockpricequote/trading/abansenterprises/MST03
ABB India
http://www.moneycontrol.com/india/stockpricequote/infrastructuregeneral/abbindia/ABB
Abbott India
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/abbottindia/AI51
ABC Bearings
http://www.moneycontrol.com/india/stockpricequote/bearings/abcbearings/ABC02
ABC Gas
http://www.moneycontrol.com/india/stockpricequote/metalsnonferrous/abcgasinternational/BE05
ABC India
http://www.moneycontrol.com/india/stockpricequote/transportlogistics/abcindia/ABC
Abco Plastic
http://www.moneycontrol.com/india/stockpricequote/plastics/abco plastics/AP17
Abee Printer
http://www.moneycontrol.com/india/stockpricequote/computershardware/abeeprinterribbons/APR01
ABG Shipyard
http://www.moneycontrol.com/india/stockpricequote/shipping/abgshipyard/ABG01
Abhijit Trading
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/abhijittradingcompany/ATC01
Abhinav Capital
http://www.moneycontrol.com/india/stockpricequote/financegeneral/abhinavcapital services/ACS04
Abhinav Leasing
http://www.moneycontrol.com/india/stockpricequote/financeleasinghirepurchase/abhinavleasingfinance/ALF03
Abhishek Corp
http://www.moneycontrol.com/india/stockpricequote/textilespinningcottonblended/abhishekkorporation/AC22
Abhishek Finle
http://www.moneycontrol.com/india/stockpricequote/financeleasinghirepurchase/abhishekkfinle/AF32
Abhishek Infra
http://www.moneycontrol.com/india/stockpricequote/infrastructuregeneral/abhishekinfraventures/AI73
Abiram Finance
http://www.moneycontrol.com/india/stockpricequote/financeleasinghirepurchase/abiramfinancialservicesindia/AFS
ABL Biotech
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/ablbio technologies/ABL
ABM Inter
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/abminternational/ABM02
ABM Knowledge
http://www.moneycontrol.com/india/stockpricequote/computerssoftwaremediumsmall/abmknowledge/ABM
ABN Granites
http://www.moneycontrol.com/india/stockpricequote/ceramicsgranite/abngranites/ABN
Abner Pharma
```

```
eclipse-workspace - TC2_DataDrivenFramework/testingDisplaylinks.xml - Eclipse IDE
File Edit Navigate Search Project Run Design Window Help

<terminated> TC2_DataDrivenFramework_testingDisplaylinks.xml [TestNG] C:\Java\jdk-10\bin\javaw.exe (Dec 13, 2018, 7:17:35 PM)
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/abnerpharma/AP01
ACC
http://www.moneycontrol.com/india/stockpricequote/cementmajor/acc/ACC06
Accel
http://www.moneycontrol.com/india/stockpricequote/computershardware/accel/AT17
Accel Frontline
http://www.moneycontrol.com/india/stockpricequote/computerssoftwaremediumsmall/accelfrontline/AF29
Accelya Kale
http://www.moneycontrol.com/india/stockpricequote/computerssoftwaremediumsmall/accelyakalesolutions/KAL
Accentia Techno
http://www.moneycontrol.com/india/stockpricequote/computerssoftwaremediumsmall/accentiatechnologies/AT19
Accclaim Ind
http://www.moneycontrol.com/india/stockpricequote/packaging/acclaimindustries/EP12
Accord Synergy
http://www.moneycontrol.com/india/stockpricequote/telecommunicationservice/accordsynergy/AS22
Accuracy Shippi
http://www.moneycontrol.com/india/stockpricequote/shipping/accuracyshipping/AS26
Accurate Exp
http://www.moneycontrol.com/india/stockpricequote/trading/accurateexports/AE12
Accurate Transf
http://www.moneycontrol.com/india/stockpricequote/electricequipment/accuratetransformers/ATL03
ACE Edutrend
http://www.moneycontrol.com/india/stockpricequote/diversified/acedutrend/AIF
ACE Integrated
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/aceintegratedsolutions/AIS
Ace Labs
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/accelaboratories/AL01
Ace Men Engg Wo
http://www.moneycontrol.com/india/stockpricequote/trading/acemenengworkslimited/AWE03
Ace Soft Export
http://www.moneycontrol.com/india/stockpricequote/computerssoftwaremediumsmall/acesoftwareexports/ASE02
Ace Software
http://www.moneycontrol.com/india/stockpricequote/computerssoftwaremediumsmall/acesoftware/AS23
Ace Stonecraft
http://www.moneycontrol.com/india/stockpricequote/ceramicsgranite/acestonecraft/ASL02
Ace Tours
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/acetoursworldwide/ATM
Achal Invest
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/achalinvestments/AI68
ACI Infocom
http://www.moneycontrol.com/india/stockpricequote/computershardware/aciinfocom/ACI07
```

