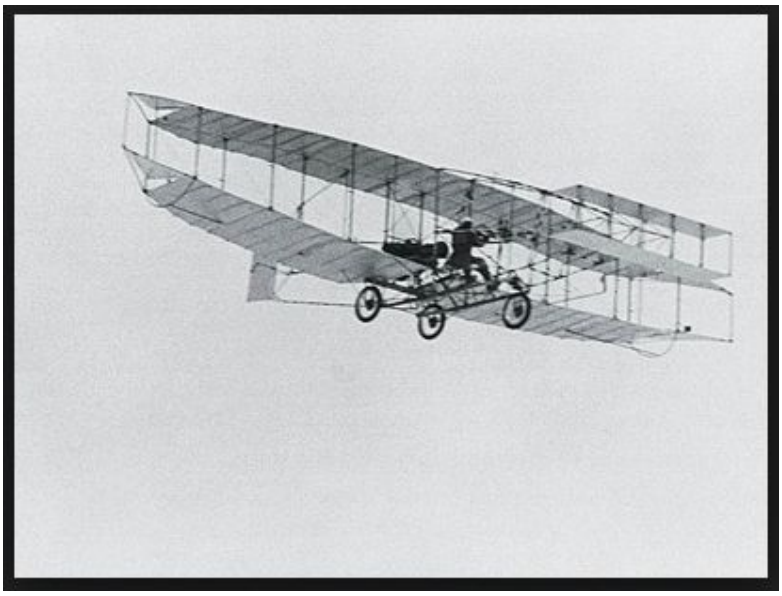
Chapter -8

VBScript and UFT



In this playhouse of infinite forms I have had my play, and here have I caught sight of him that is formless.

- Rabindranath Tagore (from *Gitanjali)*

In this chapter we will discuss the UFT settings and their effect on way the programming and the way to enhance the test scripts to provide more robust automation implementation. We will discuss VBScript, Library and Debugging in this chapter

We will discuss here General UFT Script Modification, Run and Debug Option.

Exercise – Understanding UFT Test settings

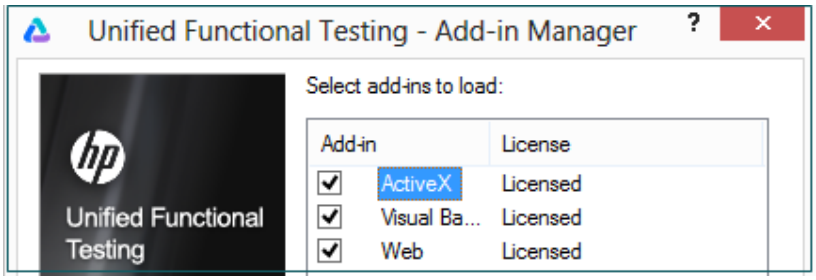
Step1: Record a Test

Open UFT | New | Test | Select "GUI Test" with name "SettingsTest" | Create | Record | Select first radio button in web | OK | Open Internet Explorer | Google.co.uk | Search with "Krishna Wikipedia" | Enter | Click on Wikipedia link | Close Internet Browser | Stop | Save

```
1   Systemutil.CloseProcessByName "iexplore.exe"
2   Systemutil.Run "iexplore.exe"
3   Browser("Browser").Navigate "http://www.google.co.uk/"
4   Browser("Browser").Page("Google").WebEdit("q").Set "krishan wikipedia"
5   Browser("Browser").Page("Google").WebEdit("q").Submit
6   Browser("Browser").Page("krishan wikipedia - Google").Link("Krishna - Wikipedia, the").Click
7   Systemutil.CloseProcessByName "iexplore.exe"
```

Step2: Disassociate Add- IN

Navigate to "SettingsTest" in UFT | File | Settings… | Properties | Modify | Deselect any selected add-in e.g. ActiveX | OK | OK | Apply | Close | Close UFT | Yes | Open UFT | Deselect ActiveX | OK | Navigate to "SettingsTest" | File | Settings… | Properties | Modify



