Sourcecode:

1)Apptest.java

```
package com.demo;

import org.testng.annotations.Test;
import org.testng.AssertJUnit;
import org.testng.annotations.Test;
import org.testng.AssertJUnit;

/**
 * Unit test for simple App.
 */
public class AppTest
{
    /**
     * Create the test case
     *
     * @param testName name of the test case
     */
    public AppTest( String testName )
    {
    }

    /**
     * Rigourous Test :-)
     */
    @Test
            public void testApp()
    {
        AssertJUnit.assertTrue( true );
    }
```

}

2)FlipkartTestChrome.java

```
package com.demo;

import org.testng.annotations.AfterClass;
import org.testng.annotations.Test;
import org.testng.annotations.BeforeClass;
import org.testng.annotations.AfterClass;
import org.testng.annotations.Test;
import org.testng.annotations.BeforeClass;
import org.testng.annotations.Test;

import java.io.File;
import java.io.IOException;
import java.util.concurrent.TimeUnit;
import java.util.function.Function;

import org.apache.commons.io.FileUtils;
import org.openqa.selenium.By;
import org.openqa.selenium.Dimension;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.NoSuchElementException;
import org.openqa.selenium.OutputType;
import org.openqa.selenium.TakesScreenshot;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.support.ui.FluentWait;
import org.openqa.selenium.support.ui.Wait;
import org.testng.annotations.AfterClass;
import org.testng.annotations.BeforeClass;
```

```
import org.openqa.selenium.TakesScreenshot;

public class FlipkartTestChrome {
	WebDriver driver;

	@BeforeClass
	public void beforeClass() {
		System.setProperty("webdriver.chrome.driver",

	"C:\\Users\\Rajapradha\\Downloads\\chromedriver_win32\\chromedriver.exe");
		driver = new ChromeDriver();
		driver.get("https://www.flipkart.com/");
		driver.manage().window().maximize();
	}

	@AfterClass
	public void afterClass() {
		driver = null;
	}

	@Test(priority = 1)
	public void closeLogin() throws InterruptedException {

		try {
			System.out.println("\nChrome Browser Result:\n");
			System.out.println(driver.getTitle());
			driver.findElement(By.cssSelector("body > div._2Sn47c > div > div >
button")).click();
			Thread.sleep(1000);
		} catch (NoSuchElementException e) {
			e.printStackTrace();
		}
```

```
		screenshot(driver,"closelogin");
	}

	@Test(priority = 2)
	public void scroll() throws InterruptedException {

		Thread.sleep(2000);
		JavascriptExecutor js = (JavascriptExecutor) driver;
		js.executeScript("window.scrollBy(0,document.body.scrollHeight)");
		System.out.println("\nNavigated to bottom of the page");
		Thread.sleep(2000);
		js.executeScript("window.scrollBy(0,-document.body.scrollHeight)", "");
		System.out.println("\nScroll Feature available");
		Thread.sleep(2000);
		screenshot(driver,"scroll");
	}

	@Test(priority = 3)
	public void searchProduct() throws InterruptedException {
		Thread.sleep(1000);
		driver.findElement(By.name("q")).sendKeys("iPhone 13");
		Thread.sleep(1000);
		By search = By.cssSelector(
				"#container > div > div._1kfTjk > div._1rH5Jn > div._2Xfa2_ >
div._1cmsER > form > div > button > svg");
		driver.findElement(search).click();

		Thread.sleep(3000);
		By load = By.cssSelector(
				"#container > div > div._36fx1h._6t1WkM._3HqJxg >
div._1YokD2._2GoDe3 > div:nth-child(2) > div:nth-child(9) > div > div");
		long start = System.currentTimeMillis();
```

```
		driver.findElement(load).click();
		long finish = System.currentTimeMillis();
		long totalTime = finish - start;
		System.out.println("\nTime to load page in millisecs - " + totalTime);
		screenshot(driver,"searchproduct");
	}

	@Test(priority = 4)
	public void loadImage() throws InterruptedException {

		String url = "https://www.flipkart.com/apple-iphone-13-blue-256-
gb/p/itmd68a015aa1e39?pid=MOBG6VF566ZTUVFR&lid=LSTMOBG6VF566ZTUVFR2RQLVU&market
place=FLIPKART&q=iPhone+13&store=tyy%2F4io&srno=s_1_8&otracker=search&otracker1=search&