```
eclipse-workspace - TC2_DataDrivenFramework/testingDisplaylinks.xml - Eclipse IDE
File Edit Navigate Search Project Run Design Window Help

Console
<terminated> TC2_DataDrivenFramework.testingDisplaylinks.xml [TestNG] C:\Java\jdk-10\bin\java.exe (Dec 13, 2018, 7:17:35 PM)
http://www.moneycontrol.com/india/stockpricequote/computershareware/acinfofcom/ACI07
ACIL Cotton Ind
http://www.moneycontrol.com/india/stockpricequote/textilesspinningscottonblended/acilcottonindustries/ACI14
Acknit Industri
http://www.moneycontrol.com/india/stockpricequote/textileshosieryknitwear/acknitindustriesltd/AK
Acme Fluoro Pol
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/acnefluoropolymers/AF01
Acme Industries
http://www.moneycontrol.com/india/stockpricequote/steelmediumsmall/acmeindustries/AI02
Acme Resources
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/acmeresources/AR9
Acme Spinners
http://www.moneycontrol.com/india/stockpricequote/textilesspinningscottonblended/acmespinners/ASL01
Acquaint Export
http://www.moneycontrol.com/india/stockpricequote/aquaculture/aquaintexports/AE
Acropetal Tech
http://www.moneycontrol.com/india/stockpricequote/computersoftware/acropetaltechnologies/AT21
Acrow India
http://www.moneycontrol.com/india/stockpricequote/constructioncontractingcivil/acrowindia/AI03
Acrysil India
http://www.moneycontrol.com/india/stockpricequote/plastics/acrysilindia/AI04
Action Const
http://www.moneycontrol.com/india/stockpricequote/engineeringheavy/actionconstructionequipment/ACE3
Action Financia
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/actionfinancialservicesindia/AF501
Active Clothing
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/activeclothingco/ACC
Acumen Trading
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/acumetradinginvestments/AT101
Ad Namum Fin
http://www.moneycontrol.com/india/stockpricequote/financeleasinghirepurchase/adnamumfinance/ANF01
Adam Comsof
http://www.moneycontrol.com/india/stockpricequote/computersoftwaremediumsmall/adamcomsof/AC01
Adani Enterpris
http://www.moneycontrol.com/india/stockpricequote/trading/adanienterprises/AE13
Adani Green Ene
http://www.moneycontrol.com/india/stockpricequote/adanigreenene/adanigreenenergylimited/ADANI54145
Adani Ports
http://www.moneycontrol.com/india/stockpricequote/infrastructuregeneral/adaniportsspecialzone/APS
Adani Power
http://www.moneycontrol.com/india/stockpricequote/powergenerationdistribution/adanipower/AP11
```

```
eclipse-workspace - TC2_DataDrivenFramework/testingDisplaylinks.xml - Eclipse IDE
File Edit Navigate Search Project Run Design Window Help