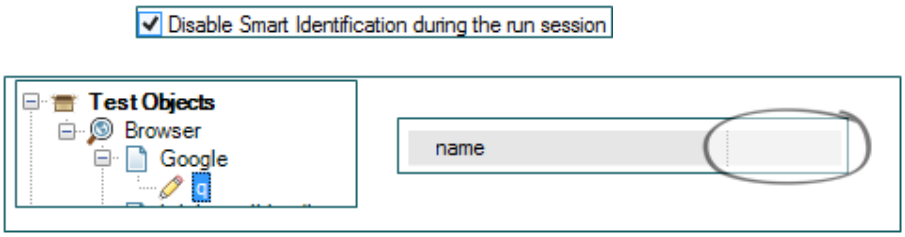
Step3: Object Synchronization timeout

Navigate to "SettingsTest" in UFT | File | Settings… | Run | set "0" to Object Synchronization timeout | OK | Save | Run three time | File | Settings… | Run | set "20" to Object Synchronization | timeout | OK | Save

Step4: Smart Identification disable

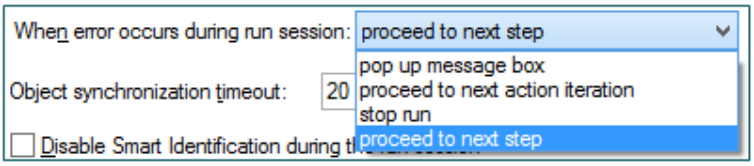
Navigate to "SettingsTest" in UFT | File | Settings… | Run | disable smart identification | OK | Resources | Object Repository | Navigate to "q" edit box object | delete "q" from name property |

Close | Save | Run | on Error Stop test | File | Settings… | Run | enable smart identification | OK | Run by F5 | View | Run Last result |ALT + V + X | Close report | Resources | Object Repository | Navigate to "q" edit box object | add "q" in name property | Close | Save | Run



Step5: UFT action during error in run session

Navigate to "SettingsTest" in UFT | File | Settings… | Run option | Change the "proceed to next step " in "When error occurs during run session"| OK | Place breakpoint on fourth line in script | Run | On breakpoint, Close the browser at run time to induce the error | Run | View | Last Run Results | ALT + V + X | Close | File | Settings… | Run | set "3" to Object Synchronization timeout | OK | Save | Run | On breakpoint, Close the browser at run time to induce the error | Run | View | Last Run Results | ALT + V + X | Close | File | Settings… | Run option | Change the "pop up message box " in "When error occurs during run session" | set "20" to Object Synchronization timeout | Apply | OK | remove breakpoint | Save



Step6: UFT action during error in run session

Open Internet Explorer | Navigate to "SettingsTest" in UFT | File | Settings… | Local System Monitor | Check "Enable System monitor" | Click on hand button | click on IE | Select "Memory Usage" and "% Processor Time" | Apply | OK | Run with F5 | View | Last Run Results | ALT + V + X | View | System Monitor | Close | File | Settings… | Local System Monitor | Uncheck "Enable System monitor" | Save

Concept of Exercise – Understanding UFT settings

In STEP1, we are recording a "Krishan Wikipedia" Google search. We have seen numerous time that Systemutil of UFT used to manage the process. In STEP2, we are de-associating add-ins. In STEP3, we are setting object synchronization timeout (OST) to "0" seconds from "20" seconds.

In STEP4, we are disabling smart identification (SI). SI is not very reliable way to identify object. It is performance degradation option as well and we should not rely on it and tick it off as possible. In

STEP5, we are selecting “Proceed to next step”. Choosing this option will not render pop-upon error at run time. Object synchronization timeout (OST) instruct UFT wait-time for object existence. If Object fails to appear in this time then UFT will consider it as an error and take the action as mention in this option. Remember if we have robust error handling then this option will keep UFT moving until all test finishes e.g. during nightly runs etc. In STEP6, we can get the crucial system information during run-time e.g. Memory usage of CPU consumption by application. We need to provide the application name and instruct UFT to monitor the specified counters (information e.g. % available memory, Disk read speed etc.).

Test setting is the important area where we can set the test specific setting in UFT. These setting will impact on each individual test and when we will create the new test they will not enforced on them. Mainly Test settings have been provided to take care the configuration of add-ins, datatable, on error action, OST settings, and library association with test, log tracking and log monitoring settings. These all are very important aspect to manage automation test and can be configured by using UFT automation object model programming. The idea is that we need not to set these setting manually. UFT provides API to manage all these configuration and we just need to write a small program for that (we will all of this discuss later).

