

PROJECT TITLE:-EXCEL AUTOMATION

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1.INTRODUCTION

1.1 OVERVIEW

The world is moving towards building new processes. This has fueled the absolute necessity for automation. Every organization, big or small, is aiming to automate its business processes in a way that it complements the manual strategizing and processes remain uninterrupted. [Robotic Process Automation](#) is a new-age technological marvel that is being utilized by enterprises to automate their tasks and process. In this RPA Blue Prism article, you will learn all the concepts of the popular RPA tool, Blue Prism and learn how it can be used for automation.

The following are the topics covered in the blog:

- [Introduction to Robotic Process Automation](#)
- [RPA Tools](#)
- [What is RPA Blue Prism?](#)
- [Features of Blue Prism](#)
- [Blue Prism Components](#)
- [Benefits of Blue Prism](#)
- [Case Study of Coca-Cola](#)
- [Companies Using Blue Prism](#)

So let us get started with the discussion.

Introduction To Robotic Process Automation

Robotic Process Automation is a methodology in which robots perform a set of tasks by following a process, without any human intervention. All of these technologies reduce the manual workforce, by giving them time and harnessing their talents in better ways.

Well, robotic process automation does not include actual robots automating your tasks. But, it is the **RPA Tools/Vendors** providing you a set of libraries and runtime environments for automating business processes.

Talking about RPA Tools, let me quickly brief you on the market leaders of RPA.

RPA Tools

There are a various number of tools in the RPA market. But, the top trending tools in today's market are UiPath, Blue Prism & Automation Anywhere. Refer to the below image.

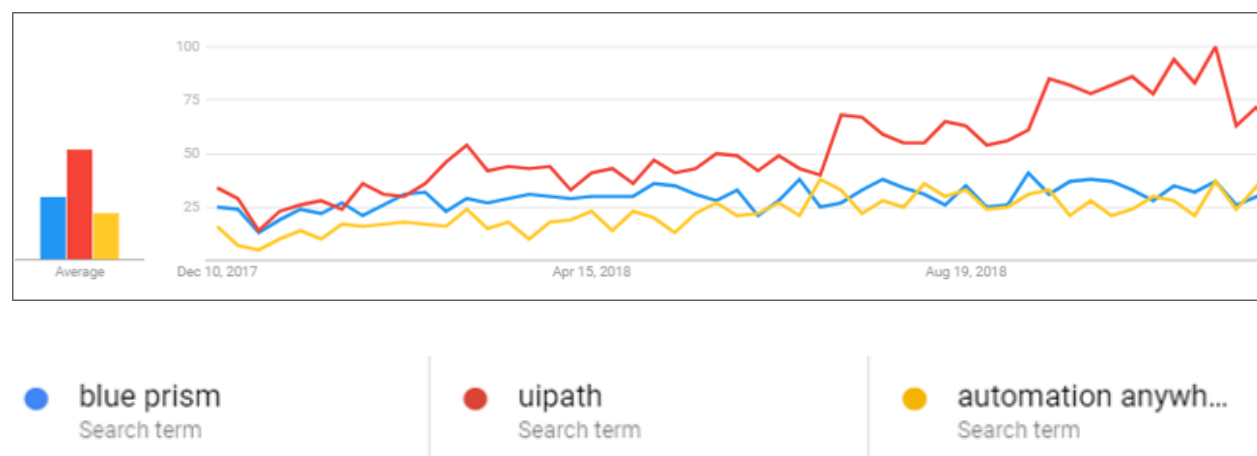


Fig 1: Google Trends of RPA Tools – RPA Blue Prism

As you can see in the above trend, **UiPath** clearly wins the competition as it offers an easy to use visual designer to practice and automate tasks. But, in case of large automation in the enterprises' business, Blue Prism takes over UiPath, as it provides

various features such as Data Security, Data Abstraction, Analytics and many more.

So, with the note of this let me introduce you to Blue Prism.



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What is RPA Blue Prism?

Blue Prism is an RPA Tool which holds the capability of virtual workforce powered by software robots. This helps the enterprises to automate the business operations in an agile and cost-effective manner. The tool is based on [Java Programming Language](#) and offers a visual designer with drag and drop functionalities.



