Types of object repositories

QTP Supports 2 types of Object Repository

1) Shared Object Repository (also called Global)

2) Per-Action Object Repository, (also called Local)

Per-Action Object Repository is used by default. The extension for Per-Action repository is ".mtr" .

Shared Object Repository is preferable while dealing with dynamic objects which are called in multiple tests. The extension is ".tsr"

What is the use of descriptive programming, how to use it with sample code?

QTP scripts can execute only if the objects are present in the Object Repository. If the descriptions of the Objects are created using Descriptive programming when testers want to perform an operation on an object that is not present in the object repository.

* When objects in the application are very dynamic in nature.
* When the Object Repository grows big, it results in poor Performance as the size of the Object Repository increases.
* When the framework is built such that it has been decided not to use Object Repository at all.
* When testers want to perform an action on the application at run-time without having the knowledge of object's unique properties.

There are two ways to script using Descriptive Programming technique. They are

* Description Objects
* Description Strings

How to select items in drop down box

iTemCountr = Split(Browser("gmail").Page(".gmail.").WebList("..:=..").GetRoProperty("Items Count")  
msgbox iTemCountr  
  
For intCounter = 0 to iTemCount - 1  
        If Browser("...:=...").Page("..:=..").Frame("..:=..").WebList("..:=..").GetItem(intCounter) = "SomeValue" Then  
            Browser("...:=...").Page("..:=..").Frame("..:=..").WebList("..:=..").Select (intCounter)  
            Exit For  
          Else  
              msgbox "value not found...Please write a reporter event for this"  
         End If        
  
Next

How to select all child items or how to find number of buttons/checkboxes on a form?

Function GetAllSpecificControls(Page, MicClass)  
    Set Desc = Description.Create()  
    Desc("micclass").Value = MicClass  
    Set GetAllSpecificControls = Page.ChildObjects(Desc)  
End Function  
  
Function GetAllEdits(Page)  
    Set GetAllEdits = GetAllSpecificControls(Page, "WebEdit")  
End Function  
  
Function GetAllButtons(Page)  
    Set GetAllButtons = GetAllSpecificControls(Page, "WebButton")  
End Function  
  
Function GetAllLinks(Page)  
    Set GetAllLinks = GetAllSpecificControls(Page, "Link")  
End Function  
  
Function GetAllImages(Page)  
    Set GetAllImages = GetAllSpecificControls(Page, "Image")  
End Function  
  
  
Set oPage = Browser("Google Sets").Page("Google Sets")  
  
MsgBox "Number of Edits: " & GetAllEdits(oPage).Count  
MsgBox "Number of Buttons: " & GetAllButtons(oPage).Count  
MsgBox "Number of Links: " & GetAllLinks(oPage).Count  
MsgBox "Number of Images: " & GetAllImages(oPage).Count

How to find broken links in a webpage?

= “link”

Set ilink = Description.Create

ilink("micclass").Value = "Link"

Set all\_links = Browser("Browser").Page("HomePage").ChildObjects(ilink)

'count of links

total\_links = all\_links.Count

Difference between actions, procedures and sub

**1. QTP Actions:-**  
  
Action is specific to QTP and not the part of vbscript. Every QTP test has at least one Action(default name is Action1).    
Action can have an object repository associated with it. Action can return multiple values in form of 'output parameters'.  
  
**2. Procedures:  
2.1. VBScript Sub Procedures:-**   
A Sub procedure:

* is a series of statements, enclosed by the Sub and End Sub statements
* can perform actions, but does not return a value
* can take arguments
* without arguments, it must include an empty set of parentheses ()

Sub mysub()  
  Print "my Sub Procedude"  
End Sub  
  
or  
  
Sub mysub(argument1,argument2)  
  Print "my Sub Procedure"  
End Sub  
  
**How to call Sub Procedures:**  
  
To call a Sub, you will use Call statement by enclosing arguments (if any) in parentheses.  
  
  
The Call statement is not necessary to call a Sub, but if you want to use Call statement (Recommended), you must enclose arguments (if any) in parentheses.  
  
Call mysub(argument1,argument2)  
  
You can call a Sub without using Call statement as well, but not recommended.  
  
mysub argument1,argument2  
  
  
  
A Function procedure:

* is a series of statements, enclosed by the Function and End Function statements
* can perform operations and can return a value
* can take arguments that are passed to it by a calling procedure
* without arguments, must include an empty set of parentheses ()
* returns a value by assigning a value to function name itself

Function myfunction1()  
  Print "my fuction1"  
End Function  
  
or  
  
Function myfunction2(a,b)  
  myfunction2=a+b  'assign value to function name  
End Function

Different ways of identifying objects

Identification of an Object in QTP/UFT :  
 1) Normal Identification  
2) Smart Identification  
3) Ordinal identification  
4) Visual Based Identification  
5) Object identification based on CSS XPath  
6) Image Based identification  
7) VRI- Visual relation Identifier

http://www.softwaretestinghelp.com/qtp-tutorial-7-how-qtp-identify-objects-uniquely/

What is driver script in QTP?

The Driver Script calls initialization function to  
initialize the input data parameters. It then calls a  
controller function, which has a Keyword Routine. It reads  
the Keyword and Data from the Data Table and then calls the  
corresponding Functions and Subroutines along with the input  
from the data table. The controller function handles this  
feature of calling the functions separately. Once the  
functions are executed, the control is then transferred back  
to the Controller for the execution of next set of records  
based on the keyword in the table.

