

Basic RPA Interview Questions for Freshers

1. What is the definition of RPA?

Robotic Process Services allows a software bot to emulate, mimic and automate human tasks by leveraging the user interface of existing applications for highly manual and time-consuming tasks.

2. Why do we use Robotic Process Automation?

RPA uses software robots to automate basic tasks by mimicking user actions that are structured, rule-based, highly mundane and repetitive in nature.

There are various kinds of Robotic automation that are augmenting and assisting humans in many day-to-day activities and aims at making their lives simpler by eliminating all manual, repetitive, monotonous, and high-volume processes and tasks.

3. What are the key tasks performed by RPA bots?

- Keystroke mapping and screen scraping
- Data input and validation
- Reconcile data across systems.
- Web Screen Scraping
- Tabbing, searching, copying and pasting.
- Mouse actions
- Screen navigations

4. What are the Key Business Drivers of adopting RPA?

Key Business Drivers	Description
Increased Speed	A bot is usually 5X times faster than humans
Improved Productivity	RPA bot never sleeps, its RPA Bot works 24 X 7 X 365 days

Cost Reduction	Avg. cost of implementing RPA is less than the equivalent of FTE cost
Adherence to Compliance	Bot enables 100 % accuracy and compliance
High Scalability	Bots can be easily scaled up or scaled down to meet customer demands
High Throughput of work	Efficiently execute high volume work
Accelerate transformation.	Straight through processing with minimal human involvement

5. What are the User Personas in RPA?

- **RPA Process Owner** is responsible for identifying, prioritizing and approving the list of processes for automation. Also, responsible for generating usage reports, analytics and bot monitoring.
- **RPA Business Analyst/Citizen Developer** is responsible for designing and modelling the RPA process using the RPA process modeler.
- **RPA Developer**- Is responsible for
- **RPA Admin** is responsible for the release and deployment of RPA projects into multiple environments such as Dev, Test and production. Also, responsible for any issue logging and monitoring.
- **RPA Business User** is the end-user of the RPA project who is responsible for defining RPA use cases and executing the use cases in runtime.

6. What is the Business Problem/s Challenges of customers?

- **Handling highly repetitive and transactional business processes**
- **High turnaround time resulting in process inefficiency and inaccuracy.**
- **Non-availability of APIs to legacy systems**
- **Error-prone due to manual & high-volume tasks**
- **The huge cost of managing human resources doing similar work.**

7. Value Proposition of RPA

- Free up customers from a mundane task to perform high value-added tasks.
- Enabling faster time to market with minimal human involvement.
- Adopt a non-invasive mechanism to interact with legacy systems.
- Improved accuracy with minimal error
- Minimized cost with less human involvement.

8. What are the product components of RPA tools?

- **Bot Process Modeler (ASG-Studio)** – Provides the ability to visually build workflows with drag-and-drop, visual editors.
- **Bot Central (Controller)** – Provides the ability to orchestrate, schedule and manage the deployments for attended and unattended bots.
- **Bot Node (Nodes)** – These are machines/nodes which can run single or multiple attended & unattended bots based on the requirement.
- **Bot Engine (Engine)** – This is an engine that executes the bots deployed in the bot node during runtime.
- **Bots**– These are the actual software bots that execute the processes built during design time.

9. Which Tools to use?

RPA tools are designed to mimic the same “manual” path taken through applications by which provides various features and functionalities to aid human action and in turn creating a Digital Workforce which can be invoked at any point in the overall business process.

Following are RPA tools in the market :

- UI Path
- Automation Anywhere
- BluePrism
- Pega Robotics
- WorkFusion
- UI Path, Work Fusion

10. What are the typical RPA use cases?

RPA enables “Digital Workers” or bots to interact with desktop applications, webpages, user portal, email, Microsoft Office suite and more.

11. Provide Vertical/Domain Specific use cases of RPA.

- **Banking-** Front office and Back-office operations, customer account management, financial claims processing, Loan updating and processing.
- **HealthCare-** Bill processing, patient data processing and patient record storage
- **Manufacturing-** Automation of logistics data, data monitoring, and product pricing comparisons
- **Retail-** Product data extraction, online inventory updating, updating vendor details.
- **Insurance-** Claims management- automate the administrative activities.
- **Finance and Accounting-** Reconciliation, Order Entry and updating

12. List down all the Horizontal Use cases of RPA

- **Human Resources-** Employee Onboarding
- **Customer Service-** Providing Digital Assistant to employees, Responding to customers.
- **Billing-** Updating Invoices, Data Extraction

13. Provide some use cases of RPA in Front Office/Customer Service Applications

- RPA bots can be used to automate various applications on the agent's desktop in a non-intrusive manner by simply interacting with the user interface of the applications.
- RPA bots can act as Digital Assistants to Front office users for performing various mundane, repetitive tasks such as filling up a form, entering data into Excel files, scraping data from Web Pages and updating data into databases.