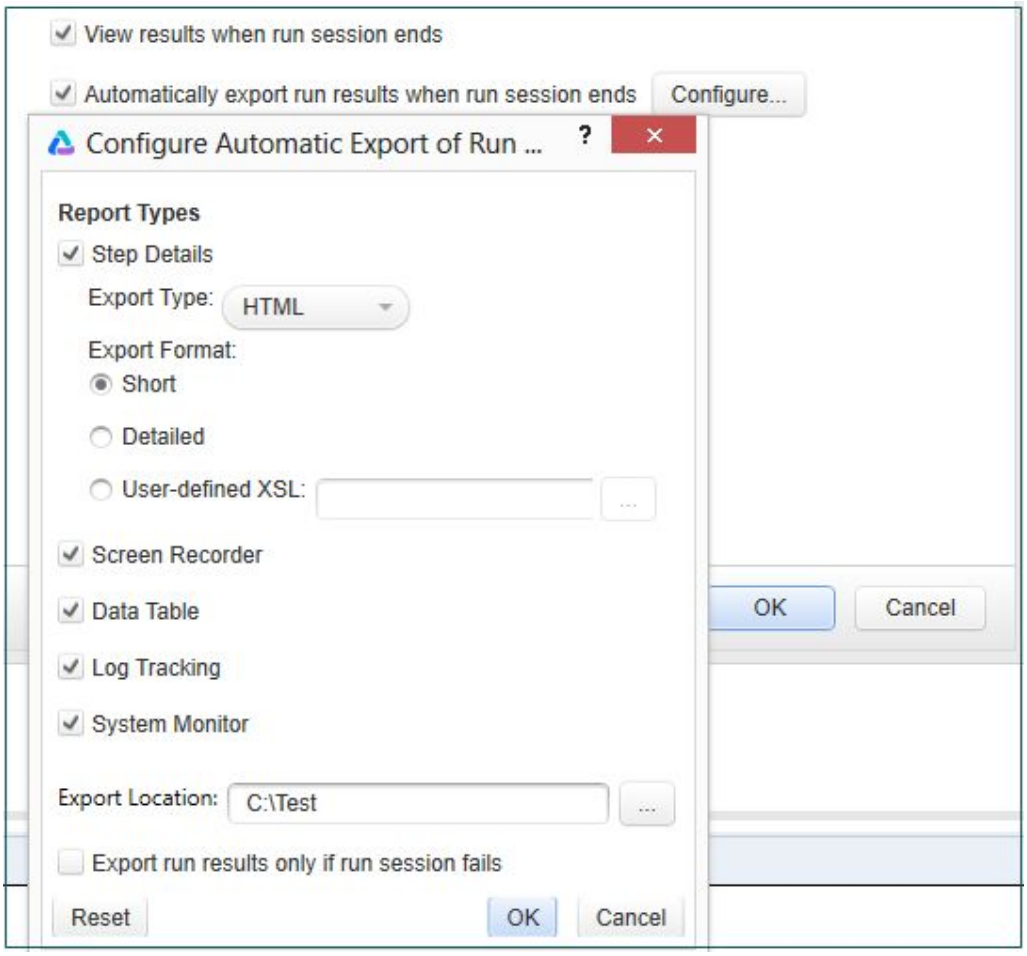
Exercise – Understanding UFT Option settings

Step1: Record a Test

 *Open UFT | New | Test | Select “GUI Test” with name “OptionTest” | Create | Record | Select first radio button in web | OK | Open Internet Explorer | Google.co.uk | Search with “Krishna Wikipedia” | Enter | Click on Wikipedia link | Close Internet Browser | Stop | Save*

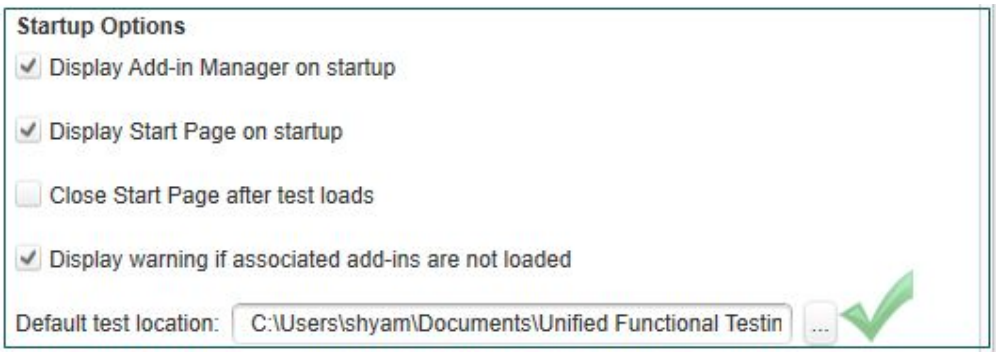
Step2: Create HTML Report

 *Navigate to “OptionTest” test in UFT | Tools | Options | General | Run Session | Check “View results when session ends” | Check “Automatic export run result when run session ends” | Click on Configure | Provide Export location “C:\Test” | OK | OK | Save | Run with F5| Go to “C:\Test” | verify HTML file | Navigate to “OptionTest” test in UFT | Run Session |UncCheck “View results when session ends” | Uncheck “Automatic export run result when run session ends” | OK | Save*



