RPA UiPath Interview Questions and Answers (Quiz Series - 16)

140) How many ways to create variable?

You can create a variable in **2 ways**:
1. From the Activities panel, drag an activity to the Designer panel. Right-click a field and select Create Variable from the context menu, or press Ctrl+K. The Set Var field is displayed.
2. Fill in the name and press Enter. The variable is created and visible in the field.

141) What are session variables?

Session Variables in UiPath are particular to one Process of the instance. If more instances of the corresponding process are continuing at the same time, that may have the same session variables but the values will be changed.

142) What is mean by generic variable in UiPath?

The generic value variable is a type of variable with a wide range that can store any kind of data, including text, numbers, dates and arrays, and is particular to UiPath Studio. Generic value variables are automatically converted to other types, in order to perform certain actions.

143) What is the use of Element Exists in UiPath?

Element Exists is used to recognize the UI Element which is present or not during the performance. The output of the active support only Boolean in Element Exists.

144) What is class and object in UiPath?

➔. **Object:** objects are reusable in local project or across projects when packaged as libraries. upgrade application and process UI elements in one go with UI libraries.

Class: In Object Oriented Programming, a Class is **a blueprint for an object**. In fact, classes describe the type of objects, while objects are usable instances of classes. Each Object was built from the same set of blueprints and therefore contains the same components (properties and methods).

145).What arearguments in UiPath& directions of Argument?

Arguments are used to pass data from a project to another. Additionally, arguments have specific directions (In, Out, In/Out, Property)

IN – Which means they are passed in and not returned.

OUT – A parameter marked OUT usually means that the value of the parameter when it is being passed to the function is not of any importance.

In fact, if it being passed by pointer, it may even be required to be NULL, and the function will allocate memory and pass a value back to you. Assign activity is required for this type of argument otherwise this argument will not take any value.

An IN/OUT parameter usually indicates something where both the input and output values are meaningful.

146). What Type of Variables & Arguments are used in UiPath?

We have text variables, Boolean variables, integer variables, Array variables, Date & Time variable, Data Table Variables. By Using Ctr+K Key we can create variable or we can directly create variable in variable panel.

Arguments are used to pass data from one workflow to another. They can store data dynamically & pass it on. Arguments have specific directions. The directions can be In, Out, In/Out.

147). What are Scalar Variables?

Variables that hold a single value of a fixed type are called Scalar Variables. For ex., Characters, Booleans, numbers, Date Times.

148). What is Dictionary?

In general, a Dictionary is a collection of words and their Meanings/Definitions.

In the same Dictionary in any programming language is a collection of Keys and Values, where "Key" is equivalent to Words and "Value" is equivalent to Meanings/Definitions.

The **Dictionary<TKey, TValue>** is a generic collection class available in the System.Collection.Generics namespace. Here "TKey" denotes the type of key and "TValue" is the type of TValue.

Example of Dictionary

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Implementation using UiPath:

Let us implement a workflow to achieve the below functionalities

Major Steps That We Will Implement:

1. Defining a Dictionary
2. Adding items to the Dictionary
3. Accessing items from the Dictionary

Step 1:
Drag "***Assign***" activity into the designer panel and define the dictionary.

my_Dictionary = new Dictionary (Of String, String)
Here my_Dictionary is of System.Collection.Generics.Dictionary<String, String> type

Step 2:
Drag "***Invoke Method***" activity into the designer panel to add items to the Dictionary.

Example:
Key: INDIA
Value: New Delhi

Step 3:
Another way of adding items Dictionary is by using Microsoft.Activities.Extensions package.

Drag "***Add to dictionary***" activity into the designer panel to add items to the Dictionary.

Example:
Key: USA
Value: Washington, D.C

Step 4:
Drag "***Message Box***" activity to display the first added Key and Value pair
i.e. Find the Value of the Key "INDIA"

Step 5:
Drag "***Message Box***" activity to display the second added Key and Value pair.
i.e. Find the Value of the Key "USA"

Step 6:
Finally, execute the workflow

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148) What is an array?

An array is an ordered collection of items, where each item inside the array has an index. Taking the one-dimensional array one step further, we can have arrays with two (or even more) dimensions.

149) Difference Between list and Array?

→**a) Array:** The array variable is a type of variable which enables you to store multiple values of the same type.

UiPath Studio supports as many types of arrays as it does types of variables. This means that you can create an array of numbers, one of strings, one of Boolean values and so on.

b) List: If you want to work with a collection that doesn't have fixed number of elements, you can use a list instead of any array

150). What is array & what is list?

a) Arrays:
An array is an ordered collection of items, where each item inside the array has an index. Taking the one-dimensional array one step further, we can have arrays with two (or even more) dimensions.

b) Lists:
It's a collection of items (called nodes) ordered in a linear sequence.
There is a general theoretical programming concept of a list, and there is the specific implementation of a list data structure, which may have taken this basic list idea and added a whole bunch of functionalities. Lists are implemented as linked lists (singly, doubly, circular, …) or as dynamic (re-sizable) array.

c) An Array Vs A List
A list is a different kind of data structure from an array.

The biggest difference is in the idea of direct access Vs sequential access. Arrays allow both; direct and sequential access, while lists allow only sequential access. And this is because the way that these data structures are stored in memory.

In addition, the structure of the list doesn't support numeric index like an array is. And, the elements don't need to be allocated next to each other in the memory like an array is.