14. List some examples of RPA in Backoffice applications

- RPA provides an API less integration approach to interact with all backend applications and legacy systems such as Mainframes, AS400, SAP, CRM etc.
- RPA can read data from legacy applications, can write data into legacy applications, perform mouse actions, perform keyboard activities, perform screen navigations without any need for integration with those applications.

15. Provide the architecture overview of the RPA product, list down all the components.

- **Bot Designer/Creator-** Provides the ability to design, develop, test and debug bots. Provides the ability to visually build Bot models (building blocks) with drag and drop feature using low code visual editor to build the bot flows.
- **Bot Central/Controller/Orchestrator-** Provides the ability to orchestrate, schedule, and manage the deployment of attended and unattended bots. It provides centralized management, centralized access control and collaboration, and centralized workforce management.
- **Bot Runtime –** This is a runtime client that provides the ability to execute the automation/ bots. These are run-time components either deployed on User's Desktop PCs or on virtual machines where the bot automation can be executed.

RPA Automation Anywhere Interview Questions

Section 1- Bot Designer/Creator used to build Bot Automations

In this section, we will talk about the Bot Designer component of RPA and the various automation capabilities or building blocks on RPA products that enable a bot to perform human-like activities.

16. What is a Bot Designer and how is its usage in bot architecture?

Bot Designer which provides the tools necessary for designing, developing and deploying automated process. Bot Designers are used for authoring, and unit testing of automation/bots.

17. List all the various building blocks or bot activities of RPA used to build automation.

- Desktop Automation
- Excel Automation
- Word Automation
- Web Automation
- Email Automation
- Database Commands
- OCR Automation
- Recorder Actions
- SAP Automation
- Terminal Automation
- Credential Vault Management

- Exception Handling
- API Commands
- File Operations

18. What are the various ways or mechanisms to Design Bot activities using RPA?

- Low code/ no code Bot Designer= This provides a GUI for Bot designer to simply drag and drop bot activities into the visual designer to create bot flows that can be tested, edited and executed.
- Bot Recorder – The bot recorder provides a highly intuitive way of recording user actions by simply mimicking them.

19. What are the advantages of BotRecorder?

- Recorder and playback to learn a task sequence performed by a human operator.
- It can make process automation fast and easy.
- User can perform the following tasks:
 - Record Web Actions
 - Replay Web Actions
 - Manage Recordings
 - Add bot recordings to RPA flow.

20. List the Desktop automation activities.

- Desktop Automation actions automate any processes involving computer application such as simple text editor, raster graphic editor, or software calculator, that are installed on a computer.
- Provides the ability to extract, enter, and read any data from applications through a different type of action using keystrokes and mouse actions.

21. List the Web Automations using RPA.

- Web Automation activities to identify web elements and enact specific web-based activities.
- Enables automation of web-based activities, such as data entry, screen scraping, extract web data to capture and consolidate information, log into websites to extract and read the data.

22. List the Excel automation using RPA.

- Excel Automation helps you to input, read, manipulate, extract, and analyze data in Microsoft excel.
- Excel activities such as Read Cell, Set Cell, Run Macro, Go to Cell, get cell, delete cell etc.

23. List the Word Automations using RPA.

- Word Automation helps you to input, read, and extract data from Word documents.
- Automates tasks such as insert content copied from a website in a Word document, remove or replace specific content, or convert a Word document to PDF.

24. List the Email Automation using RPA.

- Read Email- Read emails from users (names, IDs, and attachments being sent in)
- Send Email- Send emails (reports to managers and alerts for exceptions to a process)
 - Sending email through Microsoft Outlook application or an email service provider (ESP), such as Gmail and Yahoo.

25. Tell about the Database Automation using RPA.

- Create a connection to a database using a connection string.
- Execute a query on a database and return the query result in a dataset.

26. Can RPA bot trigger external APIs such as REST and Webservices?

- RPA Bot can run API commands using REST Web services activity.
- RPA bots can call any external API using the POST method.
- RPA bots can be triggered from external applications using the GET method.

27. Can RPA bots process Unstructured data such as pdf files, scanned images, web pages etc?

- RPA tool has built-in OCR Automation extracts data from sources such as PDF, Word, Text files or Images and to store in any file format (excel, word, text etc.)
- Allows extraction of data from an image or web user interface element.

