QTP - SYNCHRONIZATION

What is Synchronization?

Synchronization point is the time interface between Tool and Application under test. Synchronization point is a feature to specify delay time between one step and another of the test script.

For Example, clicking on a link may load the page is 1 second, sometimes 5 seconds or even it might take 10 seconds to load it completely. It depends on various factors such as the application server response time, network bandwidth , client system capabilities etc.

If the time is varying then the script will fail unless the tester handles these time differences intelligently.

Ways to Insert Sync Point:

- WaitProperty
- Exist
- Wait
- Sync*onlyforwebbasedapps*
- Inserting QTP Inbuilt Synchronization points.

Let us say we need to insert a sync point beween clicking on "numbers" link and clicking on "simple Interest" calculator of in "www.easycalculation.com". We will now take a look at all the 5 ways to insert sync point for the above scenario.

Method 1: WaitProperty

WaitProperty is a method that takes the property name, Value and Timeout value as input to perform the sync. It is a dynamic wait and hence this option is encouraged.

```
' Method 1 - WaitProperty with 25 seconds
Dim obj
Set obj = Browser("Math Calculator").Page("Math Calculator")
obj.Link("Numbers").Click

obj.Link("Simple Interest").WaitProperty "text", "Simple Interest",25000
obj.Link("Simple Interest").Click
```

Method 2: Exist

Exist is a method that takes the Timeout value as input to perform the sync. Again it is a dynamic wait and hence this option is encouraged.

```
' Method 2 : Exist Timeout - 30 Seconds
Dim obj
Set obj = Browser("Math Calculator").Page("Math Calculator")
obj.Link("Numbers").Click

If obj.Link("Simple Interest").Exist(30) Then
 obj.Link("Simple Interest").Click
Else
 Print "Link NOT Available"
End IF
```

Method 3: Wait

Wait is a hardcoded sync point which waits independent of the event happened or NOT. Hence usage of Wait is discouraged and can be used for shorter wait time such as 1 or 2 seconds.

```
' Method 3 : Wait Timeout - 30 Seconds
Dim obj
Set obj = Browser("Math Calculator").Page("Math Calculator")
obj.Link("Numbers").Click
wait(30)
Browser("Math Calculator").Page("Math Calculator").Link("Simple Interest").Click
```

Method 4: Sync Method

Sync Method can be used only for web applications where there is always a lag between page loads.

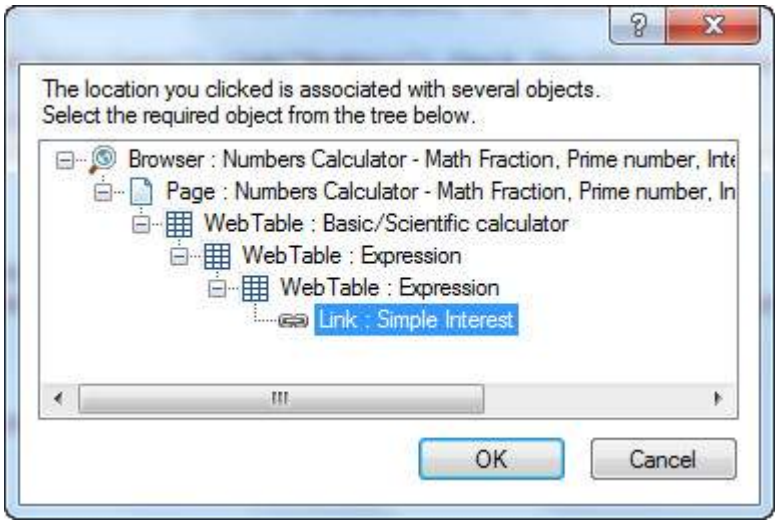
```
' Method 4 :
Dim obj
Set obj = Browser("Math Calculator").Page("Math Calculator")
obj.Link("Numbers").Click

Browser("Math Calculator").Sync
Browser("Math Calculator").Page("Math Calculator").Link("Simple Interest").Click
```

Method 5 : Inserting QTP Inbuilt Synchronization points:

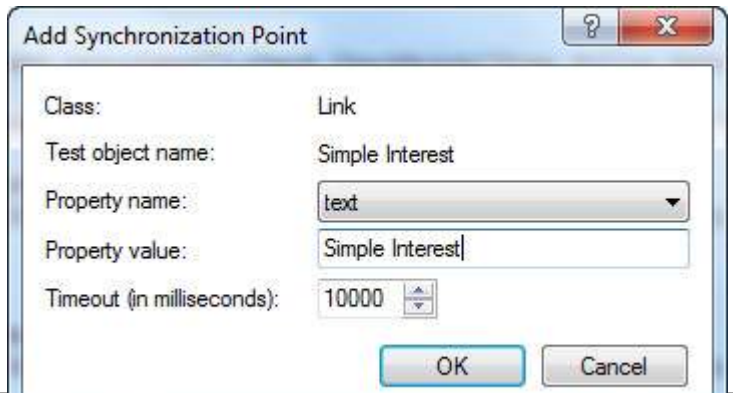
Step 1 : Get into Recording Mode. This Option Would be Disabled if the user is NOT in Recording Mode.

Step 2 : Goto "Design" → "Synchronization Point" .

Step 3 : We need to Select the object which we want to be the Sync Point. After Selecting the object, object window opens as shown below:



Step 4 : Click Ok, the "Add Synchronization Window" Opens up. Select the Property, Value and Time out value and click ok as shown below:



Step 5 : The Script would be generated as shown below which is the same as that of the WaitProperty*Method1* that we had already discussed:

```
Browser("Math Calculator").Page("Math Calculator").Link("Numbers").Click
Browser("Math Calculator").Page("Math Calculator").Link("Simple Interest").WaitProperty
"text", "Simple Interest", 10000
```

Default Synchronization:

When user hasn't used any of the above sync methods, still QTP has inbuild Object synchronization timeout which can be adjusted by the user.

Navigate to "File" >> "Settings" >> Run Tab >> Object Synchronization Time out as shown below.