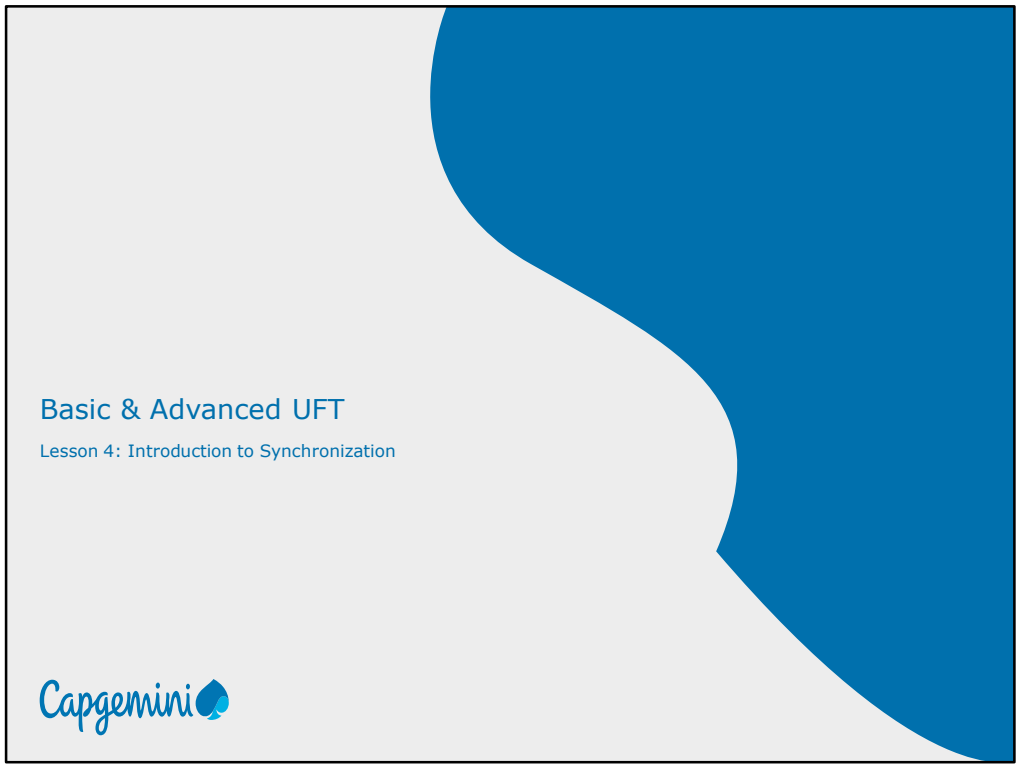

Basic & Advanced UFT
Lesson 4: Introduction to Synchronization
Capgemini

Lesson Objectives

- Why Synchronization?
- Synchronizing Test- Exist and Wait Statements
- Synchronizing Test- Timeouts
- Adding Synchronization Point in Recording mode
- Synchronization in Expert View

4.1: Introduction to Synchronization

Why Synchronization?

- When we run test it might happen that the time taken by the application to respond is more and the images might not be loaded in which case UFT will report an error as it will not be able to find the object during run time
- In such cases we need to synchronize our tests

- We can synchronize using the following options :-
  - Insert a synchronization point
  - Use EXIST or WAIT statements
  - Modify the default amount of time that Quick Test waits for a Web page to load i.e. Modify object synchronization timeout value

4.1: Introduction to Synchronization

Why Synchronization? (Cont.)

- Synchronization can be done for following tasks
  - For a progress bar to reach 100%
  - For a status message to be displayed
  - For a property change of an object
  - For a window or pop-up message to be displayed

4.2: Implementing Synchronization in UFT

Synchronizing Test- Exist and Wait Statements

- Exist and/or Wait statements can be used in the Expert View to instruct UFT to wait for a window to open or an object to appear
- ***Wait Statements***: Wait statements instruct to wait a specified amount of time before proceeding to the next step.
- ***Exist Statements***: Returns a value indicating whether or not an object currently exists.

Adding Exist and Wait Statements

You can enter Exist and/or Wait statements in the Expert View to instruct UFT to wait for a window to open or an object to appear.

Exist statements return a Boolean value indicating whether or not an object currently exists. Wait statements instruct UFT to wait a specified amount of time before proceeding to the next step.
You can combine these statements within a loop to instruct UFT to wait until the object exists before continuing with the test.