Console
<terminated> TC2_DataDrivenFramework.testingDisplaylinks.xml [TestNG] C:\Java\jdk-10\bin\java.exe (Dec 13, 2018, 7:17:35 PM)
http://www.moneycontrol.com/india/stockpricequote/powergenerationdistribution/adanipower/AP11
Adani Trans
http://www.moneycontrol.com/india/stockpricequote/powertransmissionequipment/adanitransmission/AT22
Adarsh Chemical
http://www.moneycontrol.com/india/stockpricequote/fertilisers/adarshchemicalsfertilisers/ACF
Adarsh Mercant
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/adarshmercantile/AM12
Adarsh Plant
http://www.moneycontrol.com/india/stockpricequote/pumps/adarshplantationprojects/APP01
ADC India Comm
http://www.moneycontrol.com/india/stockpricequote/telecommunicationequipment/adcindiacomunications/KC07
Adcon Capital
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/adconcapitalervices/ACS06
Adcon Capital S
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/adconcapitalervices/ACS03
Add-Life Pharma
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/addlifepharma/ALP
Add-Shop Promot
http://www.moneycontrol.com/india/stockpricequote/personalcare/addshoppromotions/AP12
Addi Industries
http://www.moneycontrol.com/india/stockpricequote/textileshosieryknitwear/addiindustries/AI05
Adel Vissi
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/adelvissi/AV01
ADF Foods
http://www.moneycontrol.com/india/stockpricequote/foodprocessing/adffoodsindustries/AF30
Adharshilla Cap
http://www.moneycontrol.com/india/stockpricequote/banksprivatesector/adharshillacapitalservices/ACS05
Adhbhut Infra
http://www.moneycontrol.com/india/stockpricequote/infrastructuregeneral/adhbhutinfrastructure/AI71
Adhunik Ind
http://www.moneycontrol.com/india/stockpricequote/steelmediumsmall/adhunikindustries/AI67
Adhunik Metalik
http://www.moneycontrol.com/india/stockpricequote/steelspongeiron/adhunikmetaliks/AM9
Adhunik Synth
http://www.moneycontrol.com/india/stockpricequote/textileseweaving/adhuniksynthetics/AS
Adhunik Yarns
http://www.moneycontrol.com/india/stockpricequote/textilesprocessing/adhunikyarns/AY
Adi Rasayan
http://www.moneycontrol.com/india/stockpricequote/dyespigments/adirasayan/AR04
Adinath Bio-Lab
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/adinathbiolabs/ABL02
Adinath Exim
```



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eclipse-workspace - TC2_DataDrivenFramework/testingDisplaylinks.xml - Eclipse IDE
File Edit Navigate Search Project Run Design Window Help

<terminated> TC2_DataDrivenFramework/testingDisplaylinks.xml [TestNG] C:\Java\jdk-10\bin\java.exe (Dec 13, 2018, 7:17:35 PM)
http://www.moneycontrol.com/india/stockpricequote/plantationstea/coffee/assamcompanyindia/AC12
Assam Petrochem
http://www.moneycontrol.com/india/stockpricequote/petrochemicals/assametrochemicals/APL04
Assambrook
http://www.moneycontrol.com/india/stockpricequote/plantationstea/coffee/assambrook/A05
Assoc Alcohol
