**WindowHandles**

* if only one window is present it will give indexoutofbound exception
* switchToAlert
* switchToFrame

Steps for SwitchToWindow:

* save the parent window value in a variable:

string currentWindowHandle = driver.CurrentWindowHandle;

* click on the link to open the new window
* Start the enumerator to verify the number of windowhandles present in the browser

iEnumerator – supports a simple iteration over a generic collection

IEnumerator<string> ie = driver.WindowHandles.GetEnumerator();

getEnumerator returns the number of windowhandles in the current window browser

and stores it in ie.

Then ie is used to run an iteration to switch between different windows.

* ie.MoveNext(); // advances the cursor to the next item in the collection
* driver.SwitchTo().Window(ie.Current); //switches the focus of the driver to a different window

keyboard and mouse throw javascript fire events only

they work on the JS level of the browser hence unable to handle the OS level events

* selenium fores the events through javascript
* javascript works on the browser level and does not operate with the OS level die to security measures, hence selenium needs the action commands to handle the mouse or keyboard events

**sikuli/autoit –** are the third party tools used to handle the os level window events

sikuli – uses images of a particular control to click on a control, drives the automation using the images of a control

IEnumerator<string> ie = driver.WindowHandles.GetEnumerator();

ie.MoveNext(); // since ie returns 2 values, to move to the 1st postion this command is used

if (ie.Current == currentWindowHandle) // the cusrsor is in the 1st window

{

ie.MoveNext(); //cursor now moves to the 2nd window

}

driver.SwitchTo().Window(ie.Current); //once the cursor is in the child window the switchto command is used to move the driver to the new window

* driver.close() – closes the current window
* driver.quit() – closes all open windows

**Handling Alerts:**

IAlert alert = driver.SwitchTo().Alert(); //returns an alert type object which acan be stored in an alert variable

alert.Accept();

alert.Dismiss();

**handling frames**

frames have documents which have their own html structure

IWebElement frame = driver.FindElement(By.Name("text"));

driver.SwitchTo().Frame(frame); //switching to the frame to work on

driver.SwitchTo().DefaultContent(); //selects the mainframe/parent frame

//to check on page load which element is in focus

IWebElement activeElement = driver.SwitchTo().ActiveElement();