How to implement data driven driven framework

Steps to be followed to implement the framework:

The general steps involved in the data driven framework are:

1. Prepare the Test Case for the Application Under Test
2. Add the Objects from AUT to OR
3. Write the scripts based on the Test Case

What are different checkpoints

**There are many types of checkpoints** detailed below

1.**Standard checkpoints:** It compares the expected values of object properties captured during recording to the **object's current values**during a run session

1. **Page Checkpoint** : A Standard Checkpoint created for a web page can be called a Page Checkpoint.  It is used to check total number of links & images on a web page. Page Checkpoints can be used to check Load Time i.e. time taken to load a web page.
2. **Bitmap Checkpoint** helps a user in checking the bitmap of an image or a full web page. It does a pixel by pixel comparison between actual and expected images.
3. **Image Checkpoint** enable you to check properties like source file location of a web image. Unlike , Bitmap Checkpoint  you can not check pixels(bitmaps) using image checkpoint.
4. **Text Checkpoint** is Used to check expected text in a web-page or application. This text could be from a specific region of the application or a small portion of text displayed
5. **Accessibility Checkpoints** verifies compliance with World Wide Web Consortium (W3C)  instructions and guidelines for Web-based technology and information systems. These Guidelines make it easy for disabled to access the web.
6. **Database Checkpoints** create  a query  during record time and database values are stored as expected values. Same query is executed during run time and actual & expected values are compared.
7. In **Table Checkpoint** , you dynamically can check the contents of cells of a table (grid) appearing in your environment. You can also check various table properties like row height , cell width and so on. Table Checkpoint is similar to Database Checkpoint
8. Using **XML Checkpoints** you can verify XML Data ,XML Schema,   XML Data

How to connect to database?

Databases can be connected using Connection strings.

We can connect to the database with the following parameters.

* **Database Type** -
* **Server Name** -
* **Database Name** -
* **User Id** -
* **password**

How to create libraries

Step 1) To create a new function library in QTP. Select File > New > Function Library. It opens as a new tab in QTP.

Step 2) Associate the library with your test. Click File > Settings > Resources > Associate Function Library.Click Add. ...

Step 3) Last step to call the function in your test script.

How to create global modules or vba files and how to associate them to script?

Global Variables

By using Environment Variables

This is the most commonly used method to create variables in QTP with global scope. All you have to do is just create a User-Defined Environment variable anywhere in your script (be it at the beginning of your action, or even inside any of your functions). That’s all. Once your environment variable is created, it would be available throughout your test script (inside all your actions & functions within the test script). Example:

'Declare Environment Variable (Global Variable)  
Environment.Value("gloVarBlogName") = "Automation Repository"  
  
'Use Environment Variable (Global Variable)  
msgbox Environment.Value("gloVarBlogName")

By using Function Library

You can also use a function library to create and use variables with global scope in your QTP script. This is how it can be done.

**1.** Create a function library(.vbs file) and associate it to your test script.

**2.** In your function library, declare a variable & assign required value to it. Example:  
  
'Declare variable in Function Library  
Dim gloVarBlogName  
gloVarBlogName = "Automation Repository"

VBA FILES:

You need to follow**3 simple steps** to use a function from a library in your test

**Step 1)** To create a new function library in QTP. Select File > New > Function Library. It opens as a new tab in QTP.

**Step 2)** Associate the library with your test.  Click File > Settings > Resources > Associate Function Library.Click Add. Select The Function Library File.Click Okay

**Step 3)**Last step to call the function in your test script

What are different types of files we handle in qtp with extension?

QTP File Types:

|  |  |
| --- | --- |
| **QTP File** | **File Type** |
| [QTP Script](http://www.qtphelp.com/search/label/QTP%20Scripts) File | .mts |
| Batch test File | .mtb |
| Environmental Variable Files | .txt, .ini, .xml |
| Input/Output Data ([Datatable](http://www.qtphelp.com/search/label/Datatables)) | .xls |
| [Recovery Scenario](http://www.qtphelp.com/2011/03/all-about-qtp-recovery-scenarios.html) Files | .qrs |
| [Library Files](http://www.qtphelp.com/search/label/Funtion%20Library) | .vbs, .qfl, .txt |
| [Object repository](http://www.qtphelp.com/2010/12/object-repository.html) (Shared) | .tsr |
| [Object repository](http://www.qtphelp.com/2010/12/object-repository.html) (Per Action/Local) | .mtr |
| [Action File](http://www.qtphelp.com/search/label/Actions) | .mst |
| [Virtual Object Collection](http://www.qtphelp.com/2011/03/virtual-object.html) | .vot |

Difference between UFT and qtp

HP **Unified Functional Testing**[**UFT**] is a new tool released in December of 2012 that integrates two of HP Testing products in a common IDE. It provides a powerfull testing framework for GUI and API testing: HP QuickTest Professional.

What is AOM

**Automation object model** is a set of objects, methods, and properties that helps testers to control the configuration settings and execute the scripts using the **QTP** interface.

How to connect QTP and QC

You need to perform following steps.  
1. Install addin for QTP  
2. Enable QTP to allow other product to run test property.  
  
Tools --> Options run --> allow other HP product to run test.  
  
3. Go to quality center connection through   
File --> Quality Center Connection  
  
give server URL and UserID / Password.