fm=organic&iid=1c0c7402-fe4f-4f45-9aa8-
cc59dffe8503.MOBG6VF566ZTUVFR.SEARCH&ppt=hp&ppn=homepage&ssid=i4t60bsv4g0000001665
375424769&qH=c3d519be0191fbf8";
		driver.get(url);
		Thread.sleep(3000);
		//driver.navigate().refresh();

		Wait<WebDriver> wait = new FluentWait<WebDriver>(driver).withTimeout(10,
TimeUnit.SECONDS)
				.pollingEvery(2,
TimeUnit.SECONDS).ignoring(NoSuchElementException.class);
		wait.until(new Function<WebDriver, WebElement>() {

			@Test
			public WebElement apply(WebDriver driver) {
				WebElement img = driver.findElement(By.xpath(

	"//*[@id=\"container\"]/div/div[3]/div[1]/div[2]/div[9]/div[4]/div[3]/div/div/div/div[1]/img"
));

				if (img.isDisplayed()) {
```

```
                                        System.out.println("\nImage Loaded");
                                        return img;
                                } else {
                                        System.out.println("\nFluent Wait Fail!, Element Not Loaded
Yet");
                                        return null;
                                }
                        }
                });
                screenshot(driver,"pageLoad");
        }

        @Test(priority = 5)
        public void scrollFrequency() throws InterruptedException {
                Thread.sleep(2000);
                long start = System.currentTimeMillis();
                WebElement element = driver.findElement(By.cssSelector(
                                "#container > div > div._2c7YLP.UtUXW0._6t1WkM._3HqJxg >
div._1YokD2._2GoDe3 > div._1YokD2._3Mn1Gg.col-8-12 > div._1YokD2._3Mn1Gg > div:nth-child(7) >
div > div:nth-child(3) > div > div > div:nth-child(1)"));
                ((JavascriptExecutor) driver).executeScript("arguments[0].scrollIntoView(true);",
element);
                long stop = System.currentTimeMillis();
                long totalTime = stop - start;
                System.out.println("\nScroll Frequency in millisecs - " + totalTime);
                screenshot(driver,"scrollfrequency");

        }

        @Test(priority = 6)
        public void downloadImages() throws InterruptedException {
                WebElement img = driver.findElement(By
```

```
        .xpath("//*[@id=\"container\"]/div/div[3]/div[1]/div[2]/div[9]/div[4]/div[3]/div/div/div/div[
1]/img"));

                Boolean p = (Boolean) ((JavascriptExecutor) driver).executeScript("return
arguments[0].complete "

                                + "&& typeof arguments[0].naturalWidth != \"undefined\" " + "&&
arguments[0].naturalWidth > 0", img);


                if (p) {

                        System.out.println("\nImage present");

                } else {

                        System.out.println("\nImage not present");

                }

                screenshot(driver,"downloadImages");

        }


        @Test(priority = 7)

        public void screenResolution() throws InterruptedException {

                Thread.sleep(1000);

                Dimension dimension = new Dimension(720, 1080);

                driver.manage().window().setSize(dimension);

                Thread.sleep(3000);


                Dimension dimension1 = new Dimension(1280, 800);

                driver.manage().window().setSize(dimension1);

                Thread.sleep(3000);


                Dimension dimension2 = new Dimension(2256, 1504);

                driver.manage().window().setSize(dimension2);


                JavascriptExecutor js = (JavascriptExecutor) driver;

                int contentHeight = ((Number) js.executeScript("return
window.innerHeight")).intValue();
```

```
                int contentWidth = ((Number) js.executeScript("return
window.innerWidth")).intValue();
                System.out.println("\nHeight: " + contentHeight + " Width: " + contentWidth + "\n");
                screenshot(driver,"screenshotResolution");

        }