Formed in 2001, this tool differs from the other tools in the market, by using a *Top-Down approach*. Also, Blue Prism offers a visual designer with no recorders, scripts or any intervention.

Features of Blue Prism

The features of RPA Blue Prism are as follows:



Fig 2: Features of Blue Prism – RPA Blue Prism

- **Secure & Accurate** – There is no limit to the number of processes which need to be executed in this tool. Blue Prism delivers secure and accurate results to any number of processes that you wish to automate.
- **Robust** – It provides robust features like load balancing, data encryption, and end-to-end auditing. So, every change is audited and related back to the user related to it.
- **Scalable & Resilient** – It allows scalability with central management. So, all the processes can be automated as per the need and can be monitored centrally.
- **24*7 Workforce** – The tool is designed to work intelligently without a person physically monitoring every action occurring on the screen.
- **Analytics** – Provides extended features to configure *Dashboards* so that the session information can be redirected to the Monitoring Systems.
- **Data Security and Data Abstraction** – As the tool is designed to work autonomously, all the processing is performed and is stored in a data center. This provides a well-defined data abstraction of data and process security.
- **Provide Cloud support** – Provides working capacity support as per the business requirement. So, users have to just create workers on demand and manage them centrally.
- **Execution Intelligence** – Robots connect to systems and react dynamically to the responses in the data on multiple environments.

Now, that you know the features of Blue Prism, let me tell you the main components of Blue Prism.

RPA Blue Prism: Blue Prism Components

In this section of the RPA Blue Prism blog, I will introduce you to the various components/essentials of Blue prism.

The four main components of Blue Prism are:

1. Process Diagram
2. Process Studio
3. Object Studio
4. Application Modeller

Process Diagram

Process Diagrams are business workflows, that act as software programs. Since Blue Prism is based on [Java](#), these diagrams utilize core programming concepts and create the operational process flows like flow charts. The diagrams are basically graphical representations of workflows, to create, analyze, modify and scale the business capability.

Process Studio

Process Studio is the area in which the Process Diagrams are created. This component of Blue Prism offers features such as business logic, object call, control loops, and variables. Each process created has the Main Page which gets executed first.

Object Studio

Almost all the enterprises need to have communication with external applications to automate tasks. Since it cannot happen in Process Studio, Object Studio is used. Object Studio is the area where Visual Business Objects(VBO) are created. These objects are nothing but diagrammatical programs interacting with external applications which perform operations.

One Business Object provides an interface with only one external application. Also, let me tell you that each Object Studio, does not have a Main page

Benefits of Blue Prism

Blue Prism offers the following benefits:

- **Better Service Quality:** As end-to-end auditing is performed by the Digital

workforce, this tool offers a better service quality.

- **High Accuracy:** This tool performs tasks in such a way that outcomes are produced with high accuracy and low errors.
- **Scalable:** Provides a scalable approach, as this tool is not based on scripts or recorders, but is based on intelligent Digital Workforce performing tasks.
- **Quick Deployment of Services:** The services can be easily deployed as it can automate the application's controls, irrespective of their onscreen position.
- **Flexible Workforce:** The Digital Workforce is designed in such a way that it doesn't need rest. It can work 24*7 without taking a break and give the same results with high accuracy.
- **Statistics:** This tool offers dashboards so that you can analyze the data, the process's session and much more.

Case Study of Coca-Cola

Coca-Cola is one the world's largest beverage company. This company has more than 500 brands in 200 countries with 1.9 billion products by 200 million customers daily.



Company Objectives

The company objectives are as follows:

- Execute HR processes and strategies smoothly
- Perform HR operational processes with constant improvement
- Resolve employee queries with good quality

To address these goals, the company started using Blue Prism to automate processes within the finance division. After that, they ventured into using Blue Prism for other divisions such as HR.

Their first step was to identify the relevant processes for automation. The main criteria they considered were the process volume, the frequency of process and the workforce required for the process. Finally, **150 processes** were identified which had to be automated.

Problems Faced By The Company

Before Coca-Cola started using Blue Prism, the HR services team had to audit 8 different sets of data. This took time, as the company was running reports, auditing them and then formatting them to analyze exceptions.

