IBM RPA BASIC COURSE

1. **What is RPA?**

Ans:- Robotic Process Automation (RPA) is the automation of computer-centric processes using software robots that can emulate human actions in the computer. These software robots, or bots, can be attended or unattended.

The processes that are candidates for automation are generally time-consuming and highly repetitive processes, that is, they follow a fixed and long flow, with predefined rules and well-determined input and output parameters.

1. **Attended Bots or Robotic Desktop Automation?**

Ans:- A specialized type of RPA designed to help humans on their daily tasks by automating the mechanical part of their everyday work. These types of bots require human interaction to be able to complete their automation goal.

1. **Unattended Bots?**

Ans:- Unattended bots don't need human interaction to complete their automation goal. They might rely on human data input, like documents or email messages.

1. **What is hyper automation?**

Ans:- Hyper automation is the combination of advanced technologies such as machine learning, Artificial Intelligence, and process mining, in combination with RPA, to identify and automate significant processes, and also improve existing automation.

1. **What is the advantages of automating process?**

Ans:-  • Accuracy, since bots eliminate errors during data entry in systems.

• Bots have high availability with uninterrupted executions.

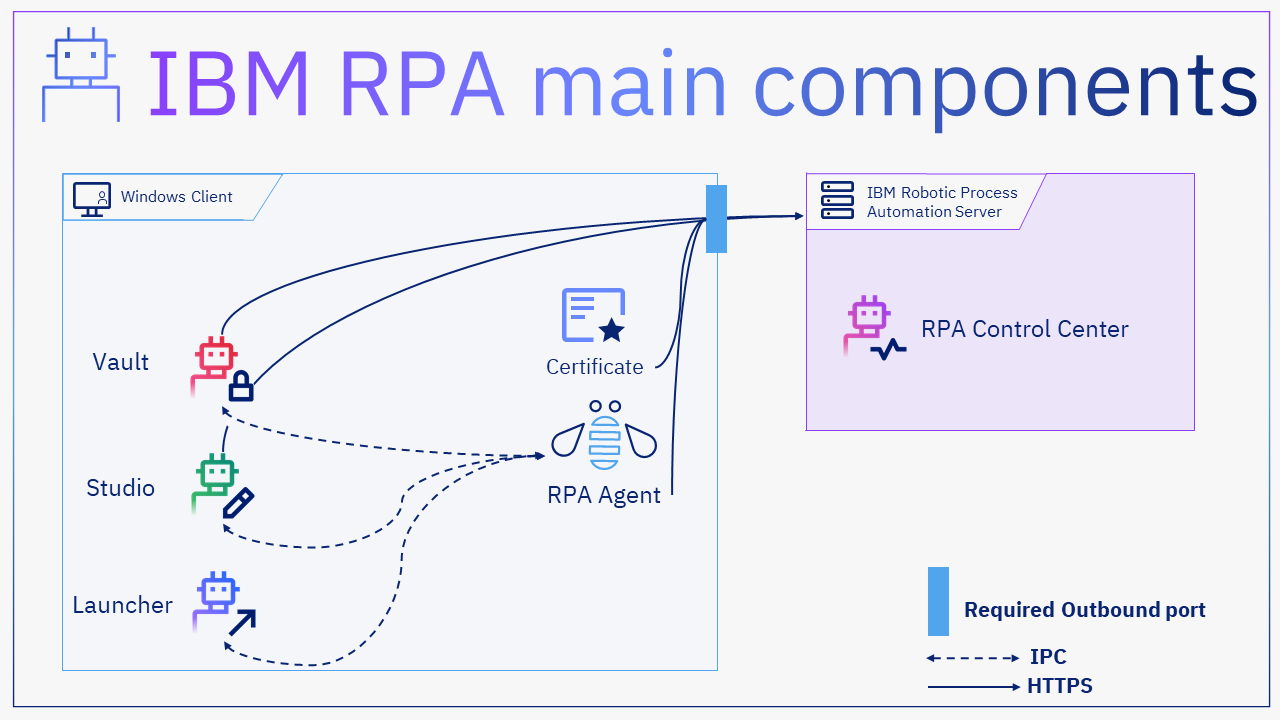
• Bots can process high volumes of data with concurrent processing.