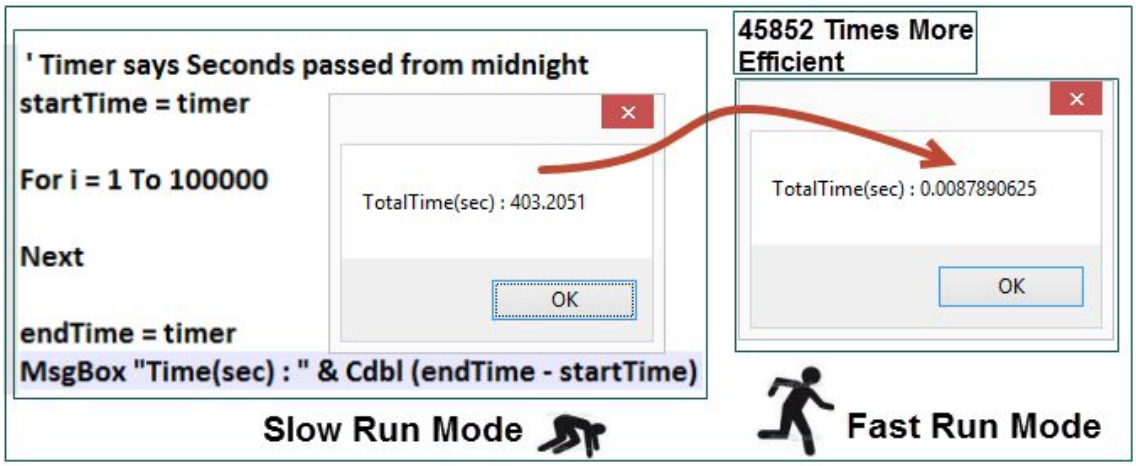
Step3 : Startup options

Navigate to "OptionTest" test in UFT |Tools | Options | General | Startup options |OK | Run | Save



Step4: General GUI Testing options

Open UFT | Create a test with following code | Tools | Options | GUI Testing | Test Runs | Select Fast Mode | OK | Run with F5 | Tools | Options | GUI Testing | Test Runs | Select Slow Mode | OK | Run with F5 | Save



Step5: Web and Window Options settings

Navigate to "OptionTest" test in UFT | Tools | Options | GUI Test | Web | Advanced | Scroll to Run Setting | Select "Mouse" in Replay type | OK | Tools | Options | GUI Testing | Test Runs | Select Slow Mode | Give "2000" millisecond | OK | Run with F5 |Tools | Options | GUI Test | Web | Advanced | Scroll to Run Setting | Select "Event" in Replay type | Reset | "Test Runs" option | provide 0 millisecond | OK | Save | Run

Step6: Text Editor Settings

Navigate to "OptionTest" test in UFT | Tools | Options | Text Editor | Select "Show Spaces" | OK | provide space in script | Tools | Options | Text Editor | Deselect "Show Spaces" | OK | Save

Concept of Understanding UFT Option settings

In STEP1, we recorded a "Krishna Wikipedia" search. In STEP2, we can ask UFT to provide result after each run by checking "View run results when session ends" option. Closing the report becomes very annoying during debug when UFT run test multiple times. So, mostly we tick it of during design. Also UFT can export the result in PDF, HTML and DOC format with all the relevant log information.

In STEP3, we manage start-up welcome wizard (add-in selection welcome box). We can also set the default test location here. In practical world, companies uses shared drive to store the files that can be used by entire team. So, if we save test at central location then all team member can run the script from their machine.