- RPA tool can integrate with any external OCR engines such as Google, AWS, Abbyy and Microsoft to convert unstructured data to structured format.

28. How are the user credentials such as passwords data etc managed securely in RPA tools?

- RPA tools have inbuilt Credentials Vault Manager which enables users to configure and store user credentials, personal data and in a secured & encrypted manner.
- All the user credentials are stored in AES encrypted format.

29. How will the RPA tool handle looping and iterations of records?

- RPA tools use LOOP commands to loop/iterate through records.
- LOOP commands help the bot to iterate through Database, Data Table, Fixed Iterations, Variable iterations, Excel/CSV records etc.

30. Can an RPA tool handle Conditions to arrive at a decision?

- If/else command is used to perform actions based on the conditions
- There are various conditions that the bot can check before taking any action such as:
 - Application is running or not.
 - Whether a Boolean condition is met or not
 - Whether a Web Control exists or not
 - To check whether a Window is active or not.
 - To check whether a Script is successful or not.
 - To check whether a Variable condition or data is met or not.

31. What are the Exception Handling capabilities of RPA?

- RPA tools use “Try-Catch-Finally” to handle errors during bot executions.
 - Try: Enables you to specify an instance or hold an activity that might throw an error.
 - Catch: Enables you to specify the alternate sequence of activities or optional activity, if the bot encounters an exception.
 - Finally: Enables you to specify an activity that should be executed if an exception occurs or not during bot execution.

32. What are the Custom Scripting capabilities available in RPA tools?

- **Custom Scripting capability in RPA enables users to create, test, debug and run script developed in the following scripting language in an RPA bot:**
 - PowerShell
 - Batch Script
 - Python
 - VBScript
 - Java Script
- **Using this feature an RPA bot can trigger and execute any external scripts either from the Inline editor or from a specified folder in a machine.**

33. Can the RPA tool integrate with SAP applications and how does it work?

- **Provides the ability to automate tasks and processes on the SAP system using the SAP Automation command.**
- **Ability to interact with SAP screens for performing various user actions.**
- **Read/extract text from SAP screens.**
- **Write/print text to SAP screens.**
- **Perform UI actions such as mouse clicks and keyboard actions.**
- **The interplay of SAP with other Desktop and Web applications using RPA.**

34. Can the RPA tool integrate with legacy Mainframe/Terminal applications and how does it work?

- **Enables RPA bot to**
 - Connect to a Terminal.
 - Set Control Keys
 - Set Text
 - Get text.
 - Move Cursor
 - Close Terminal
- **A bot can interact with Green screens, AS400 screens of mainframe application screens to read, write, navigate and move within the terminal screens.**

35. What are the various “Folder” and “File” automation commands available in RPA?

- **The File and Folder command provides an easy way to automate creating, opening, copying, moving, renaming, deleting, and organizing files and folders.**

- **Following are the Folder commands.**
 - **Create Folder** -Enables creating a new folder in a specific location.
 - **Open Folder** -Opens an existing folder.
 - **Copy Folder**
 - **Rename Folder**
 - **Delete Folder**
- **Following are the File commands.**
 - **Open File**
 - **Create File**
 - **Move File**
 - **Delete File**
 - **Rename File**

36. Can the RPA tool be used for transferring files from one host/machine to another machine using FTP or SFTP?

- **The FTP/SFTP command in RPA can automate the following:**
 - **File uploads and downloads from one location to another**
 - **Secure FTP for secure remote file transfer**

37. How the “Debugging” of RPA bots performed in RPA tools

- **Ability to identify and “Debug” RPA activities that might cause errors during design time.**
- **Ability to add “Breakpoints” to the activities which need to be modified during bot execution.**
- **The Debugger window shows the debugging process logs and allows users to make changes to the properties or variables of an activity.**

38. What is Audit log functionality in RPA?

Ability to track all the activities of the RPA bots across various machines.

It provides a complete set of activity history.

It provides detailed logs of the bot actions.

Section 2- RPA Central Management

This section explains the various components of RPA Central Management/ Controller/ Orchestrator.

39. What is Bot Central Management/Controller

Bot Central/Controller/Orchestrator provides enterprise-wide capabilities to orchestrate, manage, govern, monitor, and derive actionable analytics for all the bots in a single centralized dashboard.

40. What are the key capabilities of Bot Central/Controller/Orchestrator?

Bot Central is the Central processing unit of RPA where it provides centralized management of all the bots.