Solution

Coca-Cola obviously started using *Blue Prism's Digital Workforce* to audit in *SAP*. All their processes were divided into multiple SAP systems to save time and drive focus on the resulting data. The reports generated by these automated processes then come to the respective teams to handle exceptions manually. Also, the reports could be tracked without the need for the extra manual workforce to track them.

Business Impact

The company started delivering better operational efficiencies with the production capacity to be extended from 8 hours/day to 24 hours.

The other business impacts are listed below:

- No additional headcount
- End to end auditing performed
- Improvement of customer experience with high human interaction

Companies using Blue Prism

There are many companies which use Blue Prism to automate their operations. For your knowledge, below are some of the top-hyper growth companies which use Blue Prism.





[See Batch Details](#)

Fig 3: Companies Using Blue Prism – RPA Blue Prism

So folks! That's an end to this blog. If you wish to give a jump start, to your career as an RPA Developer, then starting learning RPA and it's various Tools.

We at edureka, offer [Robotic Process Automation Training using UiPath](#). Edureka is a trusted online learning company with a network of more than 250,000 satisfied learners spread across the globe. This training will help you gain deep knowledge in [Robotic Process Automation](#) and hands-on experience in UiPath.

1.2 PURPOSE

RPA is not part of an organization's IT infrastructure. Instead, it belongs to the top of the whole organization's IT infrastructure. In an IT environment, most of the business processes are not smart and intelligent. Many of them are dependent on multiple IT systems, which rarely interact with each other. Such types of tasks are repetitive, time-consuming, and labor-intensive for human beings. With the Robotic Process Automation, it takes large IT transformation plans and implementation process to automate those types of repetitive, time-consuming, and rule-based tasks more quickly, accurately, and tirelessly, compared to a human being.

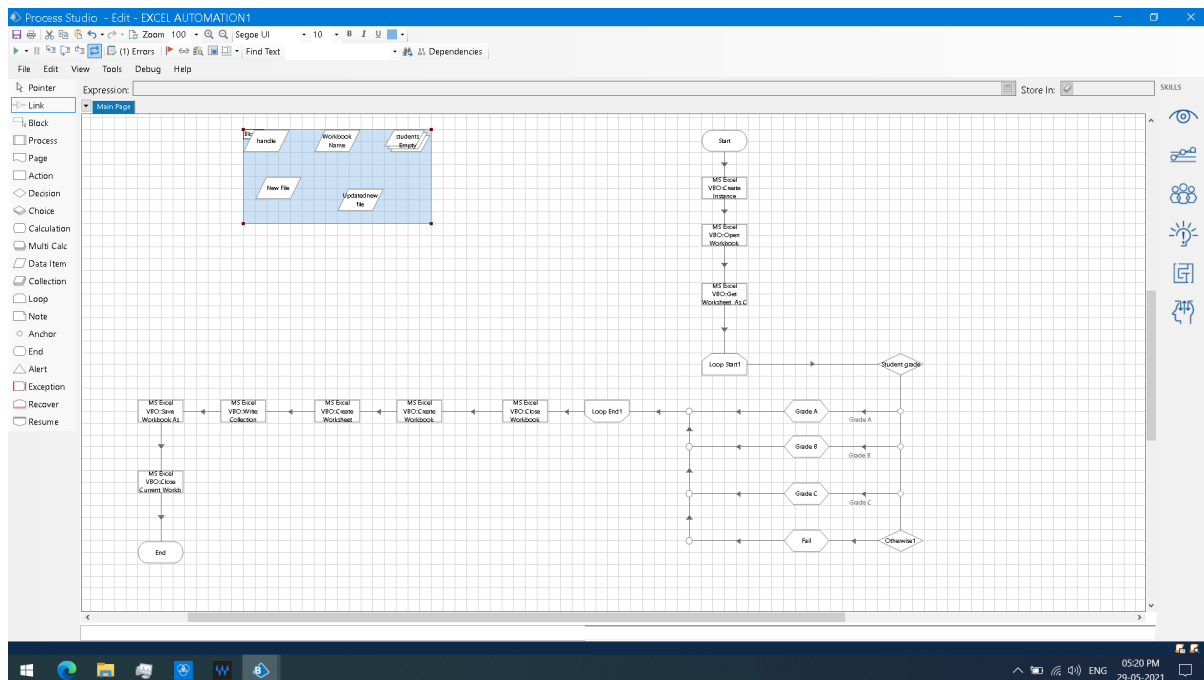
RPA technology uses bots that interact with web applications, web sites, excel worksheets, and emails to automate the tasks just like a human. RPA is currently the most efficient automation solution, and it helps human beings to focus on those tasks which require emotional intelligence, reasoning, judgement, and interactions with the customers, rather than just doing repetitive tasks.

