**VB Scripts concepts:**

**First, interview Questions:**

1. **What is the hierarchy in which objects are identified?**

Mandatory Properties----------->Assistive --------------->Ordinal Identifiers (Smart Identification is disabled)

Hierachy of objects is

Parent 🡪 child🡪 grandchild

Example:

Browser(“”).page(“”).webedit(“”).set””

Linkf for more details:

**http://www.geekinterview.com/question\_details/15453**

1. **How load/Associate Object repository**

**We can do it in 2 ways:**

1. **Associating Shared object repository**

**File🡪 settings🡪 Resources🡪 Associa**tefunctional library

Go to resources 🡪 Associate Object repository we can select the object repository to associate with the actions in test.

For editing the OR Go to Object repository manager -> open the OR🡪 Click File 🡪 enable Editing

1. Through Automation Object model

**Code:**

Set objQTP = createObject(“QuickTest.Application”)

objQTP.Launch

objQTP.Visible = true

objQTP.Open “C:\Automaton\SampleTest”, False, False

Set ObjeLib = objQTP.Test.Settings.resources.Libraries

'If the library is not already associated with the test case, associate it..

If objLib.Find("C:\SampleFunctionLibrary.vbs") = -1 Then ' If library is not already added

  objLib.Add "C:\SampleFunctionLibrary.vbs", 1 ' Associate the library to the test case

End

**How to load the Library file:**

// this the inbuilt method from QTP11

LoadFunctionLibrary “**path of the .vbs fiile**”

1. **How to load Excel Data**

Datasheet.import(“Excelpath”);

1. **Questions on web table**

#### **Methods:**

**ChildItem**  
Returns a test object from the cell by type and index  
Ex:

Set ChildItem = Browser("BrowserName").Page("PageName").WebTable("html

tag:=TABLE").ChildItem(2,1,"WebCheckBox",0)

ChildItem.Click

‘we have to pass row number, column number, Object type and Index(optional)

**ChildItemCount**  
Returns the count of objects of a specific type in the specified cell.  
Ex:

ChildItemCount=Browser("Browser").Page("Page").WebTable("html

tag:=TABLE").ChildItemCount(2,1,"WebCheckBox")

Msgbox ChildItemCount

**ChildObjects**  
Returns the collecton of Child Objects Contained within the Object.  
Ex:

1. Set ChildObject = Browser("Browser").Page("Page").WebTable("html
2. tag:=TABLE").ChildObjects
3. Msgbox ChildObject.Count
4. For i=1 to ChildObject.Count
5. msgbox i&" "& ChildObject(i).GetRoProperty("name")
6. Next
7. **RowCount**  
   Returns the number of rows in the table.

RowCount=Browser("Browser").Page("Page").WebTable("html tag:=TABLE").RowCount

Msgbox RowCount

**ColumnCount**  
Returns the number of column in the table.  
Ex:

ColumnCount = Browser("Browser").Page("Page").WebTable("html

tag:=TABLE").ColumnCount(2)

Msgbox ColumnCount

Note: we need to pass rownumber to know the column count

**GetCellData**  
Returns the text contained in the specified cell.  
Ex:

CellData = Browser("Browser").Page("Page").WebTable("html

tag:=TABLE").GetCellData(1,1)

Msgbox CellData

**GetRowWithCellText**  
Returns the number of the first row found that contains a cell with the specified text.  
Ex:

Msgbox Browser("Browser").Page("Page").WebTable("html

tag:=TABLE").GetRowWithCellText("Hello")

1. **How to get all the links and checkboxes in a page and check One checkbox**

We can get all the checkBoxes as below

Set parent = Browser(“text”).Page(“page”)

Set Objcheck = Description.Create()

Objcheck(“type”) = “checkbox”

Set Objeparent = parent.childObjects(Objcheck)

Checkboxes = Objeparent.count()

Dim i

For i=0 to checkboxes-1

Result = Objeparent (i).GetROProperty(“Checked”)

If Result=0 then

Objeparent (i).set”ON”

End If

Next

**How to get all the Links in a Page:**

Set parent = Browser(“title:.\*”).page(“xyz”)

Set Objdesc = Description.CreateObject()

Objdesc(“type”) = “Link”

Set ObjLinks = parent.childObjects(Objdesc)

noofLinks = ObjLinks.Count

Dim i

For getting all the Link text:

For i = 0 to noofLinks-1

X = objLink(i).GetRoProperty(“innerhtml”)

Print x

Next

**Other way of getting all the Links in a page:**

Set Objdesc = Description.CreateObject()

Objdesc(“html tag”).Value = “A”

Set nLinksCollection = Browser("title:=.\*"”).Page("title:=.\*").ChildObjects(oLinkDesc)

nLinksCount = nLinksCollection.Count()

' Retrieve all the requied properties

For i=0 to nLinksCount-1

sName = nLinksCollection(i).GetROProperty("innertext")

sHref = nLinksCollection(i).GetROProperty("href"”)

' Saving the results in the reporter

Reporter.ReportEvent 0, "Links name: " & sName & "; URL: " & sHref

Next

1. **What is the folder structure of the project**
2. **How to convert local Object repository to Shared**

**Go to Object repository 🡪 Click on File 🡪 click on Export (This will convert local OR to Shared OR)**

1. **How to find if a value is present in the drop down list of the combo box**

**Example 1:**

allitems=browser().page().WebList().getRoProperty("allitems")  
IF instr(allitems,"one")<>0 Then  'where "one" is an item you are looking for  
   'perform the action you want to  
End IF

**Example 2:**

allitems = split(browser().page().WebList().getRoProperty("all items"), ";")  
  
for each x in allitems   
if instr(x, "100") > 0 Then  
browser().page().WebList().select x  
strFound = True  
Exit For  
next  
  
if strFound = True Then  
msgbox "I tem is listed in the list box and selected"  
Else  
msgbox "Item is not listed in the list box"  
end if

1. **How to find the integer in a string**

Dim mytext As String = "123a123"

Dim myChars() As Char = mytext.ToCharArray()

For Each ch As Char In myChars

If Char.IsDigit(ch) Then

MessageBox.Show(ch)

End If

Next

1. or:

Private Shared Function Num(ByVal value As String) As Integer

Dim returnVal As String = String.Empty

Dim collection As MatchCollection = Regex.Matches(value, "\d+")

For Each m As Match In collection

returnVal += m.ToString()

Next

Return Convert.ToInt32(returnVal)

End Function

1. **What is the difference between local object repository and shared object repository?**

**Local Object Repository**

* Local Object Repository is the default object repository
* It is specific to actions and can be used only for a particular action
* Local Object Repository   is preferable when application is not dynamic with respect to time
* Local Object Repository  cannot be reused

**Share Object repository can be used throughout all the Actions.**

1. **What are different types of ordinal identifiers?**

There 3 types of Ordinal Identifiers

1. Index based
2. Location based
3. Creation Time
4. How to return a value in Vbscrit?

We can return a value to the function by assigning value to the function name.