• Integration with legacy systems without the need for customizations.

• Real-time data visualization with dashboards.

1. M
2. N
3. V
4. H
5. K
6. L
7. T
8. E
9. Q
10. W
11. P
12. D
13. Z

IBM RPA main components



**Windows Client**

The client-side is agent-centric, allowing main communication between client and service.

**IBM RPA Vault**

The Vault is an IBM RPA tool used to store encrypted credentials. A credential consists basically of sensitive data used during an automated task, like the user and password from a login process.

The Vault has two distinct modes named System Vault and User Vault that can be used simultaneously.

* The RPA Vault, or System Vault: is recommended for unattended automation, where the process runs in the background and it needs a credential to access a specific system.
* The RDA Vault, or User Vault: is recommended for attended automation, where the bot needs human interaction to perform its task. Thus, when a credential is needed, the bot will prompt the user for the Vault's password to access its credentials.

**IBM RPA Studio**

* IBM RPA Studio is the IBM RPA bot authoring tool. IBM RPA Studio is an integrated development environment (IDE) that uses IBM RPA’s proprietary scripting language.
* You can use it to develop, run, test, and publish bots on the platform, requiring no previous experience with programming languages in general. With IBM RPA Studio, you can develop your RPA script by drag and drop function in a modern and intuitive layout.
* Also, IBM RPA Studio has tools that improve the way that you develop your bots, such as Machine Learning tools, PDF handling tools, Regular Expression Builder, workflow files, spreadsheet files, report files, text files and many other features.

**IBM RPA Launcher**

* The IBM RPA Launcher is a client-side component. Use the RPA Launcher to run bots manually on your computer.
* The Launcher interface displays a set of buttons for running robots that the logged-in user has access to.

**License and Certificate**

* The license validates and controls IBM RPA instances available to you. You have a limited amount of licenses to run certain tools and features in the SaaS offering, and you must purchase more instances if you want to run more services using the same license. In the on premises offering, despite the RPA client displaying an unlimited amount of licenses for each RPA tool’s instance, license usage is controlled by IBM License Metric Tool (ILMT) which might charge for additional usage of IBM RPA instances.
* The computer certificate verifies if the computer is properly registered to an RPA environment, enabling the connection between the RPA client and server. The certificate in IBM RPA follows the X.509 template and is installed on the computers where the platform was installed.

**IBM RPA Bot Agent**

The IBM RPA Bot Agent is an IBM RPA’s Windows service. By default, the service starts with the operating system and it is responsible for activities such as:

* Log synchronization
* Schedules
* Web API, using the 8099 port
* Execution of bots, using the 8099 port
* Bot Runtimes
* Orchestration
* Licensing
* Chatbot
* IVR
* Web Recorder for Google Chrome
* SignalR connections hub

**IBM RPA Server**

The server side of IBM RPA manages administration resources and deploy services such as:

* RPA Control Center
* OCR
* Antivirus

**IBM RPA Control Center**

* IBM RPA control center is the control room for managing and auditing resources that are related to your solution environment. It centralizes all operation functions into a robust interface.
* You perform the overall system administration in the RPA control center. You can schedule bots, set bots for manual launching, and orchestrate bots. Bots in the RPA control center are under an embedded revision control system.
* In the RPA control center you can visualize data of bots in operation in dashboards, manage the organization's available computers and active users, among other advanced functions.

For more information, about the main components of IBM RPA and how they relate to each other, see the <https://www.ibm.com/docs/en/rpa/21.0?topic=architecture>

IBM Robotic Process Automation Studio is the integrated development environment (IDE) of IBM RPA. To learn how to use it, see – https: //www.ibm.com/docs/en/rpa/21.0?topic=automation-overview-rpa-studio

WDG Automation language or WAL(in short)-> is a procedural strongly types automation language used only in the WDG automation platform for building bots. You won’t find it anywhere else.