- **Managing- Manage bots in the bot dashboards.**
- **Scheduling- A calendar functionality to schedule bots for execution.**
- **Executing- Remotely execute bots based on the schedule.**
- **Configuring- Configure and map machines where the bots will be executed.**
- **Monitoring – Provide bot insights dashboard to view, monitor bot results.**
- **Bot authentication- All the bot activities are authenticated.**

41. What are the various Dashboards in Bot Central?

- **Bot Health Report- Provides real-time status of bots such as:**
 - **Total Bots Running**
 - **In Progress**
 - **Completed**
 - **Failed**
 - **Weekly Bot Status**
- **Bot Device analytics- Provides real-time status of devices/machines executing bots such as**
 - **No of bot schedules on devices**
 - **Device utilization**

Section 3 - RPA Runtime Environment

This section explains the various run-time activities of RPA.

42. What are the RPA bot execution modes in runtime?

- **Assisted/ Attended Bot- Bot is installed in users' desktop/laptop, working side-by-side with each user as an automated assistant. These assisted bot needs to be manually triggered by the user.**

- **Unassisted / Un Attended Bot** – Bot is installed in a VM/server, it runs automatically when triggered/scheduled by the orchestrator/controller. These bots are automating interactions with applications behind the scenes without any explicit trigger by the user.

43. What are the features of Attended Bot?

- RPA bots can work alongside humans to deliver attended automation
- They are digital helpers for human users.
- They work on the same machines as humans, during the same hours.
- They are triggered directly by humans

44. What are the use cases of Attended Bot

- Generating Excel charts, macros and formulas
- Scraping the data from the Web and pasting it to office applications
- Reading an email and its data

45. What are the features of UnAttended Bot?

- Unattended RPA bots execute tasks and interact with applications independent of human involvement.
- They are deployed on separate machines and their jobs are triggered exclusively from Orchestrator
- Work 24 X 7 X 365 days

46. What are the use cases of UnAttended Bot

- Updating Database records
- Sending bulk email notifications
- Performing backend system automation- Mainframe, SAP, CRM etc

47. List all runtime execution components.

The Bot Runtime component is the software machine that runs bots.

- Multiple bots can be running in various machines.
- Bots can run in parallel in a single machine, bots follow a queuing mechanism.
- Bots connect to Bot Central to check the licenses and then execute the bots on the user or virtual machines.
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Section 4- Cognitive Automation in RPA

This talks about combining Hands (RPA) with Heads (Artificial Intelligence), its capabilities and real-life applications.

48. What is the Cognitive Automation capability?

“Cognitive Automation” refers to the automation of tasks leveraging AI capabilities. RPA complemented with AI technologies such as Machine Learning, Computer Vision, Natural Language Processing (NLP) to automatically classify, extract and validate information provides an Intelligent Automation capability in RPA products.

49. What are the use cases of Cognitive Automation capability?

Below are the use cases of Cognitive Automation?

- Optical character recognition (OCR)
- Computer Vision for image identification
- Document Classification
- Extracting intent and entities
- Named Entity Recognition
- NLP for Sentiment Analysis
- NLP for Text analytics
- Chatbots with RPA for initial intake and customer interaction

50. What is the difference between RPA and Cognitive Automation?

SL No.	Robotic Process Automation(RPA)	Cognitive Automation
1	Rule-based, routine tasks	Judgement based, Adhoc tasks
2	Structured Data	Unstructured, Semi-Structured data
3	Eliminating repetitive, Manual and rules-based process	Pattern Identification, Self Learning algorithms, Complex Recommendations

- | | | |
|---|---|--|
| 4 | Graphical, COTS tools such as UI Path, Automation Anywhere, Blueprism, Workfusion etc | Algorithmic(Classification, Regression, Decision Trees etc) |
| 5 | Account Opening, KYC, Order processing, Customer service, Claims Processing etc | Fraud Detection, Product Recommendations, Next Best Action |

51. What is the Future Roadmap of RPA?

The future roadmap for RPA looks very promising as RPA and AI will form a consortium of Intelligent Automation products that will cater to various intelligent automation needs of the customers and add value in terms of providing better customer experience and productivity.

RPA digital workforce handles frequent, repetitive tasks more efficiently and precisely than requiring human involvement. When RPA is tightly integrated with a full-featured digital process automation platform, organizations can gain a considerably greater customer-centric advantage, as well as opportunities for innovation.

RPA, Machine Learning, AI and Cognitive automation form a set of complementary tools that will help automate different types of tasks. Adding AI capabilities such as Machine Learning, Visual Recognition, Text Recognition and Natural Language processing to RPA tools will enable software bots to learn real-time and take higher value-added tasks.