Example:

Function retval()

Retval = 10 **/// please find the difference in this line**

End Function

Then the function will return value 10 and that can be assigned to any variable using

Val = retval()

**Example 2:**

If we want to return an Object in a function, we have to use **set** key wrd

Function returnobject()

Set Object = createObject(“Scripting.dictionary”)

Set retunobject= Object **/// please find the difference in this line**

End Function

Even while calling this method we have use **set**

**Set** recvieObj = returnobject()

1. What is VBScript?

VBScript Stands for Visual Basic Script – it is light version of Microsoft VBA – it is client side scripting language like Java Scripting.

Unlike C++ and Java – VBScript is an Object Based Language.

1. What are different types of environments VBScript work?
2. IE – Internet explorer
3. IIS – Internet Information Server – Microsoft’s web server
4. WSH- Windows script host- the native hosting env of windows Env
5. What are the different technologies VBScript Provide:

Subroutines

Functions

String Manipulation

Data/time

Error Handling etc.

1. What are the rules to name the variable in VBScript?

Variables should start with an alphabet

Should not contain (.)

Should be an unique with in procedure/class

Should not exceed 255 Characters.

1. How to assign a date value to a variable?

By mentioning # before

Example; Dim dater = #27-11-2017

1. What is procedure?

Procedure is block of code that is used to perform a single function

Examples:

Functions and Sub – in VBScript

1. Mention how to create a Cookie in VBScript?

The simplest way to create a cookie is to assign a string value to the Document. Cookie Object

1. Mention what is the use of Option Explicit?

The use of option explicit in VBScript is to initialize all the variables before using the so that it will helps us to avoid typing errors.

1. What are different Types of Data Conversion?

CInt, CDbl, CLong, CStr, CSng(Converts Expression to single value), CCur(Givves Currency Value), CByte, CBool

1. Mention the rules for writing the Option explicit
2. Option Explicit should be used before writing any other Statements – If not then a nontrapable error occurs.
3. If we do not mention Option Explicit then all the variables will be taken as **variants- Variant is the datatype – where it will act as a string and Integer.**

If we mention – value in side “” considered as string if not as integer.

2 Types of Variant Sub Types – TypeName(), VarType()

Vartype() give numeric value of the variable\

TypeName() – Gives data type – long, int, Double

1. What is the difference between function and Sub?

Function: If you want to return a block of code that returns a value - we will have to use functions.

It may or may not have Arguments as inputs. But it will return a value by assigning to its name.

A function starts with Function and Ends with Function

Example:

Function add(a, b )

c = a+b;

add = c

End function

Sub:

Sub will not return a value but it may or maynot take input.

Example:

Sub wriiteoutput()

Document.write(“hello world”)

Msg box(“Hello World”)

End sub

1. What are the different ways of passing the arguments in VBScript?

ByRef and ByValue

ByRef:

By default the arguments passed in VBScript will be ByRef – if we didn’t mention anything.

If we are mention ByRef then the changes made by the called procedure exists even after the procedure call ends.

Example:

Function returnResult(ByRef value)

value = value +1

msgbox("msg box in loop: "&value)

returnResult = value

End Function

Dim x

x=5

call returnResult(x)

msgbox(x)

outut:

first msgbox will be 6

second and third masgcox will return 6

ByVal:

The changed made by the Called Procedure will remain with the procedure. Once the procedure call is ends – the changes will not be reflected.

Example:

Function returnResult(ByVal value)

value = value +1

msgbox("msg box in loop: "&value)

msgbox("msg box in loop: "&x)

returnResult = value

End Function

Dim x

x=5

call returnResult(x)

msgbox(x)

out put:

first msgbox will be 6

second and third masgcox will return 5

1. **Explain what is loose binding? Why is it not a good practice to use it?**

VBScript allows you to use variables without declaring it known as 'loose binding.' It is not an ideal practice to use it. Because if you misspell the same variable when you use it again then VBScript will not show you of the error.

1. **Explain about scrrun.dll in VBScript?**

Scrrun.dll is used very much in programming VB. Scripting Runtime library is very important for the functioning of the Visual basic script. It provides much more functionality such as, text operations, file management and file modification features.

1. What are different types of operators?

Arithmetic Operator - +,-, \*,/,%,^,&

Comparison 🡪 ==, >=, <=, >, <

Logical operators 🡪 AND, OR, NOT, XOR,

Precedence order – ACL(As in Alphabet order)

Arithmetic operators are evaluated in the following order:

* exponentiation
* multiplication
* division
* modulus
* addition and subtraction
* and finally concatenation.

Logical operators are evaluated in the following order:

* NOT
* AND
* OR
* XOR.

For i = 1 To 5 Step 2

If i=3 Then Exit For

document.write("The number is " & i & "<br />")

Next

Step 2 – adds 2 to the i value.

**How to create Objects on VBScrpt:**

VBScript runtime

Dim objectname

Set objectname = Create(Obejct\_Type);

Example:

Dim obj

Set obj = CreateObject("Scripting.Dictionary")

There are different types of objects

If we want to destroy the objects

We have set Object variable to nothing

Example:

Dim obj

Set obj = CreateObject(“Scripting.FileSystemObject”)

Set obj = Nothing

Error Handling:

There are 3 types of errors

* 1. Syntax Errors
  2. Runtime Errors
  3. Logical Errors

|  |  |
| --- | --- |
| **Category** | **Function Name/Statement Name** |
| Options | Option Explicit |
| Script Engine ID | ScriptEngine |
| Variants | IsArray, IsEmpty, IsNull, IsNumeric, IsObject, TypeName |
|  |  |
| Expression | Eval,Execute |
| Control Statement | With...End With |
| Math Function | Randomize |

Eval

The Eval Function executes an expression and returns the result as either a string or a number.