UFT Option setting can set the General, GUI Test, API Test, Coding and Text Editor Settings. These setting applicable on all the test (unlike the specific test that configured by test settings). In STEP4,

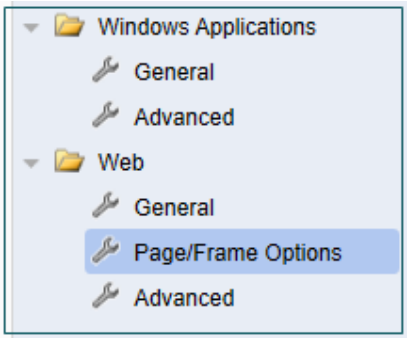
we set the fast mode in “GUI test” Settings. UFT has two replay mode (not record mode i.e. analog, low level, insight and normal recording). Fast mode do not show you the arrow on the line and decrease execution time substantially. Run mode keep track of all debug related information and execute script in slow manner. It is recommended to design the script in slow mode but change to the fast mode in automation suite execution.

In STEP5, we explore the web and window specific GUI Test settings. When we perform any action on browser via UFT, it use browser events to handle the actions. So effectively, click on button is not a mouse operation. We can force UFT to mimic the mouse action by setting-up Replay type “2”. It is very time consuming and only recommended for the operation where user struggle to perform mouse actions e.g. selecting weblist, clicking on tricky web objects etc. We should reset Replay type “1” after performing these tricky operations.

In STEP6, we are showing space in script. Text editor option take care fonts, color, word wrap and tab spacing etc. There is one more setting “Coding” in option settings. Coding provide the valid coding syntax for each file type listed in code templates. When we start writing any text in UFT (say if) then UFT auto complete the Skelton of the “if” block from this setting.

Snapshot of Test setting and option settings:

Category	Test Settings	Option Settings
Scope	Specific to test and applicable on specific test	Specific to IDE and applicable on all tests.
Programmable	Yes (by object model)	Yes (by object model)
Settings	Iteration, log, recovery, Synchronization and environment	GUI, API , Editor and template settings. GUI Test: Active screen, Window, Web , Insight, OCR, start-up and run modes settings.
Location	File | Settings	Tools | Options
Generate Script	Yes	Yes
Restore possible	No	Yes (Restore to factory i.e. initial settings)
Test Information	Yes	No



Exercise – Understanding Script Modification Options

Step1: Record a Test

Open UFT | New | Test | Select "GUI Test" with name "ScriptModifyByRighClicktest" | Create | Record | Select first radio button in web | OK | Open Internet Explorer | Google.co.uk | Search with "Krishna Wikipedia" | Enter | Click on Wikipedia link | Close Internet Browser | Stop | Save

Step2: Comment the Script and Insert the transactions

Navigate to "ScriptModifyByRighClicktest" test in UFT | Select line 1 to line 4 by mouse | Right Click | Comment | Right Click | Uncomment | Indent | Right Click | Outdent | Click on 3rd line | Right click and select "Insert BreakPoint" to select breakpoint | Click on 3rd line | Right click and select "Insert BreakPoint" to disable breakpoint | Click on 3rd line | Right click and select "Insert BreakPoint" to deselect breakpoint | Click on 1st Line | Right click | Insert Step | Start transaction | "StratTest" | OK | Click on last Line | Right click | Insert Step | End transaction | Select "StratTest" | OK | Save | Run by F5 | View | Last Run Result | ALT + V + X | Select End Transaction | Close | Save

Object	Details	Result	Time
StratTest	Transaction "StratTest" ended with "Pass" status (Total Duration: 7.0127 sec Wasted Time: 1.1331 sec).	Done	7/18/2013 - 8:31:36

Step3: Insert Step in Script by step generator

Navigate to "ScriptModifyByRighClicktest" test in UFT | Go to the line after the following line | Right click | Insert Step | Step Generator | Test Object | Click on  *| Select "Krishna – Wikipedia, the" link | OK | select "Capture Bitmap" in Operation | Provide FullfileName value "C:\Test\LooksOfLink.png" with quote marks | OK | Run | Navigate to C:\Test\LooksOfLink.png | Navigate to UFT | Rerun | On Error Stop Test | Remove insert step | Save | Rerun*

```
Browser("Browser").Page("Google").WebEdit("q").Submit
```

Concept of Exercise – Understanding Script Modification Options

In STEP1, we created "Krishna Wikipedia" Google search test. In STEP2, we have commented, outdent and inserted transactions in test. Transactions tells the time taken by the steps. We need to

insert start-transaction and end transaction which we need to calculate the time. Transactions time logged in UFT report. In STEP3, we modified our script by inserting the step. Step can be coded directly or can be assist by UFT with step geneartor. We can generate three kind of steps

1. Test objects and their operations
2. Utility objects
3. Functions (Library and built-in functions)

UFT endores the simplicity. Everything mentioned here can be achieved by programming but these features assist automation engineer to accomplish steps with help of wizard.