Main features of WDG Automation tool – 1. Defining variables, 2. Importing assets, 3. Line comments 4. Command comments and subroutines

## Script, Designer and Call Graph

## 

## Debugger – important point is breakpoint

## Publishing, Repository and Revision Control

QUIZE-1

1. In the SaaS installation, the user must be connected to the internet at all times to access the platform. - true
2. The SaaS installation can be done in two ways. Drag and drop them on the column.-setup wizard,windows command prompt
3. The **/exenoui** line parameter is responsible for: disable the graphical user interface
4. When using the **installlevel**parameter on the windows command prompt, the values 1 and 4 represent respectively: typical and complete
5. In the setup wizard, the proxy configuration is required if there is an existing proxy server. – true
6. Some of the platform services take some time to start running. The message \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ usually appears if the computer has just started and the services are not yet ready. – you’re out of license
7. To resolve the issue with the IBM Robotic Process Automation Agent you must: start or restart the service.
8. You must enter two datas to activate the license. Drag and drop them on the column. -license id, license password
9. To create a new tenant what information is needed: tenant name, owner name, owner email, and if is approved
10. What types of installation does IBM Robotic Process Automation On-premises Client allow? Drag and drop them on the column. – typical , custom, complete
11. Some of the information that can be sent by the email server are: user information, such as confirmation \_changes\_ to the user \_accounts\_ and reset \_password\_
12. The 20.12.0 release introduced a new IBM RPA CA certificate. If you are upgrading from a version prior to 20.12.x, you must update your current certificate. – true
13. The installation of on-premises is divided in two parts: \_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_. -client installation, server installation.
14. *The logs are generated daily by the platform and are named as: Logs.{Year of creation}.{Month of creation}.{Day of creation}... true*
15. Which databases are required to install perform server installation? Drag and drop them on the column. – address, automation, knowledge, wordnet

1. To troubleshoot when a service does not respond, just open IIS and stop the service. If it does not work, start the service and stop again. – false
2. In the process of troubleshooting when you cannot run scheduled executions, after locating your computer in the list of computers, click the vertical ellipsis button ⋮and click \_\_\_\_\_\_\_\_\_\_\_\_\_ and run the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. – download certificate, download file certificate

18.

open IIS, go to sever certificates, On actions-click import to install a new certificates, select the .pfx file, enter the certificate password, and select personal, click ok

# What are assets?

* Assets are files or instances of web services used by our bots that are incorporated into the scripts.

PART-2 QUIZE

Review the following statements:

I) Parameters are numeric variables defined in WDG Automation Studio.   
  
II) Parameters are created on the Web Client, and can have values accessed by any Client script.   
  
III) There is only one way to get parameter, which is through the *getParameter* command.   
  
IV) The *getParameter* command  gets the value of a single client  parameter,  and *getParameters*  allows the values of multiple parameters to be obtained at once.   
  
V) Parameters are a great resource for getting values for the script in scenarios where these values are not initially controlled by the robot. 

Check the alternative that contains all the correct statements.

Select one:



I, II, III and IV. X



I, IV and V. X



II and V.



II, IV and V. A



IV and V.

What are parameters within the WDG Automation context?

Select one:



These are variables defined in WDG Automation Studio. X



These are subroutines defined in WDG Automation Studio. X



They are Text type variables defined in the Web Client.



These are assets imported into WDG Automation Studio.



They are numerical variables. X

What is the command used to export an asset to use in the script?

Select one:



Write to file



Set Variable



Export Asset A



Move File



Import file

Review the following statements:

I) To start pdf manipulation, we use the*pdfClose* command.  
  
II) *pdfSetValues* used to assign a value to a specific field in an editable PDF file.   
  
III) The Field Mapper tool is used to map FIELDS of PDFs with mappable fields.   
  