## Execute

The Execute statement accepts argument that is a string expression containing one or more statements for execution.

### Syntax

Execute (expression)

In VBScript, a = b can be interpreted two ways. It can be treated as an assignment statement where the value of x is assigned to y. It can also be interpreted as an expression that tests if a and b have the same value. If they do, result is True; if they are not, result is False. The Execute statement always uses the first interpretation while the Eval statement always uses the second.

Component Object Model (COM)

## What is a Class?

Class is a construct that is used to define a unique type. Like Object Oriented Programming, VbScript 5.0 supports the creation of classes and it is very similar to writing COM objects with VB.

Class is simply the template for an object and we instantiate an object to access the properties and methods of it. Classes can contain variables, properties, methods or events.

Syntax:

Class class\_name

End Class

We Can have variables, methods inside the class.

Class Properties are Let, Set, Get

Class Comp

Private modStrType

Private OS

Public Property Let ComputerType(strType)

modStrType = strType

End Property

Public Property Get ComputerType()

ComputerType = modStrType

End Property

Public Property Set OperatingSystem(oObj)

Set OS = oObj

End Property

Public Property Get OperatingSystem()

Set OperatingSystem = OS

End Property

End Class

Get Is Read-only Type whereas Let and Set are Write Only.

UFT Practice:

VBSctipt is an object-based language – Not an Object oriented language.

Difference between Object based and Object oriented language are:

Object oriented language follows all the concepts of OOPs like inheritance, Abstraction

Object based language has built in Object

2 types of object repositories – Shared .tsr and local .msr

Reusable actions and non-reusable actions

How do you handle in Java tree?

We have to select the java adding then record Operations if still havex problems then tools 🡪 Object identification and java tree object and make necessary changes in mandatory and assistive properties to enable identification.

Descriptive language:

Browser("name:="xxx"").page("name:="xxxx"")

## When ordinal identifiers alone can make an object unique then why they are not given top priority? Why it is first mandatory and next assistive. Why we cannot go for ordinal identifiers directly?

## Consider the following -

## a) If two objects are overlapped on each other than location based object recognition will fail.

## b) If only index based recognition is used your script will work but script execution time will increase.

## Hence mandatory and assistive properties are used.

## Extttension of code file in QTP

## .mts

## DataTable.ImportSheet "..\..\TestData\Input.xls",1,dtGlobalSheet

## DataTable.ExportSheet "..\..\Results\Output.xls","Global"

## Function library extension is .qfl

## Set myShell = CreateObject (“WScript.Shell”)

## WScript.Echo myShell.ExpandEnvironmentStrings( "%PATHEXT%" )

## myShell=Nothing,

## ) Which environments are supported by QTP?

## QTP supports the following environments

|  |  |  |
| --- | --- | --- |
| Active XDelphiJava.NetOracle | People SoftPower BuilderSAPSiebelStingray | Terminal EmulatorVisual BasicVisual AgeWebWeb Services |

## To learn more about Add-ins and how to use them, watch this video [tutorial](https://www.guru99.com/quick-test-professional-qtp-tutorial-1.html).

## 2) What are the types object Repositories in QTP.

## 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"

## 3) Can we call QTP test from another test using scripting. Suppose there are 4 tests and I want to call these tests in a main script. Is this possible in QTP?

## Yes.  You can call 4 or even more scripts in your tests.For this, first you will need to make the Actions in the corresponding scripts re-usable.Then from the destination script you can make calls to these re-usable actions.

## 4) What is action split and the purpose of using this in QTP?

## Action split is to divide an existing action into two parts.The purpose is to divide actions based on their functionality to improve code re-use.

## 5) How will you handle Java tree in QTP ?

## Foremost you will select[Java](https://www.guru99.com/java-tutorial.html) Add - In and launch QTP. Next step record operations on the Java Tree. If you face an issue while recording, you can select Tools > Object Identification > Java, tree object and make changes in mandatory and assistive properties to enable identification.

## Tip: You can base you answer on similar lines for any other object of any environment. For example : If the question is how will check SAP checkbox , You say , first I will select SAP Add in ... and so on.

## 6) Explain how QTP identifies object ?

## QTP identifies any GUI Object based on its corresponding properties.  While recording, QTP will identify and store peculiar properties (as defined in the Object Identification settings) in the object repository of the GUI object . At run-time, QTP will compare the stored property values with the on-screen properties, to uniquely identify the GUI object.

## Learn more about [Object Identification](https://www.guru99.com/quick-test-professional-qtp-tutorial-6.html)

## 7) How many types of recording modes in QTP? Which will be used when ?

## QTP supports 3 types of recording modes

## 1. Normal mode also called Contextual

## 2. Low-level recording mode

## 3.Analog mode

## Normal Mode: It is the default recording mode and takes full advantage of QTP's Test Object Model. It recognizes objects regardless of their position on -screen. This is the preferred mode of recoding and is used for most of the automation activities.

## Low-level recording mode: This mode records the exact x,y co-ordinates of your mouse operations. It is helpful in testing hashmaps. It is useful for recording objects not identified by normal mode of QTP.

## Analog mode: This mode records exact mouse and keyboard "movements" you perform in relation to the screen / application window. This mode is useful for the operation such as drawing a picture, recording signature., drag and drop operations.

## Learn more about [Recording Modes in QTP](https://www.guru99.com/quick-test-professional-qtp-tutorial-26.html)

## 8) How will you  call from one action to another action ?

## We can call an action in 2 ways

## 1) Call to copy of Action. - In this ,the Action Object Repository , Script and Datable will be copied to the destination Test Script. 2) Call to Existing Action. - In this,  Object Repository , Script and Datable  will NOT be copied but a call (reference) would be made to the Action in the source script.

## 9) What are Virtual Objects?

## Your application may contain objects that behave like standard objects but are not recognized by QTP. You can define these objects as virtual objects and map them to standard classes, such as a button or a check box. QTP emulates the user's action on the virtual object during the run session. In the test results, the virtual object is displayed as though it is a standard class object.