        public static void screenshot(WebDriver driver,String screenshotName){
                TakesScreenshot ts = (TakesScreenshot)driver;
                File scr = ts.getScreenshotAs(OutputType.FILE);
                try {
                        FileUtils.copyFile(scr, new File(screenshotName+".png"));
                        System.out.println("Screenshot taken");
                } catch (IOException e) {
                        e.printStackTrace();
                }
        }




}
```

3)FlipkartTestChrome1.java

```
package com.demo;

import org.testng.annotations.AfterClass;
import org.testng.annotations.Test;
import org.testng.annotations.BeforeClass;
import org.testng.annotations.AfterClass;
import org.testng.annotations.Test;
import org.testng.annotations.BeforeClass;
```

```
import org.testng.annotations.Test;

import java.io.File;
import java.io.IOException;
import java.util.concurrent.TimeUnit;
import java.util.function.Function;

import org.apache.commons.io.FileUtils;
import org.openqa.selenium.By;
import org.openqa.selenium.Dimension;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.NoSuchElementException;
import org.openqa.selenium.OutputType;
import org.openqa.selenium.TakesScreenshot;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.support.ui.FluentWait;
import org.openqa.selenium.support.ui.Wait;
import org.testng.annotations.AfterClass;
import org.testng.annotations.BeforeClass;
import org.openqa.selenium.TakesScreenshot;

public class FlipkartTestChrome {
	WebDriver driver;

	@BeforeClass
	public void beforeClass() {
		System.setProperty("webdriver.chrome.driver",

	"C:\\Users\\Rajapradha\\Downloads\\chromedriver_win32\\chromedriver.exe");
```

```
		driver = new ChromeDriver();
		driver.get("https://www.flipkart.com/");
		driver.manage().window().maximize();
	}

	@AfterClass
	public void afterClass() {
		driver = null;
	}

	@Test(priority = 1)
	public void closeLogin() throws InterruptedException {

		try {
			System.out.println("\nChrome Browser Result:\n");
			System.out.println(driver.getTitle());
			driver.findElement(By.cssSelector("body > div._2Sn47c > div > div > button")).click();
			Thread.sleep(1000);
		} catch (NoSuchElementException e) {
			e.printStackTrace();
		}
		screenshot(driver,"closelogin");
	}

	@Test(priority = 2)
	public void scroll() throws InterruptedException {

		Thread.sleep(2000);
		JavascriptExecutor js = (JavascriptExecutor) driver;
		js.executeScript("window.scrollBy(0,document.body.scrollHeight)");
```

```
		System.out.println("\nNavigated to bottom of the page");
		Thread.sleep(2000);
		js.executeScript("window.scrollBy(0,-document.body.scrollHeight)", "");
		System.out.println("\nScroll Feature available");
		Thread.sleep(2000);
		screenshot(driver,"scroll");
	}

	@Test(priority = 3)
	public void searchProduct() throws InterruptedException {
		Thread.sleep(1000);
		driver.findElement(By.name("q")).sendKeys("iPhone 13");
		Thread.sleep(1000);
		By search = By.cssSelector(
				"#container > div > div._1kfTjk > div._1rH5Jn > div._2Xfa2_ >
div._1cmsER > form > div > button > svg");
		driver.findElement(search).click();

		Thread.sleep(3000);
		By load = By.cssSelector(
				"#container > div > div._36fx1h._6t1WkM._3HqJxg >
div._1YokD2._2GoDe3 > div:nth-child(2) > div:nth-child(9) > div > div");
		long start = System.currentTimeMillis();
		driver.findElement(load).click();
		long finish = System.currentTimeMillis();
		long totalTime = finish - start;
		System.out.println("\nTime to load page in millisecs - " + totalTime);
		screenshot(driver,"searchproduct");
	}

	@Test(priority = 4)
	public void loadImage() throws InterruptedException {
```

```
		String url = "https://www.flipkart.com/apple-iphone-13-blue-256-
gb/p/itmd68a015aa1e39?pid=MOBG6VF566ZTUVFR&lid=LSTMOBG6VF566ZTUVFR2RQLVU&market
place=FLIPKART&q=iPhone+13&store=tyy%2F4io&srno=s_1_8&otracker=search&otracker1=search&