IV) When using the Field Mapper tool, we abstract the manual use of the *pdfGetValue* command through the "Get" option and *pdfSetValue*through the "Set" option.  
  
V) With the region selector tool we can get a PDF region just like text. 

Check the alternative that presents all the correct statements.

Select one:



Only statement I.



I and V.



II, III and IV. A



II, IV and V.



All statements are correct.

Review the following information:

I) WDG Automation enables mass data processing in the database, thus ensuring performance and consistency in interactions.   
  
II) All databases have the same syntax for connection string.  
  
III) For connection to mySQL database it is necessary to make a manual configuration of the connector on the target machine.   
  
IV) To execute a stored procedure we use the *sqlProcedure* command and to have the result of a procedure we use the *sqlReaderProcedure* command.  
  
V) The *sqlExecute* and *sqlExecuteReader* commands allow SQL statements to be executed, the difference between them is that *sqlExecute* returns a data table and number of rows and columns, and  *sqlExecuteReader* returns only the rows that have been affected. 

Check the alternative that presents all the correct statements.

Select one:



Only statement I.



I and V.



I, III and IV. A



II, IV and V.X



All statements are correct. X

What command is used to terminate the database connection?

Select one:



Terminate SQL Connection A



Connect to SQL Server



SQLite Connection



Run SQL Command

What are the asset options available in WDG Automation Studio?

Select one:



Variables, Subroutines, and Commands.



File, Audio, Image, Web Service, and Grammar. A



File, Variables, Subroutines, and Commands.



Subroutines, Audio, Image, and Variables.



Audio, Subroutines, and Commands.

Read the following data table sentence in WDG Automation:

"The delete Column command allows you to delete a column as well as all its values and shifts the following columns to the left."

Select one:

True A

False

What command is used to assign a value to a specific field in an editable PDF file?

Select one:



Assign Value to PDF A



Open PDF File



Merge PDFs



Set Variable



Close PDF

What the Add row (*addRow*) command does?

Select one:



Writes a table of data to a text file.



Copies the values of one or more specific rows from one table to another.



Allows you to add a new row of values to a Data Table, even if the table contains values. A



Deletes a column from a data table.



Updates existing values in a specific row of the table.

Final Quize

Assets are files or instances of web services embedded in the script for the bot to use by exporting them at run time.

Select one:

True A

False

When installing via the Command Line, what is the purpose of the installevel command?

Select one:



a.Determine the type of installation



b.Determine the proxy address



c.Determine the region in which the information generated by WDG Automation tools will be stored X



d.Activate the installation's silent mode



e.Disable the graphical interface of the installation

In a custom installation, while you can choose which tools and features to install, which of the following features **must**be installed?

Select one:



a.WDG Launcher



b.AlwaysOn



c.WDG Automation Studio X



d.Web Client



e.Runtime

Which of the following is a function of the WDG Automation Studio Log Message command?

Select one:



a.Print the results of script errors



b.Print the commands’ results in text files X



c.Print errors in the script



d.Print an output message

Which of the following are correct? There might be more than one correct answer.

Select one or more:



a.During installation, the machine's MAC address is not automatically identified



b.If the services are not started automatically after restarting the computer, it is possible to start them manually A



c.The license number and password are mandatory at installation A



d.When connecting with the proxy, the configuration screen displays a confirmation message indicating that the connection has been established A

Which of the following is **not**a user requirement?

Select one:



a.Antivirus A



b.Administrator privileges



c.License password



d.License identifier



e.Customer Code

When installing via Command Line, what is the purpose of the **qn**command?

Select one:



a.Determine the type of installation



b.Disable the graphical interface of the installation



c.Determine the region in which the information generated by WDG Automation tools will be stored X



d.Determine the proxy address



e.Activate the installation's silent mode

WDG Studio is integrated with WDG Automation's built-in version control system, allowing scripts to be published to the client repository and WDG app. Which of the following does WDG's version control system allow you to do? There might be more than one correct answer.