## For example, suppose you want to record a test on a Web page containing a bitmap that the user clicks. The bitmap contains several different hyperlink areas, and each area opens a different destination page. When you record a test, the Web site matches the coordinates of the click on the bitmap and opens the destination page.

## To enable QTP to click at the required coordinates during a run session, you can define a virtual object for an area of the bitmap, which includes those coordinates, and map it to the button class. When you run a test, QTP clicks the bitmap in the area defined as a virtual object so that the Web site opens the correct destination page.

## 10) How to perform Cross platform testing and Cross browser testing using QTP? Can u explain giving some example?

## You will need to create separate Actions which take care of different OS and Browsers

## Cross Platform Testing: Using the Built in Environment Variable you can dig up the OS information.

## Eg. Platform = Environment("OS"). Then based on the Platform you need to call the actions which you recorded on that particular platform. Cross Browser Testing: Using this code  Eg. Browser("Core Values").GetROProperty("version") you can extract the Browser and its correspondin version. Ex: Internet Explorer 6 or Netscape 5. Based on this value you call the actions which are relevant to that browser.

## 11) What is logical name of the object?

## Logical name is a name  given by  QTP while creating an object in the repository to uniquely identify it from other objects in the application. This name would be used by the QTP to map the object name in script with its corresponding description in the object repository. Ex: Browser("Browser").Page("Guru99") Here Guru99 is the logical name of the object.

## 12) What is descriptive programming?

## Typically ,an object and its properties must be recorded in the Object Repository to enable QTP to perform action s on it.

## Using descriptive programming , you do not store the object and its property values in the Object repository but mention the property value pair directly in the script.

## The idea behind descriptive programming is not bypass the object repository but help recogonize dynamic objects.

## Learn more about [Descriptive Programming](https://www.guru99.com/quick-test-professional-qtp-tutorial-32.html)

## 13)What are the properties you would use for identifying a browser & page when using descriptive programming ?

## You can use the name property

## ex: Browser("name:="xxx"").page("name:="xxxx"").....

## OR We can also use the property "micClass". ex: Browser("micClass:=browser").page("micClass:=page")....

## 14)Can we record an application running on a remote machine using QTP ?

## Yes .you can record remote application provided you are accessing application through the local browser not via remoter like citrix.

## If you are still unable to record it is advisable install QTP and application, on the same machine

## 15) Explain the keyword CreateObject with an example.

## Creates and returns a reference to an Automation object

## SYNTAX: CreateObject(servername.typename [, location])

## Arguments servername: Required. The name of the application providing the object. typename :  Required. The type or class of the object to create. location :  Optional. The name of the network server where the object is to be created.

## Example : Set IE = CreateObject("InternetExplorer.Application")

## 16) Can you switch between Per-Action and Shared Object Repository ? If yes how ?

## Yes .We can switch. Go to Test--->Settings--->Resources. Here  you have an option to choose repositories.

## 17) What is Object Spy ? How to Use it ?

## Object Spy helps in determining the run & test time object properties & methods of the application under test.

## You can access object spy directly from the toolbar or from the Object Repository Dialog Box.

## It is very useful during Descriptive Programming

## Learn more about [Object Spy](https://www.guru99.com/quick-test-professional-qtp-tutorial-31.html)

## 18) When ordinal identifiers alone can make an object unique then why they are not given top priority? Why it is first mandatory and next assistive. Why we cannot go for ordinal identifiers directly?

## Consider the following -

## a) If two objects are overlapped on each other than location based object recognition will fail.

## b) If only index based recognition is used your script will work but script execution time will increase.

## Hence mandatory and assistive properties are used.

## 19) What is the file extension of the code file in QTP?

## Code file extension is script.mts

## 20) Explain in brief about the QTP Automation Object Model.

## QTP Automation Object model deals with Automation of QTP itself. Almost all configuration and functionality provided by QTP is represented by QTP's Automation Object Model . Almost all dialog boxes in QTP have a corresponding automation object which can set or retrieved using the corresponding properties or methods in the Automation Object Model.QTP Automation Objects can be used along with standard VB programming elements like iterative loops or conditional statements to help you design a script of choice.

## 21) What is the use of Text output value in QTP?

## Text Output values enable you to capture text appearing on the application under test during run-time.

## If parameterized, text output values will capture values appearing in each iteration which would be stored in the run-time data table for further analysis.

## 22) What is Step Generator?

## Step Generator enables use to Add Test Steps in your script. Using step generator you can add steps to your script without actually recording it.

## 23) How to make QTP understand the difference amongst the  same type of objects .Suppose there are 5 check boxes in a page and I have to choose the 2nd one, how to do that through script?

## You can use ordinal identifiers like index along with a little descriptive programming for object recognition.

## Watch a [video](https://www.guru99.com/quick-test-professional-qtp-tutorial-33.html) of this example.

## 24) What is Test Fusion Report ?.

## Test Fusion Report , displays all aspects of a test run and is organized in a Tree format.

## It gives details of each step executed for all iterations.

## It also gives Run-time data table, Screen shots and movie of the test run if opted.

## 25) How can you handle exceptions in QTP?

## In QTP Exceptional handling is done by using

## a. Recovery Scenarios. b. Using “On Error” statement

## In Recovery scenario you have to define. 1. Triggered Events. 2. Recovery steps. 3. Post Recovery Test-Run.

## At Script Level you can use the On Error Resume Next and On Error Go to 0 statement.

## 26) What are the types of environment variables in QTP ?

## Environment variables in QTP are of three types:

## 1) Built-in (Read only)

## 2) User-defined Internal (Read only)

## 3) User-defined External (Read/Write)

## You Set the Environment Variable  using the following syntax

## Environment.Value( "name") = "Guru99"

## You can Retrieve the Environment Variable using following syntax

## Environment.Value("name") -- This will retrun name as Guru99

## Environment.Value("OS")  -- This will return your system OS

## 27) What is the Difference between Bitmap Check point & Image Check point? Bitmap checkpoint does a pixel to pixel comparison of an image or part of an image.

## Image checkpoint does do a pixel to pixel comparison but instead compare image properties like alt text , destination url etc.