http://www.moneycontrol.com/india/stockpricequote/breweriesdistilleries/associatedalcoholbreweries/AAB
Assoc Business
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/associatedbusinesscredits/ABC03
Assoc Marmo
http://www.moneycontrol.com/india/stockpricequote/ceramicsgranite/associatedmarmograntes/AMG
Assoc Rubber
http://www.moneycontrol.com/india/stockpricequote/rubber/associatedrubberindustries/ARI01
Assoc Stone
http://www.moneycontrol.com/india/stockpricequote/miningminerals/associatedstoneindustrieskotah/ASI01
Associated Cera
http://www.moneycontrol.com/india/stockpricequote/ceramicsgranite/associatedceramics/ACL03
Associated Info
http://www.moneycontrol.com/india/stockpricequote/computersoftwaremediumsmall/associatedinfotech/AI48
Astec Life
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/asteclifesciences/AL13
Aster DH Health
http://www.moneycontrol.com/india/stockpricequote/diversified/asterdhealthcareltd/ADH
Astra Microwave
http://www.moneycontrol.com/india/stockpricequote/telecommunicationsequipment/astramicrowaveproducts/ANP01
Astral Poly Tec
http://www.moneycontrol.com/india/stockpricequote/plastics/astralpolytechnic/APT02
Astrazeneca
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/astrazenecapharma/AZP
Astron Drugs
http://www.moneycontrol.com/india/stockpricequote/pharmaceuticals/astrondrugsindustries/ADI03
Astron Paper &
http://www.moneycontrol.com/india/stockpricequote/paper/astronpaperboardmillltd/APB
Asutosh Ent
http://www.moneycontrol.com/india/stockpricequote/plantationstea/coffee/asutoshenterprises/AEL
Asya Infosoft
http://www.moneycontrol.com/india/stockpricequote/computersoftware/asyainfosoft/SHF
Atash Ind
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/atashindustries/AI27
Atash Securitie
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/atashsecurities/ASL04
Atcom Tech
http://www.moneycontrol.com/india/stockpricequote/electricals/atcomtechnologies/AT
```

```
eclipse-workspace - TC2_DataDrivenFramework/testingDisplaylinks.xml - Eclipse IDE
File Edit Navigate Search Project Run Design Window Help

<terminated> TC2_DataDrivenFramework/testingDisplaylinks.xml [TestNG] C:\Java\jdk-10\bin\java.exe (Dec 13, 2018, 7:17:35 PM)
http://www.moneycontrol.com/india/stockpricequote/chemicals/avonlifesciences/M04
Avon Mercantile
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/avonmercantile/AML
Avon Moldplast
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/avonmoldplast/AM09
Avonmore Cap
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/avonmorecapitalmanagementservices/AC19
AVS World Trade
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/avsworldtrade/AVS01
AVSL Industries
http://www.moneycontrol.com/india/stockpricequote/diversified/avslindustries/AI75
AVT Natural
http://www.moneycontrol.com/india/stockpricequote/edibleoilssolventextraction/avtnaturalproducts/AVT02
AVTIL Ent