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151). Difference between sequence flowchart :

→**Sequences** :

Sequences are the smallest type of project. They are suitable to linear processes as they enable you to go from one activity to another seamlessly, and act as a single block activity. One of the key features of sequences is that they can be reused...

Flowcharts :

Flowcharts can be used in a variety of settings, from large jobs to small projects that you can reuse in other projects. The most important aspect of flowcharts is that, unlike sequences, they present multiple branching logical operators

Ref: https://forum.uipath.com/t/difference-between-sequence-flowchart-statemachines/14486

→The **Assign** activity is an important activity that is going to be used quite often, as it enables you to assign a value to a variable.

You can use an **Assign** activity to increment the value of a variable in a loop (see the example in the The Do While Activity chapter), sum up the value of two or more variables and assign the result to another variable (see the example in the Generic Value Variables), assign values to an array (see Array Variables) and so on.

By default, this activity is also included in the **Favorites** group. To remove it, right-click it and select **Remove**.

Ref: https://docs.uipath.com/studio/docs/the-do-while-activity

153).What is Workflow analyzer?

→Workflow Analyzer is a static code analyzer that ensures your project meets high quality and reliability standards. A static code analyzer checks for inconsistencies without actually executing the project, as opposed to dynamic analyzers which step in during execution.

154).Types of Workflows in UiPath?

a) Sequences- The sequence is actually the small type of projects which are suitable mainly for linear processes & will enable you to switch from one activity to another seamlessly. It actually acts as a single activity block. We can reuse them for many times.

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b) Flowchart- It helps in large jobs as well as in small projects & you can also use them in different projects Flowcharts help in presenting multiple branching of logical operators, helps in building complex business & for connecting the activities in many ways.

c) State Machine- when a machine is using a certain number of states for automation during the execution it is known as the state machine. it will only switch from one state to another if any action is triggered.

155) What is Switch & flow switch In UiPath?

The **Switch** activity enables you to select one choice out of multiple, based on the value of a specified expression.

A **FlowSwitch** activity works like a FlowDecision except instead of being restricted to a True and False branch. Each branch of a FlowSwitch activity is called a FlowStep.

156)What is difference between for each, for each row & parallel For each?

For Each– allow you to iterate through a collection of items. It can be an array, a list, a datatable etc.

For each row-When using For each you need to specify the data type and because you might need to iterate through a data table more often you have the specific Activities for Data tables.

Parallel for Each-Asynchronously executes a series of activities on each element of an enumeration, in parallel.

157). What is Credentials Manager? How it is used in Project?

In Windows, you can view and manage your network-based logon credentials (i.e., usernames and passwords) using Credential Manager.
With UiPath, you can automate the process of creating, querying and deleting the credentials through some dedicated activities.
To get credentials from the windows credential manager, you have to use the **Get Secure Credential** activity.

158). If you want to use python in UiPath which activity you should use?
- We want to use Python in UiPath we need to install Python Activities Package from Managed Package in UiPath Studio.

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- The purpose of this package is to enable to invoke Python scripts and methods in any workflow directly from our product. We can also pass input arguments to the invoked code, as well as retrieve the output data generated by the activities.
- The **Python Scope**container activity connects to the Python environment installed on the machine and enables us to use the rest of the activities within itself.
- The PythonObject variable is specially designed to handle and manipulate Python data. By using the **Load Python Script**activity, you can easily assign the code from any file containing a Python script to a PythonObject and you can also convert it to a .NET data type by using the **Get Python Object**
- With this powerful variable at hand, you can run scripts, extract .NET types or invoke Python methods by using the dedicated activities for each of these tasks.

159). What are UI Activities in UiPath?

UiPath includes **300+ inbuilt** activities that cover the broad spectrum of process automation as well as application integration design works.

160). Explain state machine design?

A state machine is a type of automation that uses a finite number of states in its execution. It can go into a state when it is triggered by an activity, and it exits that state when another activity is triggered.

Another important aspect of state machines are transitions, as they also enable you to add conditions based on which to jump from one state to another. These are represented by arrows or branches between states.

There are two activities that are specific to state machines, namely State and Final State, found under Workflow > State Machine.

State machine design consist of

1. Init
2. State
3. Final State.

161). What is Control Flow?
Control-flow is the order in which particular actions are taken. It defines the rules and automatic decisions that the workflow will take.

- If-Else Statement

- Loops are structures most often used to automate repetitive tasks.
  In sequence, While, Do-While and For Each loops are used.

162). What is the difference between While Loop and Do-While Loop?

While: if the condition is met, the set of actions in the body are executed.

Do While: the actions are executed and then, if the condition is met, the actions are executed again.

163). What is the sequence, flowchart and state machine?

Sequence:

Sequences are the smallest type of project. They are suitable to linear processes as they enable you to go from one activity to another seamlessly, and act as a single block activity. One of the key features of sequences is that they can be reused...

Flowcharts:

Flowcharts can be used in a variety of settings, from large jobs to small projects that you can reuse in other projects. The most important aspect of flowcharts is that, unlike sequences, they present multiple branching logical operators, that...

State Machine:
A state machine is a type of automation that uses a finite number of states in its execution. It can go into a state when it is triggered by an activity, and it exits that state when another activity is triggered. Another important aspect of state.

Source : Google, UiPath Community, Blogs, EmergenTeck.

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