## 28) What is the difference between functions and actions in QTP?

## Actions have their own Object Repository & Data Table. Actions help make your Test modular and increase reuse. Example: You can divide your script into Actions based on functionality like Login, Logout etc.

## Functions is a VB Script programming concept and do not have their own Object Repository or Data Table. Functions help in re-use of your code. Ex:  You can create a Function in your script to concatenate two strings.

## 29) What is keyword view and Expert view in QTP?

## Keyword View is an icon based view which shows test steps in tabular format. It also automatically generates documentation for the test steps.

## Expert View gives the corresponding VB Script statement for every test step in the Keyword view.

## 30)  Explain QTP Testing process? -

## Quick Test testing process consists of 6 main phases:

## 1)  Create your test plan - This is preparatory phase where you identify the exact test steps, test data and expected results for you automated test. You also identify the environment and system configurations required to create and run your QTP Tests.

## 2) Recording a session on your application - During this phase , you will execute test steps one by one on your AUT ,and QTP will automatically record corresponding VB script statements for each step performed.

## 3) Enhancing your test - In this stage you will insert checkpoints , output values , parameterization , programming logic like if…else loops to enhance the logic of your test script.

## 4) Replay & Debug - After enhancements you will replay the script to check whether its working properly and debug if necessary.

## 5) Run your Tests - In this phase you will perform the actual execution of your Test Script.

## 6) Analyzing the test results - Once test run is complete, you will analyze the results in the Test Fusion report generated.

## 7) Reporting defects - Any incidents identified needs to be reported. If you are using Quality Center , defects can be automatically raised for failed tests in QTP.

## 31) What are the different types of Test Automation Frameworks ?

## The types of Automation Frameworks are -

## 1) Linear Scripting - Record & Playback

## 2) The Test Library Architecture Framework.

## 3)The Data-Driven Testing Framework.

## 4)The Keyword-Driven or Table-Driven Testing Framework.

## Learn more about [Test Automation Frameworks](https://www.guru99.com/quick-test-professional-qtp-tutorial-34.html).

## 32) How will you check a web application for broken links using QTP?

## You can use the Page Checkpoint which gives a count of valid/invalid links on a page.

## 33) What is a Run-Time Data Table? Where can I find and view this table?

## Data like parameterized output , checkpoint values , output values  are stored in the Run-time Table. It is an xls file which is stored in the Test Results Folder.  It can also be accessed in the Test Fusion Report.

## 34) What is the difference between check point and output value.

## Check point is a verification point that compares a current value for a specified property with the expected value for that property. Based on this comparison, it will generate a PASS or FAIL status.

## An output value is a value captured during the test run and can be stored in a specified location like the  Datable or even a variable. Unlike Checkpoints, no PASS/FAIL status is generated.

## 35) How would you connect to database using[VBScript](https://www.guru99.com/vbscript-tutorials-for-beginners.html)?

## To connect to the database you must know

## a) connection string of your server

## b) username

## c) password

## d) DNS name

## You can code the database connectivity command directly or you can use the[SQL](https://www.guru99.com/sql.html)Query tool provided by QTP.

## 36) What is QTP batch testing tool?

## You can use the Batch testing tool to run multiple scripts. Once the scripts are added in the tool , it  will automatically open the scripts and start executing them one after the other.

## 37) What are the drawbacks of QTP?

## As of QTP version 10

## 1) Huge Tests in QTP consume lots of memory and increase CPU utilization.

## 2) Since QTP stores results in HTML file (and not txt) the result folder sometimes becomes big.

## 38) What is an Optional Step ?

## A step when declared optional is not mandatory to be executed. If the corresponding GUI object is present, QTP performs the operation on it. If the GUI object is not present, QTP bypasses the optional step and proceeds to execute the next step.

## 39) What  is Reporter.ReportEvent ?

## Reporter.Reportvent is standard method provided by QTP to send custom messages to the test results window.

## Syntax

## Reporter.ReportEvent EventStatus, ReportStepName, Details [, ImageFilePath]

## where

## EventStatus = 0 or micPass

## 1 or micFail

## 2 or micDone

## 3 or micWarning

## Results can assume any status like Pass , Fail , Warning etc. You can also send screenshot to the test results window.

## 40) How will you  declare a variable in QTP ?

## You declare using a DIM keyword. You assign value to the variable using the SET keyword.

## Ex.

## Dim temp 'Will declare the temp variable

## Set  temp = 20 ' Will assign a value 20 to temp.

## 41) What is GetRoProperty ?

## GetRoProperty is a standard method provided by QTP to fetch property values of a run -time object.

## 42) What is smart Identification?

## Typically, if even one of the on-screen object property does not match the recorded object property. The test fails.

## In smart identification, QTP does not give an error if the property values do not match, but uses Base filter and Optional Filter properties to uniquely identify an object. In Smart identification, if a property value does not match the script does not fail but it proceeds ahead to compare the next property. Smart identification can be enabled in Object Identification Dialog box.

## Learn more about [SMART Identification](https://www.guru99.com/quick-test-professional-qtp-tutorial-20.html)

## 43) How would you export a Script from one PC to another in QTP ?

## We can make use of the "Generate Script" function available in Object Identification, Test Settings and Tools/Options tab to create a zip of the script at the source computer. These zip files then can be imported into QTP at the destination computer.

## 44) Can launch two instances of QTP on the same machine ?

## No. You can work with only single instance of QTP on the same machine. But QTP itself can work on multiple instances of the Application Under Test (AUT). Ex:  QTP can handle multiple IE browser windows.

## 45) Give the syntax to import/export xls into QTP.

## DataTable.ImportSheet "..\..\TestData\Input.xls",1,dtGlobalSheet

## DataTable.ExportSheet "..\..\Results\Output.xls","Global"

## 46) What is SetToProperty ?

## SetToProperty changes property of an object stored in the Object Repository. However these changes are not permanent.

## 47) What is the standard timing delay for web based application in QTP ?

## The standard delay is 60 seconds. This is can be changed in Test Settigns.

## 48) What is the Action Conversion Tool ?

## It is an in-built tool provided by QTP to convert Actions into Business Process Components.

## 49) What is the extension for a function library ?

## The extension is  '.QFL'

## 50) If the Global Data sheet contains no data and the Local Datasheet contains two rows of data, how many times will the test iterate?