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/avtilenterprise/AVT01
Awas Ayogen Vit
http://www.moneycontrol.com/india/stockpricequote/financehousing/awasayogenvitnigam/AAV
Avel Polymers
http://www.moneycontrol.com/india/stockpricequote/plastics/axelpolymers/AP24
Axis Bank
http://www.moneycontrol.com/india/stockpricequote/banksprivatesector/axisbank/AB16
Axis Gold ETF
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/axismutualfundgoldetf/AMF02
AXISCADEN ENGG
http://www.moneycontrol.com/india/stockpricequote/computersoftwaremediumsmall/axiscadenengineeringtechnologies/AXI
Axisnifty ETF
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/axisniftyetf/AET02
Axon Finance
http://www.moneycontrol.com/india/stockpricequote/computersoftwaremediumsmall/axonfinance/AI47
Axtel Ind
http://www.moneycontrol.com/india/stockpricequote/engineering/axtelindustries/AI62
Ayepee Lamitube
http://www.moneycontrol.com/india/stockpricequote/miscellaneous/ayepeelamitubes/AL10
AYM Syntex
http://www.moneycontrol.com/india/stockpricequote/textilesprocessing/aymsyntex/MS01
Ayoki Mercan
http://www.moneycontrol.com/india/stockpricequote/financeinvestments/ayokimercan/AM08
Aztecsoft
http://www.moneycontrol.com/india/stockpricequote/computersoftware/aztecsoft/AI13
Azure Exim Serv
http://www.moneycontrol.com/india/stockpricequote/edibleoilssolventextraction/azureeximservices/HK09
```

```
eclipse-workspace - TC2_DataDrivenFramework/testingDisplaylinks.xml - Eclipse IDE
File Edit Navigate Search Project Run Design Window Help

<terminated> TC2_DataDrivenFramework/testingDisplaylinks.xml [TestNG] C:\Java\jdk-10\bin\javaw.exe (Dec 13, 2018, 7:27:35 PM)
JavaScript error: https://stat1.moneycontrol.com/mcjs/markets/https_common.js?ver=0.2, line 945: unreachable code after return statement
JavaScript warning: https://stat1.moneycontrol.com/mcjs/markets/https_common.js?ver=0.2, line 2239: unreachable code after return statement
JavaScript warning: https://stat1.moneycontrol.com/mcjs/markets/https_common.js?ver=0.2, line 2245: unreachable code after return statement
JavaScript warning: https://stat3.moneycontrol.com/mcjs/markets/https_market_hp12.min.js?v=0.2, line 348: unreachable code after return statement
JavaScript warning: https://stat3.moneycontrol.com/mcjs/markets/https_market_hp12.min.js?v=0.2, line 354: unreachable code after return statement
JavaScript warning: https://stat3.moneycontrol.com/mcjs/markets/https_market_hp12.min.js?v=0.2, line 3051: unreachable code after return statement
JavaScript warning: https://stat3.moneycontrol.com/mcjs/markets/https_market_hp12.min.js?v=0.2, line 3057: unreachable code after return statement
JavaScript warning: https://stat4.moneycontrol.com/mcjs/mcradar/market_radar_mus.js?ver=20180820, line 3385: unreachable code after return statement
JavaScript warning: https://stat4.moneycontrol.com/mcjs/mcradar/market_radar_mus.js?ver=20180820, line 3391: unreachable code after return statement
