1. close()

The close() method closes the current browser window that the driver has focus on.

Example:

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

public class CloseExample {
   public static void main(String[] args) {
      WebDriver driver = new ChromeDriver();
      driver.get("http://www.example.com");
      driver.close(); // Closes the current browser window
   }
}
```

Explanation:

- **Return Type:** void
- Closes the window that the WebDriver is currently controlling.
- If it is the only window open, the browser session will be closed.

2. quit()

The quit() method closes all browser windows and ends the WebDriver session.

Example:

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

public class QuitExample {
   public static void main(String[] args) {
      WebDriver driver = new ChromeDriver();
      driver.get("http://www.example.com");
      driver.quit(); // Closes all browser windows and terminates the WebDriver session
   }
}
```

Explanation:

- **Return Type:** void
- Ends the session and closes all associated browser windows.

3. findElement()

The findElement() method finds the first WebElement using the given method.

Example:

```
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class FindElementExample {
   public static void main(String[] args) {
      WebDriver driver = new ChromeDriver();
      driver.get("http://www.example.com");
      WebElement element = driver.findElement(By.id("exampleId"));
      element.click(); // Interacts with the found element
   }
}
```

Explanation:

- **Return Type:** WebElement
- Finds and returns the first matching element on the current page.
- Throws NoSuchElementException if no matching element is found.

4. findElements()

The findElements() method finds all elements within the current page using the given method.

Example:

```
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import java.util.List;

public class FindElementsExample {
   public static void main(String[] args) {
      WebDriver driver = new ChromeDriver();
      driver.get("http://www.example.com");
      List<WebElement> elements = driver.findElements(By.className("exampleClass"));
      for (WebElement element : elements) {
```

```
            System.out.println(element.getText()); // Prints text of each element
        }
    }
}
```

Explanation:

- **Return Type:** List<WebElement>
- Returns a list of all matching elements on the current page.
- Returns an empty list if no elements are found.

5. get()

The get() method loads a new web page in the current browser window.

Example:

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

public class GetExample {
    public static void main(String[] args) {
        WebDriver driver = new ChromeDriver();
        driver.get("http://www.example.com"); // Navigates to the specified URL
    }
}
```

Explanation:

- **Return Type:** void
- Loads a new web page in the current browser window.

6. getCurrentUrl()

The getCurrentUrl() method fetches the string representing the current URL that the browser is looking at.

Example:

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

public class GetCurrentUrlExample {
    public static void main(String[] args) {
```

```
        WebDriver driver = new ChromeDriver();
        driver.get("http://www.example.com");
        String currentUrl = driver.getCurrentUrl();
        System.out.println("Current URL: " + currentUrl); // Prints the current URL
    }
}
```

Explanation:

- **Return Type:** String
- Returns the current URL of the page being viewed.

7. getPageSource()

The getPageSource() method returns the source code of the current page.

Example:

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

public class GetPageSourceExample {
    public static void main(String[] args) {
        WebDriver driver = new ChromeDriver();
        driver.get("http://www.example.com");
        String pageSource = driver.getPageSource();
        System.out.println("Page Source: " + pageSource); // Prints the page source
    }
}
```

Explanation:

- **Return Type:** String
- Returns the source code of the current page as a string.

8. getTitle()

The getTitle() method fetches the title of the current page.

Example:

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
```

```
public class GetTitleExample {
   public static void main(String[] args) {
      WebDriver driver = new ChromeDriver();
      driver.get("http://www.example.com");
      String title = driver.getTitle();
      System.out.println("Page Title: " + title); // Prints the title of the page
   }
}
```

Explanation:

- **Return Type:** String
- Returns the title of the current page.

9. getWindowHandle()

The getWindowHandle() method fetches the handle of the current window.

Example:

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

public class GetWindowHandleExample {
   public static void main(String[] args) {
      WebDriver driver = new ChromeDriver();
      driver.get("http://www.example.com");
      String windowHandle = driver.getWindowHandle();
      System.out.println("Current Window Handle: " + windowHandle); // Prints the window
handle
   }
}
```

Explanation:

- **Return Type:** String
- Returns an opaque handle to the current window.

10. getWindowHandles()

The getWindowHandles() method fetches the handles of all windows opened by the WebDriver instance.

Example:

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import java.util.Set;

public class GetWindowHandlesExample {
   public static void main(String[] args) {
      WebDriver driver = new ChromeDriver();
      driver.get("http://www.example.com");
      Set<String> windowHandles = driver.getWindowHandles();
      for (String handle : windowHandles) {
         System.out.println("Window Handle: " + handle); // Prints each window handle
      }
   }
}
```

Explanation:

- **Return Type:** Set<String>
- Returns a set of window handles for all open windows.

11. manage()

The manage() method provides access to various options and settings of the WebDriver instance.

Example:

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import java.util.concurrent.TimeUnit;

public class ManageExample {
   public static void main(String[] args) {
      WebDriver driver = new ChromeDriver();
      driver.get("http://www.example.com");
      driver.manage().timeouts().implicitlyWait(10, TimeUnit.SECONDS); // Sets implicit wait
   }
}
```

Explanation:

- **Return Type:** Options
- Provides access to browser's settings and options like timeouts, cookies, and window sizes.

12. navigate()

The navigate() method provides a way to navigate within the browser's history and control browser actions like refreshing the page.

Example:

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

public class NavigateExample {
   public static void main(String[] args) {
      WebDriver driver = new ChromeDriver();
      driver.get("http://www.example.com");
      driver.navigate().to("http://www.another-example.com"); // Navigates to a different URL
      driver.navigate().back(); // Navigates back to the previous page
      driver.navigate().forward(); // Navigates forward to the next page
      driver.navigate().refresh(); // Refreshes the current page
   }
}
```

Explanation:

- **Return Type:** Navigation
- Provides methods to navigate within the history of the browser.

13. switchTo()

The switchTo() method allows switching between different frames, windows, and alerts.

Example:

```
import org.openqa.selenium.Alert;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class SwitchToExample {
   public static void main(String[] args) {
      WebDriver driver = new ChromeDriver();
      driver.get("http://www.example.com");

      // Switching to an iframe
```

```
        driver.switchTo().frame("iframeName");
        WebElement element = driver.findElement(By.id("exampleId"));
        element.click();

        // Switching back to the main content
        driver.switchTo().defaultContent();

        // Handling an alert
        driver.findElement(By.id("alertButton")).click();
        Alert alert = driver.switchTo().alert();
        alert.accept();
    }
}
```

Explanation:

- **Return Type:** TargetLocator
- Allows switching to frames, windows, and alerts.