## The test will iterate only once - global iteration.

## 51) Explain how to read registry key in UFT ?

## The example demonstrated here explains how to read registry key in UFT

## ‘Create a shell object

## Set MyShell= CreateObject (“WScript.Shell”)

## Read the value of key from the registry

## RegValue =MyShell.RegRead (varpathofkey)

## ‘in above function we have to pass the path of key in registery’.

## e.g. HKCU\software\ie\settings

## msgbox RegValue

## 52) What are the ways in UFT to get system environment variables in UFT?

## There are three ways to get system environment variables in UFT

## Use the WSH shell object

## Use WMI’s Win32\_Environment Class

## Read variables from the registry

## Set myShell = CreateObject (“WScript.Shell”)

## WScript.Echo myShell.ExpandEnvironmentStrings( "%PATHEXT%" )

## myShell=Nothing,

## The output will be .BAT;.CMD;.VBS;. VBE;. JS;. JSE

## Other user variable, like TEMP, overwrite their system counterpart

## Set myShell = CreateObject( "WScript.Shell" )

## WScript.Echo myShell.ExpandEnvironmentStrings( "TEMP=%TEMP%" )

## myShell=Nothing

## The output will be TEMP:C:\DOCUME~1\You\LOCALS~1\Temp

## 53) Mention the steps required in UFT to send mail from outlook?

## To send mail from outlook in UFT,

## Set Outlook = CreateObject ("Outlook.Application")

## Dim Message 'As Outlook.MailItem

## Set Message = Outlook.CreateItem(olMailItem)

## With Message

## .Subject = Subject

## .HTMLBody = TextBody

## .Recipients.Add (aTo)

## Const olOriginator = 0

## .Send

## End With

## 54) Explain how you can fetch data from database in UFT?

## To fetch data from database in UFT, you have to follow the code below

## Set db= createobject (“ADODB.Connection”)

## db.Open “Provider=Microsoft.Jet.OLEDB.4.0;Data Source=G:\guru99\vb6\admission\_project.mdb;

## Persist Security Info= False”

## Set rst=createobject(“ADODB.Recordset”)

## rst.Open “select\*from Course”, db, 3

## id=rst. RecordCount

## For i=0 to id-1

## Print rst.field (0) & rst.fields (1) & rst.fields (2) & rst.fields (3)

## rst.Movenext

## Next

## 55) What are the codes we can use to get files from ftp server in UFT?

## To get ftp files from ftp server, you have to use below code

## a)      put- To store single file on server

## b)      get- To download single file from ftp server

## c)       mget- To download multiple files from server

## d)      mput- To store multiple files on server

## e)      delete- To delete files on ftp server

## MyShell.Run "%comspec% /c FTP -n -s:" & commandstoworkwithftp & " " & Site, 0,True

## 56) In UFT how you can prevent the system from getting locked?

## To prevent system getting locked, any of the two ways can be used

## Create a simple vbs file having code to press numlock key and run that vbs file

## Edit one registry key “DisableLockWorkstation =1” to disable locking

## 57) What is descriptive programming in UFT means?

## Descriptive programming includes property name and property value.  Whenever UFT is facing difficulty in identifying objects from object repository, and instead the object is directly identified from, the script is known as descriptive programming.

## 58) In UFT explain the difference between qfl and vbs files?

## a)      qfl is quick test function library file while vbs is Microsoft’s vbscript

## b)      qfl is a non-executable file while vbs is an executable file

## c)       To use file in UFT associate qfl file from test setting, while to include vbs file use “execute file statement”

## 59) What is the code to write data to text file in UFT?

## To write data to text file in UFT code is

## Content = “Guru99 Rocks”

## Set Fo = createobject ("Scripting.FilesystemObject")

## Set f = Fo.openTextFile ("c:\myFile.txt",8,true)     ' open in write mode

## f.Write (contents)

## f.Close

## Set f = nothing

## 60) How to write data to excel file in UFT?

## Code to write data to[Excel](https://www.guru99.com/excel-tutorials.html)file in UFT is

## filepath = “C:\Bugs\Reports.xlsx”

## Set objExcel = CreateObject(“Excel.Application”)

## objExcel.Visible= True

## Set Wb= objExcel.Workbooks.Open (filepath)

## Wb.worksheets(1).Cells(1,1).Value = “guru99” read value from Excel file

## 61) How to create TSR file in UFT?

## TSR means Test Shared Repository, it is created to share object repository.

## To create TSR file, follow the steps

## Open object repository

## Go to file menu

## Go to export local objects option and select it

## After that, UFT will ask you to store .tsr file. Give the path and save.  This will create .tsr file in UFT

## 62) How to connect to QC in UFT?

## To connect with QC, UFT provides the option to connect QC directly from UFT GUI.

## a)      Go to file menu

## b)      Select (QC) quality center

## c)       You will be asked to - Enter QC url

## d)      Enter user id, password and project

## Following above steps will allow you to connect with QC, later on you can execute the tests from QC itself.

## 63) What are the types of Automation Framework in UFT?

## In order to ease the process of test automation using UFT, test automation is designed.  There are mainly three types of automation frameworks in UFT

## Keyword Driven Framework: It is used when multiple functionality needs to be tested.

## Data Driven Framework: It is used to test same flow with different test data, test data is given more importance than multiple functionality of application

## Hybrid Framework: It is a combination of data driven framework and keyword.

## 64) When we should use descriptive programming in UFT ?

## Through either object repository or description programming, UFT identifies objects.  Descriptive programming is used in following scenarios

## a)      It is used to remove duplicate objects.  Same objects exists in different screens or windows of your application.  If you use OR in this case you have to store same object under different object hierarchy in OR.  To deal with such situation, descriptive programming is used

## b)      It is not appropriate in certain scenarios to store the objects inside OR (Object Repository).  Suppose if you want to print 100 links on the page, you should not store all links in OR. Instead you should use Description Programming to access those links.

## 65) What is “settoproperty” and when to use it in UFT?

## Settoproperty stands for set test object property.  You can use this property to change the object values at runtime.  You can edit the property values during the runtime, but the changes that are made are temporary.

