SCREENSHOT

1: Upcast driver reference variable to TakeScreenshot interface

2: To take screenshot we use getScreenshotAs() method which takes output type as an argument

3: To specify location, create file class object with path as an argument

4: To copy screenshot we use FileHandler class static method copy().

-->TakesScreenshot <<I>>

Ques: Why?

1: Whenever there is difference between expected result and actual result.

-->2 implementations:

1: Screenshot of a webpage

2: Screenshot of a WebElement

1: Abstract method----->getScreenshotAs()

Ques: How to take screenshot of webpage?

Step 1: Typecasting

TakesScreenshot ts = (TakesScreenshot) driver;

Step 2: take screenshot and store at temporary location

File src=ts.getScreenshotAs(OutputType.File);

Step 3: Create a Permanent location

File dest = new File("./Folder_name/file_name.extension");

Step 4: copy screenshot from temporary location to permanent location

FileHandler.copy(src,dest); --->Handle IO Exception

Script:

```java
WebDriver driver = new FirefoxDriver();

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

    driver.get("http://localhost/login.do");

    //Step 1:  Typecasting

TakesScreenshot ts = (TakesScreenshot) driver;

// Step 2: take screenshot and store at temporary location

File src = ts.getScreenshotAs(OutputType.FILE);

// Step 3: Create a Permanent location

File dest = new File("./screenshot/webpage.png");

//Step 4: copy screenshot from temporary location to permanent location

FileHandler.copy(src, dest);
```

AssignQues: WATS to take screenshot of google webpage

Script:

```java
WebDriver driver = new FirefoxDriver();

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

    driver.get("http://localhost/login.do");

    //identify the element

    WebElement ele = driver.findElement(By.id("loginButton"));

    //take screenshot

    File src = ele.getScreenshotAs(OutputType.FILE);

    //define Permanent loc

    File dest = new File("./screenshot/Login.png");

    FileHandler.copy(src, dest);
```

AssignQues: WATS to take screenshot of facebook login button

***Popup:

-->Sudden window which will be displayed when we click on element.

**Types of Popup:

1: Hidden Division Popup:

Properties:

1: We cannot drag this popup

2: We can inspect this popup

Note: Hidden division popup can be handle directly

Ques: Test Case

1: Open Browser

2: Navigate to https://www.abhibus.com

3: click on login

4: click on signinwithgoogle

Script:

```
WebDriver driver = new FirefoxDriver();

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

        driver.get("https://www.abhibus.com/");

        driver.findElement(By.xpath("//span[text()='Login/SignUp']")).click();

        Thread.sleep(2000);

        driver.findElement(By.xpath("//span[text()='Sign in with google']")).click();
```

2: Alert/Java script Popup:

Properties:

1: We cannot drag this popup

2: We cannot inspect this popup

3: These popup will contain Ok and Cancel button

4: To handle alert popup, we cannot use selenium directly

5: Before handling Alert Popup, we need to switch selenium focus from main page to Alert using switchTo() method

Alert a= driver.switchTo.alert();

-->To handle Alert Popup, we use Alert Interface method

1: accept(): used to click on OK button'

2: dismiss(): used to click on CANcel button

3: getText(): Used to get Text present within popup

4: sendkeys(): used to enter text

Script:

```
WebDriver driver = new ChromeDriver();

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

        driver.get("http://localhost/login.do");

        driver.findElement(By.id("username")).sendKeys("admin");

        driver.findElement(By.name("pwd")).sendKeys("manager");

        driver.findElement(By.id("loginButton")).click();

        driver.findElement(By.xpath("//div[text()='Tasks']")).click();

        driver.findElement(By.xpath("//input[@value='Delete Selected Tasks']")).click();

        Alert a = driver.switchTo().alert();

        Thread.sleep(3000);

        System.out.println(a.getText());

        Thread.sleep(3000);

        a.accept();

        Thread.sleep(3000);

        driver.close();
```