JavaScript error: https://www.moneycontrol.com/india/stockpricequote/auto-lcvh-hovs/ashokleyland/AL, line 6986: TypeError: $(...).eq(...).offset(...) is undefined
JavaScript warning: https://www.google-analytics.com/gtag/js?id=GTM-PGHT597K&id=1529547594.1544708864, line 94: unreachable code after return statement
JavaScript error: https://outstream.playstream.media/domain/e381b553-3aa2-4f8e-938a-7eb908c34221.js, line 2: SecurityError: Permission denied to access property "document" on cross-origin object
JavaScript error: https://outstream.playstream.media/js/outstream-network18.js, line 1: TypeError: $(...)[0] is undefined
JavaScript error: https://stat4.moneycontrol.com/mcjs/mcradar/market_radar_mus.js?ver=20180820, line 4451: TypeError: $(...).webflicker is not a function
Title is Ashok Leyland Ltd. Stock Price, Share Price, Live BSE/NSE, Ashok Leyland Ltd. Bids Offers, Buy/Sell Ashok Leyland Ltd. news & tips, & F&O Quotes, NSE/BSE Forecast News and Live Quotes
1544709007815 Marionette INFO Stopped listening on port 61738
[Parent 15412, Gecko_IOThread] WARNING: pipe error: 109: file z:/build/build/src/ipc/chromium/src/chrome/common/ipc_channel_win.cc, line 346
[Child 15780, Chrome_ChildThread] WARNING: pipe error: 109: file z:/build/build/src/ipc/chromium/src/chrome/common/ipc_channel_win.cc, line 346
[Parent 15412, Gecko_IOThread] WARNING: file z:/build/build/src/ipc/chromium/src/base/process_util_win.cc, line 188
[Child 10208, Chrome_ChildThread] WARNING: pipe error: 232: file z:/build/build/src/ipc/chromium/src/chrome/common/ipc_channel_win.cc, line 513
[Child 10208, Chrome_ChildThread] WARNING: pipe error: 232: file z:/build/build/src/ipc/chromium/src/chrome/common/ipc_channel_win.cc, line 513
[Child 10208, Chrome_ChildThread] WARNING: pipe error: 232: file z:/build/build/src/ipc/chromium/src/chrome/common/ipc_channel_win.cc, line 513
[Child 10208, Chrome_ChildThread] WARNING: pipe error: 109: file z:/build/build/src/ipc/chromium/src/chrome/common/ipc_channel_win.cc, line 346

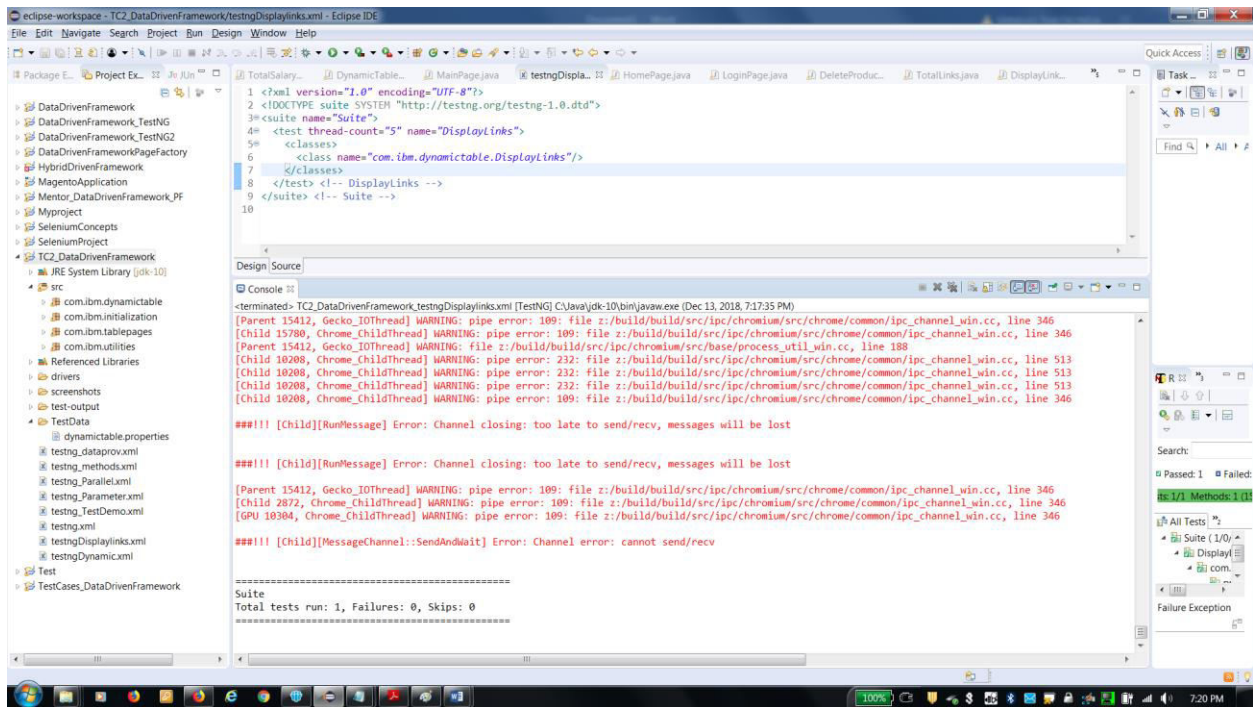
###!!! [Child][RunMessage] Error: Channel closing: too late to send/recvv, messages will be lost

###!!! [Child][RunMessage] Error: Channel closing: too late to send/recvv, messages will be lost

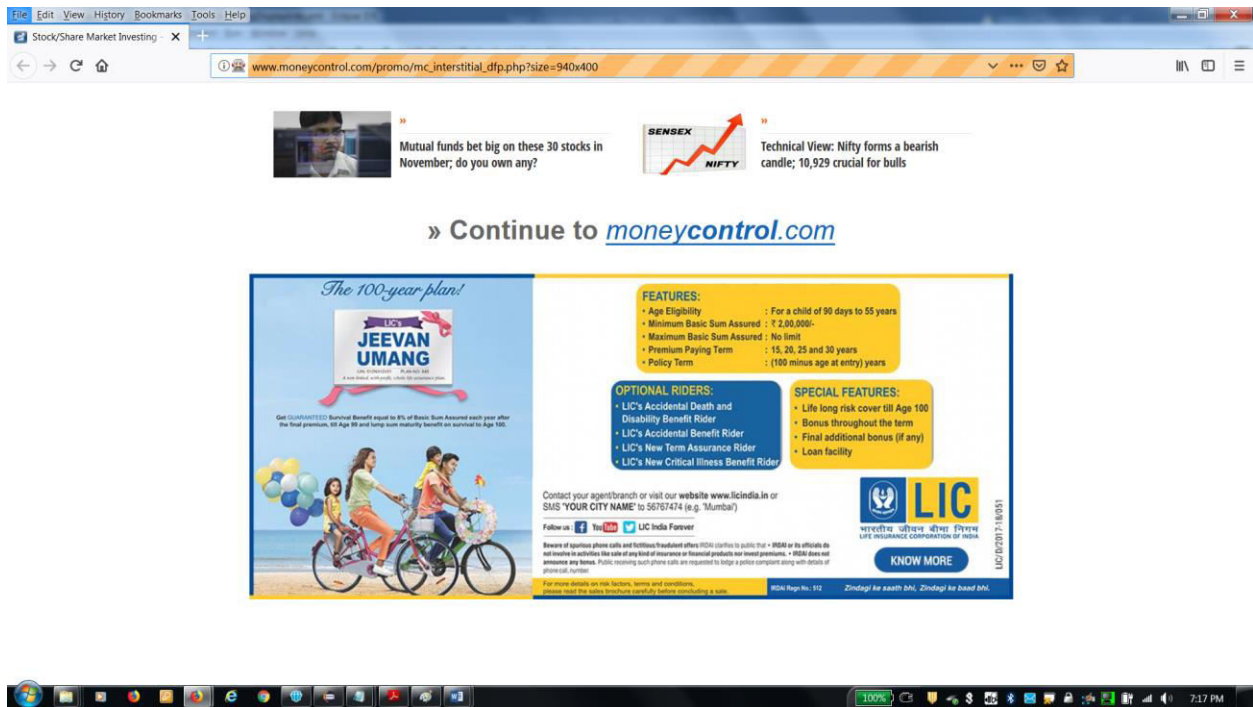
[Parent 15412, Gecko_IOThread] WARNING: pipe error: 109: file z:/build/build/src/ipc/chromium/src/chrome/common/ipc_channel_win.cc, line 346
[Child 2872, Chrome_ChildThread] WARNING: pipe error: 109: file z:/build/build/src/ipc/chromium/src/chrome/common/ipc_channel_win.cc, line 346
[GPU 10304, Chrome_ChildThread] WARNING: pipe error: 109: file z:/build/build/src/ipc/chromium/src/chrome/common/ipc_channel_win.cc, line 346

###!!! [Child][MessageChannel::SendAndWait] Error: Channel error: cannot send/recvv

=====
Suite
Total tests run: 1, Failures: 0, Skips: 0
=====
```