## 66) How to create an array of dictionary in UFT?

## We can create an array of dictionary using syntax

## Dim ArrayofDictionary(2)

## First element of array

## Set ArrayofDictionary(0)= createobject("scripting.dictionary")

## ArrayofDictionary(0).Add "key1", "temp1"

## ArrayofDictionary(0).Add "key2", "temp2"

## Added keys in first dictionary

## Second element of array as dictionary

## Set ArrayofDictionary(1)= createobject("scripting.dictionary")

## ArrayofDictionary(1).Add "key1", "temp1"

## ArrayofDictionary(1).Add "key2", "temp2"

## Added keys in second dictionary…..and so on

## 67) What is the difference between “Array” and “Dictionary”?

|  |  |
| --- | --- |
| Array | Dictionary |
| Dynamic array is possible | There is no concept of dynamic dictionary |
| Size of array must be set before the use of array | The size of dictionary do not need to be set |
| We have to use redim statement before adding extra element into dynamic array | To add extra element there is no need to write any statement.  We just use add method |
| There is no particular method to release the memory if particular element is not required | Element which is not required any longer can be removed from the dictionary |

## 68) What is round function in UFT?

## Round function in UFT is used to round the decimal For example

## Mydecimal = 6.3433333

## Roundedvalue= Round(Mydecimal , 3)

## Print roundedvalue,  it will print 6.343

## 69) How to find the total number of rows in the webtable in UFT?

## There are three ways which we can find the count of rows in the table in UFT

## a)  Using rowcount property of UFT webtable object

## b)  Using GetROProperty of UFT

## c)   Using HTML DOM + UFT

## 70) How to create excel file in UFT ?

## steps will create excel file in UFT,

## 'Create a new Microsoft Excel object

## Set myExcel = createobject("excel.application")

## 'To make Excel visible

## myExcel.Application.Visible = true

## myExcel.Workbooks.Add

## MyExcel.worksheets(1).Cells(1,1). Value = “Scenario Id”

## MyExcel.worksheets(1).Cells(1,2).Value = “Scenario Name”

## MyExcel.worksheets(1).Columns(1).ColumnWidth = 10

## MyExcel.worksheets(1).Columns(2).ColumnWidth = 40

## MyExcel.worksheets(1).Columns(3).ColumnWidth = 20

## MyExcel.worksheets(1).Columns(4).ColumnWidth = 20

## MyExcel.SaveAs "c:\guru99.xlsx"

## MyExcel.close

## objExcel.Quit

## blnFlag = False

## 72) Explain in what ways we can export datatable to excel in UFT?

## To export data-table to excel, there are two methods.

## a)      DataTable.Export (“C:\export.xls”)

## b)      DataTable.ExportSheet “C:\mysheet.xls”   ( If excel file does not exist, new file is created)

## 73) In datatable sheet in UFT, how to read a value from the cell?

## To read a value from the cell, we follow 2 step process

## a)      We set the row pointer in first step

## b)      In second step we define the parameter/column name from the sheet to read

## Example:

## For this example, we have set the row pointer to 2 in transaction sheet

## Datatable.GetSheet(“Transactions”).SetCurrentRow(2)

## Now, we have to specify that we want to read a value from the module\_name column from the transaction sheet

## Print datatable.Value (“Module\_Name, “Transactions”)

## 73) What are the loops available in UFT and what they do?

## There are 3 loops available in UFT

## a)      Do…..Loop : Do Loop will run a block of statements repeatedly

## b)      For…..Next : For Next Loop will execute a series of statements until a specific counter value

## c)       For……Each : In order to execute a series of statements for each statements for each object in collection “For Each Loop” is used

## While….Wend Loop : While Wend Loop is used to execute a series of statements as long as given condition is true

## 74) What are the types of error need to be handle in UFT?

## There are three types of error that one will face in UFT

## a)      Syntax Errors

## b)      Logical Errors

## c)       Runtime Errors

## 75) What are the ways you can handle run time errors?

## There are various ways to handle run time errors

## a)      Using test settings

## b)      Using on error statement

## c)       Using err Object

## d)      Using Exit Statement

## e)      Recovery Scenarios

## f)       Report Object

## 76) What is the difference between exitaction and exititeration?

## Exitaction is used when we want to exit from a particular action, while exititeration is used to exit from a particular action iteration of an action.

## 77) In QTP how you can remove the spaces from string?

## You can use replace function to remove spaces from string in QTP

## Print replace(“ sdsd  sd sd s “, “ “,”””)

## Output will be sdsdsdsds

## Itrim function can be used if only leading spaces from string needs to be removed

## Print Itrim(“ sdsd sd s   “) à Output will be “sdsd sd s”

## You can use rtrim function to remove trailing spaces from string

## Print rtrim(“ sdsd sd s   ” )  à Output will be “  sdsd sd s”

## 78) In QTP how you can get the last character from a string?

## Code to get the last character of a string in QTP

## print right( “junior,1) ‘ à Output will be “r”

## 79) How to add synchronisation points in QTP?

## There are 4 ways through which we can add synchronisation points in QTP

## a)      Wait statement :  This statement will pause the execution for x seconds until object comes up

## b)      Wait property : This method will wait until property of object takes particular value

## c)       Exist statement : This statement will wait until object becomes available

## d)      Sync method: The code will wait until browser page is completely loaded. For web application testing this method is used. 80) In QTP explain what is crypt object

## Crypt object in QTP is used to encrypt a strings.

## Syntax

## Crypt.Encrypt(“Guru99”)

## Example :

## In this example, value in pwd variable is encrypted using the Crypt. Encrypt method.

## Then this encrypted value is entered into editbox.

## pwd= “myvalue”

## pwd = Crypt.Encrypt (pwd)

## Browser(“myb”).WinEdit (“pwd”). SetSecure pwd

## 81) Mention what is the difference between Excecute file and loadfunction library ?

## In execute file, we can’t debug the statements.  With loadfunction library, statements can be debug and can also load multiple library files.