***Handling of Multiple Alerts:

1: Simple Alert Popup: This popup contains text, ok & Cancel button

---<To handle that popup we use:

  accept()---->OK

  dismiss()-->Cancel

  getText()-->Text

2: Prompt Popup--->This popup contains text, text field & ok & cancel button

-->To handle that popup we use:

  accept()---->OK

  dismiss()-->Cancel

  getText()-->Text

  sendkeys()-->Enter Text

3: Confirmation Popup: This popup contgains checkbox, text, ok & cancel button

-->To handle this popup we use:

  accept()---->OK

  dismiss()-->Cancel

  getText()-->Text

     +

  Robot Class (to handle checkbox we use robot class)

AssignQues: Handle multiple Alert: https://the-internet.herokuapp.com/javascript_alerts

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3: Calendar Popup:

-->It can be in form of a dropdown selection with backward and forward button

-->To select up and down we use calendar popup

Script:


```
WebDriver driver = new FirefoxDriver();

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

                driver.get("https://www.makemytrip.com/");

                Thread.sleep(3000);

                driver.findElement(By.xpath("//span[@class='commonModal__close']")).click();

                driver.findElement(By.xpath("//span[text()='Departure']")).click();

                Thread.sleep(3000);
```

```java
//driver.findElement(By.xpath("//div[text()='August 2025']/../..//p[text()='11']")).click();



//driver.findElement(By.xpath("//div[text()='August 2025']/ancestor::div[@class='DayPicker-Month']/descendant::p[text()='11']")).click();



//Dynamic Xpath: The path remains same any value changes should be done outside the path



String month="August 2025";

String date="14";



driver.findElement(By.xpath("//div[text()='"+month+"']/ancestor::div[@class='DayPicker-Month']/descendant::p[text()='"+date+"']")).click();

}
```

AssignQues: WATS to select departure date in yatra.com

Exp: //span[text()='August 2025']/ancestor::div[@class='react-datepicker__month-container']/descendant::span[text()='08']

4: File Upload:

-->The seperate window which comes for selecting the file which need to be uploaded is called as file upload

Script:

```java
WebDriver driver = new FirefoxDriver();

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

driver.get("https://the-internet.herokuapp.com/upload");

WebElement ele = driver.findElement(By.xpath("//input[@id='file-upload']"));

ele.sendKeys("C:\\Users\\Alpha\\Desktop\\excel.xlsx");

driver.findElement(By.xpath("//input[@value='Upload']")).click();
```

Script: Handling fileupload popup using Robot Class

```java
WebDriver driver = new FirefoxDriver();
    driver.manage().window().maximize();
    driver.get("https://online2pdf.com/");
    WebElement rv = driver.findElement(By.xpath("//button[text()='Select files']"));
    rv.click();
    Robot r = new Robot();
    r.keyPress(KeyEvent.VK_A);
    r.keyPress(KeyEvent.VK_DOWN);
    r.keyPress(KeyEvent.VK_ENTER);
```

5: Child/Window Popup:

Properties:

1: We can drag this popup

2: We can inspect this popup

3: This popup will contain Url, Title, Maximize, Minimize & close options

-->To handle child browser popup we need to shift selenium focus from main page to child by using foll cmd:

```java
driver.switchTo().window(child);
```


-->To get child address we use following methods:

1: getWindowHandle(): used to get parent ref. address & Return type: String

2: getWindowHandles(): Used to get parent & child address & Return type: set<String>

Ques: WATS to print number of windows displayed count as output

Script:

```java
WebDriver driver = new FirefoxDriver();
```

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

driver.get("https://www.naukri.com/");

driver.findElement(By.id("login_Layer")).click();

Thread.sleep(3000);

driver.findElement(By.xpath("//span[text()='Sign in with Google']")).click();

//get window refid

Set<String> s = driver.getWindowHandles();

System.out.println(s.size());
```

Script: display title of all the windows as output

```java
WebDriver driver = new FirefoxDriver();

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

driver.get("https://www.naukri.com/");

Thread.sleep(3000);

driver.findElement(By.id("login_Layer")).click();

Thread.sleep(3000);

driver.findElement(By.xpath("//span[text()='Sign in with Google']")).click();

Thread.sleep(3000);

//get window refid

Set<String> s = driver.getWindowHandles();

Iterator<String> itr = s.iterator();

while(itr.hasNext())

{

    String refid = itr.next();

    driver.switchTo().window(refid);

    System.out.println(driver.getTitle());

}

driver.quit();
```