Select one or more:



a.Simple incremental versioning: each published script increments the last version number A



b.Restoration: Earlier versions of a script can be restored to accommodate changes A



c.Production version: a specific baseline version can be referenced as the production version, making it accessible to be used when calling the bot individually or via other scripts A



d.Modification history: the script’s modification history can be viewed in comments added during its publication A

The WDG Launcher is the tool responsible for keeping the client’s system access data secure.

Select one:

True X

False

In WDG Automation, data tables are two-dimensional arrays divided into columns and rows, where each set of these form a cell that can store values.

Select one:

True A

False

What three visualization interfaces in the WDG Automation Studio tool assist in the bot building process?

Select one:



a.Designer, Script, and Workflow



b.Designer, Routines, and Call Graph



c.Designer, Script, and Call Graph



d.Designer, Assets, and Call Graph



e.Designer, Variables, and Call Graph X

How are breakpoints defined?

Select one:



a.Clicking on the right side of the command line in the Script interface



b.Clicking on the left side of the command line in the Call Graph interface



c.Clicking on the left side of the command line in the Designer interface A



d.Clicking on the right side of the command line in the Designer interface



e.Clicking on the left side of the command line in the Script interface

The insertion of license data such as license number and password is optional, but it is advisable to insert it during the installation.

Select one:

True A

False

In which path do you find PDF tools?

Select one:



a.Home > Edit



b.Tools > PDF A



c.Tools > Image



d.Tools > Image



e.Tools > General

To access the WDG Automation tools and applications, you must have:

Select one:



a.Administrator privileges



b.Email



c.WDG Launcher installed X



d.Antivirus installed X



e.Tenant registration

After installing WDG Automation and restarting the machine, if services are not started, what should you do?

Select one:



a.Activate the license X



b.Contact WDG Automation



c.Enable the WDG Automation Agent service in the Windows services panel



d.Reinstall WDG Automation



e.None of the above

What commands are used to obtain parameters?

Select one:



a.getParameter and getSubString



b.getDirectories and getSubString



c.getEnVar and getParameter X



d.getParameters only



e.getParameter and getParameters

Which of the following are correct? There might be more than one correct answer.

Select one or more:



a.For the tools and features to work properly, you must unblock the \* .wdgautomation.com domains and subdomains A



b.The installer is downloaded from the Web Client A



c.Installation via Interface has only two types of installation in addition to installation via Command Line



d.As of version 19.8.0, the WDG Automation installer works offline



e.To use the Runtime, you must have administrator privileges

Which of the following are correct? There might be more than one correct answer.

Select one or more:



a.WDG Automation enables mass data processing in the database, thus ensuring performance and consistency in interactions A



b.The sqlExecute and sqlExecuteReader commands allow SQL statements to be executed; the difference between them is that sqlExecute returns a data table and number of rows and columns, while sqlExecuteReader returns only the rows that have been affected



c.The sqlProcedure command executes a stored procedure, and the sqlReaderProcedure command shows the result of a procedure A



d.To connect to a mySQL database, it is necessary to make a manual configuration of the connector on the target machine A



e.All databases have the same syntax for connection string

WDG Automation Studio is the tool for developing scripts, with which it is possible to create and execute bots directly on the user's machine.

Select one:

True A

False

What is the expected result of using the Concatenate Texts command (*concatTexts*) to concatenate the variables "WDG" and "Automation"?

Select one:



a.Automation WDG



b.WDGAutomation



c.WDG Automation



d.WDG

he FIFO (First In, First Out) concept relates to which type of collection?

Select one:



a.List



b.Stack



c.Queue



d.None of the above

In the WDG Automation Language (WAL), variables are a symbolic reference to the memory position that stores data at runtime. This data can be obtained by referencing the variable name using the syntax: ${<variable\_name>}.

Select one:

True

False

Which of the following is the correct path to insert an asset?