## 82) Explain how you can find length of array in QTP?

## The code to find the length of array in QTP is

## print (ubound(arr)+1)

## Ubound returns the last index in array- so length of array will be +1. This will be total number of elements in array

## 83) Mention what are the different types of recording modes in QTP? Which will be used when?

## QTP supports 3 types of recording modes

## a)      Normal mode : It is the default recording mode and used for most of the automation activities. Regardless of their position on screen it recognizes objects.

## b)      Low level recording mode:  It is useful for recording objects not identified by normal mode of QTP. It records the exact x,y coordinates of your mouse operations.

## c)       Analog mode: This mode is useful for the operation such as recording signature, drawing a picture, drag and drop operation.

## 84) In what ways you can call from one action to another action?

## There are two ways you can call from one action to another action

## a)      Call to copy of action:  In this,  the script and data-table, action object repository will be copied to the destination Test Script

## b)      Call to existing Action: In this, script data-table and object repository are not copied instead a call reference would be made to the action in the source script

## 85) What is Optional step in QTP ? How you can add optional step in QTP?

## When running a test, it test fails in opening a dialog box, QTP does not necessarily abort the test run.  It bye passes any step designated “optional” and continues running the test.  By default QTP automatically marks as optional steps that open certain dialog boxes. In order to set an optional step in the keyword, right click and select “Optional Step”.  The icon for optional step would be added in next step. In the expert view to add optional step, add optional step to the beginning of the VBScript statement.

## 86) How to define array in QTP?

## Array can be defined in 3 ways in QTP

## a)      Fixed size array in QTP

## Dim A (10) - single dimension

## Dim MyTable (5,10) – multi-dimension

## b)      Dynamic array-size not fixed

## Dim MyArray()ReDim MyArray(25)

## c)       Using Array Function in QTP

## A= Array (10, 20,30)

## B= A(2) ‘ B is now 30

## 87) How you can write contexts to text file in QTP?

## Content = “Guru99”

## Set Fo = createobject(“Scripting.FilesystemObject”)

## Set f =Fo.openTextFile(“c:\abc.txt”, 8,true)

## f.Write (contents)

## f.Close

## Set f= nothing

## 88) When ‘option explicit’ keyword is used in QTP?

## To specify that all variable must be declared before use in QTP,  ‘Option Explicit’ keyword is used.

## 89) In QTP how you can exit for loop?

## You must use “Exit For” statement to exit “for loop” in QTP. “Exit For” statement will get the control out of the “for loop”

## For count= 1 to 3

## TempNum= mid(Tempstr,count,1)

## If isnumeric(TempNum) Then

## LenghtNum = LengthNum & TempNum

## Else

## Exit For

## End If

## Next

## GetStrLenNumber = LengthNum

## 90) How to find array size in QTP?

## Size of an array in QTP will be found by using the following code Print (ubound(arr)+1)

## Ubound returns the last index in array- so size of array will be +1

## 91) In QTP, explain what is qrs file?

## qrs means “Quicktest Recovery Scenario”. By using recovery scenario manager we can handle exceptions in test execution.In QTP using recovery scenario manager we can handle exceptions in test execution. In QTP when you create a recovery scenario, you must save it in .qrs file. qrs file may have any number of scenarios defined in it.

## 92) What is the significance of “action 0” in QTP?

## “Action 0” is created by default when you create a new test in QTP along with action 1.  To determine the sequence in which we call other actions 1,2,3 etc. action 0 is used.

## 93) Explain how you can replace string in QTP?

## To replace part of string in QTP we will use the code as shown below Example,

## Str = (Guru99)

## Suppose if you want to replace “99” with “88” then the code will

## print replace(str,“99”, “88”) output will be “Guru88”

## 94) What are the various automation frameworks available in QTP?

## Various types of automation frameworks available in QTP are

## a)      Linear Scripting

## b)      The Test Library Architecture Framework

## c)       The Data Driven Testing Framework

## d)      The Keyword Driven or Table Driven Testing Framework

## e)      The Hybrid Test Automation Framework

## 95) What is ‘Object Spy’ and what is the function of object spy in QTP?

## ‘Object Spy’ is a feature in QTP by using which you can view both the test and run time object properties and methods.

## 96) What is “GetROProperty” and what are the steps involved in using GetROProperty?

## “GetROProperty” is an in built method used to retrieve runtime value of an object property.

## To use GetRoProperty it involves four steps

## a)      Record the object on which you want to use the GetROProperty in Object Repository

## b)      Identify the run time property for the recorded object which could be used

## c)       To retrieve the identified run time property and store the value in a variable

## d)      Use this value for further deductions

## 97) Explain how you can find the absolute value of the number in QTP?

## To find out the absolute value of a number a built in function in QTP is available

## Example-   a= -1

## Print abs(a) ‘output will be 1

## This code will find the absolute value of a number

## 98) How you can check if parameter exists in Datatable?

## To check whether if parameter exists in data table we will use the code

## on error resume next

## val=DataTable(“ParamName”, dtGlobalSheet)

## if err.number<>0 then

## ‘Parameter does not exist’

## else

## ‘Parameter exists

## end if

## 99) In QTP explain what is keyword driven automation framework?

## In keyword driven automation framework, the focus is mainly on keywords/functions and not the test data.  It means the complete focus is on creating functions which maps the functionality of the application.

## 100) In QTP how you can use Xpath to identify objects?

## Xpath can be used to identify only web objects. We can use the following code to identify objects.

## Set oPage=Browser(“myGoogle”).Page(“myGoogle”)

## oPage.WebEdit(“xpath:=//INPUT[@name=‘nameofeditbox’]”).Set “search term”

## ‘Enter value in google edit box

## Here you can get 3 Questions bonus :-) 101) Explain how you can delete excel file in QTP? To delete excel file in QTP, Set fo = createobject(“Scripting.filesystemobject”) fo.deletefile(“C:\xyz.xlsx”) Set fo=nothing

## 102)  What factors affect bitmap checkpoints ?

## Bitmap checkpoints are affected by screen resolution and image size.

## 103)  What is Accessibility Checkpoint?

## World Wide Web Consortium (W3C) came up with some instructions and guidelines for Web-based technology and information systems to make it easy for the disabled to access the web. For example the standards make it mandatory to have an 'alt text' for an image. So a blind person who is accessing the website, will use text - to -speech converters and atleast understand what the image is about if not see it. All these standards are checked by Accessibility Checkpoints.