Display of the first page when the site for money control is launched.



After clicking on stocks link 'Stock Price Quote List' page is displayed

YOU ARE HERE > Moneycontrol > Markets > Stock Price Quotes

Stock Price Quotes List

STOCKS [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#) [OTHERS](#)

GO

Company Name		
3M India	8K Miles Soft	Aarti Ind
Aban Offshore	ABB India	Abbott India
ACC	Adani Enterprise	Adani Ports
Adani Power	Adani Trans	Aditya Birla F
Advanced Enzyme	Aegis Logistics	AIA Engineering
Ajanta Pharma	Akzo Nobel	Alembic Pharma
Alkem Lab	Allahabad Bank	Aircargo
Amara Raja Batt	Ambuja Cements	Andhra Bank
r Ind	APL Apollo	Apollo Hospital

Connected to imgg-cdrnmgid.com...

After clicking on link 'A', companies stock starting with 'A' are displayed

YOU ARE HERE > Moneycontrol > Markets > Stock Price Quotes > Companies Stock Starting with 'A'

Companies Stock Starting with 'A' - Price & Chart Quote

STOCKS [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#) [Others](#)

GO

Company Name		
A & M Febron	A and M Jumbo B	A F Ent
A Infra	A K S Credits	A K Spintex
A P T Yarns	A K Capital Ser	A22 Infra Eng
Aachal Alloys	Aadhaar Venture	Aadi Industries
Aagam Capital	Aakar Engg & Mf	Aakash Explorat
Aamcol Tools	Aainanda Lakshmi	Aanchal Ispat
Aankit Granites	AAR COMMERCIAL	Aarey Drugs
Aaron Industrie	Aarti Drugs	Aarti Ind
AARV Infratel	Aarvee Denim	Aarvi Encon
Aanya Global	Aashere Infotech	Aasheesh Sec

After clicking on link for 'Ashok Leyland' company the below page is displayed

The screenshot shows the Moneycontrol website interface. The browser address bar displays the URL: <https://www.moneycontrol.com/india/stockpricequote/auto-lcvs-hcvs/ashokleyland/AL>. The website header includes the Moneycontrol logo and navigation links such as Home, News, Markets, Mutual Funds, Commodities, Startups, Video, Podcast, Personal Finance, Portfolio, Forum, Subscription, and Live TV. Below the header, there is a section for Ashok Leyland Ltd. with the following details:

Ashok Leyland Ltd.
BSE: 500477 | NSE: ASHOKLEY | ISIN: IHE208A01029 | SECTOR: AUTO - LCVS & HCVS | [TRADE NOW](#) | [SET SMS ALERT](#) | [Angel Broking](#) | [ARG SCORE](#) | [Reports](#)

Below the company name, there are two main sections for BSE and NSE data:

BSE LIVE
Dec 13, 16:00
104.35 ▼ -1.05 (-1.00%) VOLUME 1,459,699

PREV. CLOSE	OPEN PRICE	BID PRICE (QTY)	OFFER PRICE (QTY)
105.40	107.15	104.35 (145)	104.35 (932)

NSE LIVE
Dec 13, 15:59
104.40 ▼ -0.75 (-0.71%) VOLUME 14,387,333

PREV. CLOSE	OPEN PRICE	BID PRICE (QTY)	OFFER PRICE (QTY)
105.15	106.95	104.40 (473)	0.00 (0)

Below the live data, there are two tables for VWAP and Market Depth:

VWAP

PREV. CLOSE	OPEN PRICE	BID PRICE (QTY)	OFFER PRICE (QTY)
105.97	107.15	104.35 (145)	104.35 (932)

MARKET DEPTH

BUY QTY	SELL QTY	LIQ PRICE BAND
33.74 K	70.8 K	94.90

The bottom of the page shows the Windows taskbar with the time 7:19 PM and the system tray.

Live instructor-led online certifi... x

TestNG Report x

+

file:///C:/Users/IBM_ADMIN/eclipse-workspace/TC2_DataDrivenFramework/test-output/emailable-report... Search

Test	# Passed	# Skipped	# Failed	Time (ms)	Included Groups	Excluded Groups
Suite						
DisplayLinks	1	0	0	153,963		

Class	Method	Start	Time (ms)
Suite			
DisplayLinks — passed			
com.ibm.dynamictable.DisplayLinks	printLinks	1544708860756	147033

DisplayLinks

com.ibm.dynamictable.DisplayLinks#printLinks

[back to summary](#)



Live instructor-led online certifi... x

TestNG Report x

TestNG reports x

+

file:///C:/Users/IBM_ADMIN/eclipse-workspace/TC2_DataDrivenFramework/test-output/index.html Search

Test results
1 suite

All suites

Suite

Info

- C:\Users\IBM_ADMIN\workspace\TC2_DataDrivenFramework\testng\DisplayLinks.xml
- 1 test
- 0 groups
- Times
- Reporter output
- Ignored methods
- Chronological view

Results

- 1 method, 1 passed
- Passed methods (show)



Flow Information:

Initially a property file 'dynamicTable.properties' is created in Test Data folder of the project and list of key, values for url of money control site, expected page title is stored in this property file.

Under the class 'LaunchWebDriver' ,a Test NG annotation 'Before Suite' is used to invoke the method 'preSetFortTest' which is used to instantiate object for class PropertiesFileHandler to return the list of these key,values in to a HashMap.

The testng annotation 'BeforeMethod' is used with method initializeDriver' to set the relative path and instantiating webdriver for firefox under LaunchWebDriver class.

The class NewsPage uses the annotation FindBy to locate the link 'Stocks'. Click method is used to click on this link. PageFactory is used in the constructor of this class to initialize elements.

The class StocksQuotePage uses the annotation FindBy to locate the link 'A'. Click method is used to click on this link. PageFactory is used in the constructor of this class to initialize elements.

The class CompanyPage uses the annotation FindByAll to locate the all the web links under the displayed table and are stored in a list.The link for 'Ashok Ley land' company is also located .The method 'printLinks' to find the total number of rows and columns in the table.In side a for loop each company link is located using xpath and then company link and link text are displayed on console. The method clickonCompany is used to click on the link for AshokLeyland using click method and title of the page is returned..

The annotation @Test is used with the class DisplayLinks which is defined with method printLinks that uses get method is to launch the web application for money control and to instantiable objects for above classes and calling above mentioned methods as required. Assert is used to verify the page title.

The testngDisplaylinks.xml is defined with class name and test name.