For example, the following statements instruct UFT to wait up to 20 seconds for the Flights Table dialog box to open.

```
y=Window("Flight Reservation").Dialog("Flights Table").Exist
counter=1
While y=0
    Wait (2)
    y=Window("Flight Reservation").Dialog("Flights Table").Exist
    counter=counter+1
    If counter=10 then
        y=1
    End if
Wend
```

4.2: Implementing Synchronization in UFT

Synchronizing Test- Timeouts

- What is a Time out?
- It is the amount of time UFT waits for an object to appear or for a browser to navigate to a specified page

- How to Modify Time out settings?
- You can increase the default object - synchronization and browser navigation timeout values for your test

- If you insert synchronization points and Exist and/or Wait statements for the specific areas in your test where you want UFT to wait a longer time for an event to occur, you may want to decrease the default timeouts for the rest of your test

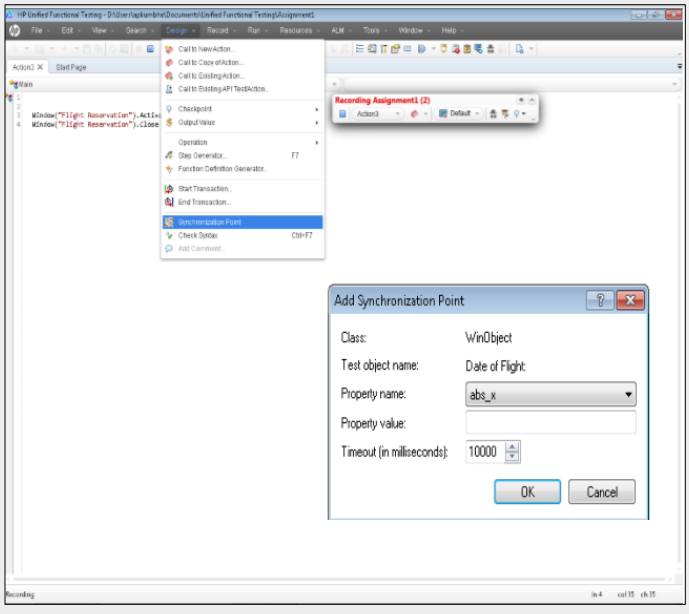
Modifying Timeout Values

Mostly, the amount of time UFT waits for objects to appear or for a browser to navigate to a specified page is insufficient, you can increase the default object - synchronization and browser navigation timeout values for your test.
If you insert synchronization points and Exist and/or Wait statements for the specific areas in your test where you want UFT to wait a longer time for an event to occur, you may want to decrease the default timeouts for the rest of your test.
To modify the maximum amount of time that UFT waits for an object to appear, change the Object Synchronization Timeout (Test > Settings > Run tab).
To modify the amount of time that UFT waits for a Web page to load, change the Browser Navigation Timeout (Test > Settings > Web tab).

4.2: Implementing Synchronization in UFT

Adding Synchronization Point in Recording mode

1. Insert while recording by selecting Design-Synchronization point
2. Click on the control to be synchronized
3. Add Synchronization Point dialog is displayed



Code snippet

```
Browser("Welcome: Mercury Tours").Page("Welcom e: Mercury Tours").WebEdit("user Name").WaitProperty "abs_x", 100, 10000
```

4.2: Implementing Synchronization in UFT

Synchronization in Expert View

- Synchronization – Using Wait
- The timing problem can be handled by adding a Wait statement in the script instead of inserting a synchronization point
- Consider the same script, a wait statement is included to instruct the tool to wait for 2 seconds.

- Example :

```
Browser("Welcome: Mercury Tours").Page("Welcome: Mercury
Tours").Image("Sign-In").Click

Wait (2)

Browser("Find a Flight: Mercury").Page("Find a Flight:
Mercury").Link("SIGN-OFF").Click
```

4.2: Implementing Synchronization in UFT

Synchronization in Expert View (Cont.)

- Synchronization – Using Exist
- Using this function we can check for the existence of an object or a window and continue with the script based on the result
- Syntax : Object.Exist(Timeout in seconds)
- Object can be any GUI object or Window
- The function returns a Boolean value. True value is returned in case object exists else False is returned
- Time Out – time for which the object's existence should be checked

- Example:

```
If Window("Flight Reservation").WinButton("Update Order").Exist(10)
Then
        ……..
End if
```

Demo

- Demo on Synchronization – Using Time Out
- Demo on Synchronization – Synchronization Point
- Demo on Synchronization – Exit and wait statement

Summary

In this lesson, you have learnt

- What is Synchronization?
  When we run test it might happen that the time taken by the application to respond is more and the images might not be loaded in which case UFT will report an error as it will not be able to find the object during run time
- Different ways of implementing Synchronization
- Implementing Synchronization in Expert View

Add the notes here.