fm=organic&iid=1c0c7402-fe4f-4f45-9aa8-
cc59dffe8503.MOBG6VF566ZTUVFR.SEARCH&ppt=hp&ppn=homepage&ssid=i4t60bsv4g0000001665
375424769&qH=c3d519be0191fbf8";

		driver.get(url);

		Thread.sleep(3000);

		//driver.navigate().refresh();


		Wait<WebDriver> wait = new FluentWait<WebDriver>(driver).withTimeout(10,
TimeUnit.SECONDS)

				.pollingEvery(2,
TimeUnit.SECONDS).ignoring(NoSuchElementException.class);

		wait.until(new Function<WebDriver, WebElement>() {


			@Test

			public WebElement apply(WebDriver driver) {

				WebElement img = driver.findElement(By.xpath(


	"//*[@id=\"container\"]/div/div[3]/div[1]/div[2]/div[9]/div[4]/div[3]/div/div/div/div[1]/img"
));


				if (img.isDisplayed()) {

					System.out.println("\nImage Loaded");

					return img;

				} else {

					System.out.println("\nFluent Wait Fail!, Element Not Loaded
Yet");

					return null;

				}

			}

		});
```

```
		screenshot(driver,"pageLoad");
	}

	@Test(priority = 5)
	public void scrollFrequency() throws InterruptedException {
		Thread.sleep(2000);
		long start = System.currentTimeMillis();
		WebElement element = driver.findElement(By.cssSelector(
				"#container > div > div._2c7YLP.UtUXW0._6t1WkM._3HqJxg > div._1YokD2._2GoDe3 > div._1YokD2._3Mn1Gg.col-8-12 > div._1YokD2._3Mn1Gg > div:nth-child(7) > div > div:nth-child(3) > div > div > div:nth-child(1)"));
		((JavascriptExecutor) driver).executeScript("arguments[0].scrollIntoView(true);", element);
		long stop = System.currentTimeMillis();
		long totalTime = stop - start;
		System.out.println("\nScroll Frequency in millisecs - " + totalTime);
		screenshot(driver,"scrollfrequency");

	}

	@Test(priority = 6)
	public void downloadImages() throws InterruptedException {
		WebElement img = driver.findElement(By

	.xpath("//*[@id=\"container\"]/div/div[3]/div[1]/div[2]/div[9]/div[4]/div[3]/div/div/div/div[1]/img"));
		Boolean p = (Boolean) ((JavascriptExecutor) driver).executeScript("return arguments[0].complete "
				+ "&& typeof arguments[0].naturalWidth != \"undefined\" " + "&& arguments[0].naturalWidth > 0", img);

		if (p) {
			System.out.println("\nImage present");
```

```
		} else {
			System.out.println("\nImage not present");
		}
		screenshot(driver,"downloadImages");
	}

	@Test(priority = 7)
	public void screenResolution() throws InterruptedException {
		Thread.sleep(1000);
		Dimension dimension = new Dimension(720, 1080);
		driver.manage().window().setSize(dimension);
		Thread.sleep(3000);

		Dimension dimension1 = new Dimension(1280, 800);
		driver.manage().window().setSize(dimension1);
		Thread.sleep(3000);

		Dimension dimension2 = new Dimension(2256, 1504);
		driver.manage().window().setSize(dimension2);

		JavascriptExecutor js = (JavascriptExecutor) driver;
		int contentHeight = ((Number) js.executeScript("return
window.innerHeight")).intValue();
		int contentWidth = ((Number) js.executeScript("return
window.innerWidth")).intValue();
		System.out.println("\nHeight: " + contentHeight + " Width: " + contentWidth + "\n");
		screenshot(driver,"screenshotResolution");

	}

	public static void screenshot(WebDriver driver,String screenshotName){
		 TakesScreenshot ts = (TakesScreenshot)driver;
```

```
                File scr = ts.getScreenshotAs(OutputType.FILE);
                try {
                        FileUtils.copyFile(scr, new File(screenshotName+".png"));
                        System.out.println("Screenshot taken");
                } catch (IOException e) {
                        e.printStackTrace();
                }
        }
}
```

4)testing.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE suite SYSTEM "https://testng.org/testng-1.0.dtd">
<suite name="Suite">
  <test thread-count="5" name="Test">
    <classes>
      <class name="com.demo.FlipkartTestChrome"/>
      <class name="com.demo.AppTest"/>
      <class name="com.demo.FlipkartTestChrome1"/>
    </classes>
  </test> <!-- Test -->
</suite> <!-- Suite -->
```