Select one:



a.Tools > General > Asset Synchronization X



b.Home > Edit > New Routine



c.Home > Edit > File



d.View > Studio > Tools



e.View > Wal > Assets X

Which of the following are correct? There might be more than one correct answer.

Select one or more:



a.With the region selector tool, you can get a PDF region just like text



b.To start PDF manipulation, use the pdfClose command



c.The Field Mapper tool is used to map fields of PDFs with mappable fields



d.Use pdfSetValues to assign a value to a specific field in an editable PDF file



e.When using the Field Mapper tool, you abstract the manual use of the pdfGetValue command through the "Get" option and pdfSetValue through the "Set" option

What should you do if you see a message that a license has already been used?

Select one:



a.Activate the license



b.Contact WDG Automation



c.Configure the Proxy



d.Reinstall WDG Automation



e.None of the above

Which of the following is **not** correct?

Select one:



a.A routine is a piece of code that can be called repeatedly by the main script



b.You can visualize the flow of the routines created by going to the Call Graph interface



c.Routines are not executed at run time



d.There are two ways to create a new routine: (1) using the "New Routine” button in the “Home” menu, or (2) right-clicking a command and going to Advanced > Extract Routine X

In the context of manipulating data tables within WDG Automation, which of the following is **not** correct?

Select one:



a.The addColumn command allows you to add a new column to the left of the data table.



b.The deleteRows command allows you to remove rows in an index-based data table, and reorders the table so that there is no hop from one row to another.



c.The deleteCell command allows you to remove the value contained in a specific cell from a data table.



d.The deleteColumn command allows you to delete a column and all of its values, and shifts the following columns to the left.



e.The addRow command allows you to add a new row to the end of the table.X

For the Connection String parameter in a WDG Automation Studio connection command to be valid, you must:

Select one:



a.Have internet access X



b.Have the database previously configured

c.Add the disconnect command



d.None of the above

What is a Runtime?

Select one:



a.An application that is used by other applications, responsible for managing processes



b.A feature to unlock the machine



c.A tool for creating scripts



d.An application that is used only in the WDG Launcher



e.An application that is used by other applications, responsible for the execution of the bots

In the WDG Automation Studio, several commands for file manipulation have the "File System" parameter, which must be filled in to correctly handle files. If the parameter is not entered, an error is displayed saying that the parameter should not be empty.

Select one:

True

False

Which of the following is a WDG Automation tool?

Select one:



a.Paint



b.Calculator



c.Microsoft Teams



d.Notepad



e.Vault

Which of the following are correct? There might be more than one correct answer.

Select one or more:



a.Parameters are created on the Web Client, and can have values accessed by any Client script



b.Parameters are a great resource for getting values for the script in scenarios where these values are not initially controlled by the robot



c.The only way to get parameters is through the getParameter command



d.Parameters are numeric variables defined in WDG Automation Studio



e.The getParameter command gets the value of a single client parameter, and getParameters can obtain the values of multiple parameters at once

In a complete installation, which of the following tools and features are installed?

Select one:



a.Vault



b.WDG Automation Studio



c.WDG Launcher



d.Runtime



e.All of the above

Which of the following is a function of the WDG Automation Studio Log Message command?

Select one:



a.Print the commands’ results in text files



b.Print the results of script errors



c.Print an output message



d.Print errors in the script

When installing via the Command Line, what is the purpose of the installevel command?

Select one:



a.Disable the graphical interface of the installation



b.Determine the proxy address



c.Determine the region in which the information generated by WDG Automation tools will be stored



d.Determine the type of installation



e.Activate the installation's silent mode

In which path do you find PDF tools?

Select one:



a.Home > Edit



b.Tools > Image



c.Tools > PDF



d.Tools > General



e.Tools > Image

WDG Automation Studio is the tool for developing scripts, with which it is possible to create and execute bots directly on the user's machine.

Select one:

True

False

The WDG Launcher is the tool responsible for keeping the client’s system access data secure.

Select one:

True

False