2 .THEORTICAL ANALYSIS

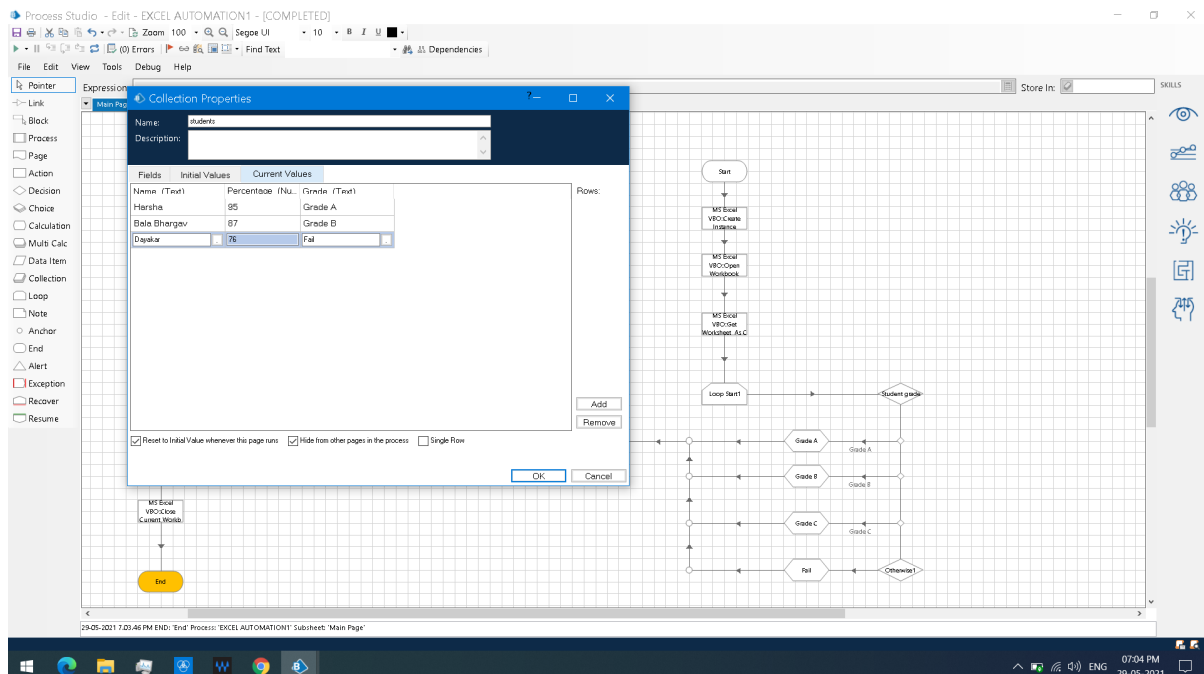
2.1 HARDWARE/SOFTWARE DESIGNING

BLUEPRISM TOOL

2.2 BLOCK DIAGRAM/FLOW CHART



3.RESULT:-Hence, we have created a flow and have run the program ,the result has been stored in Collection properties-students.



4.ADVANTAGES AND DISADVANTAGES

4.1 Advantages of RPA

Some of the significant advantages of Robotic Process Automation software are given below:

Code-Free

RPA doesn't require any coding or programming knowledge. The modern RPA tools are used to automate applications in any department where the clerical work is performed across an enterprise. Hence, Employees only need to be trained on how RPA works, and they can easily create bots, just through **GUI (Graphical User Interface)** and different intuitive wizards. It gives an advantage over the traditional methods of automation and enables accelerated delivery of business applications. Besides, this platform reduces the initial cost of installation, training, and deployment.

Non-Disruptive

One of the major challenges that IT deployment faces is the risky or complex transformation process, which prevents large organizations from redesigning, replacing, or enhancing the running system. However, the transformation process in RPA is very simple and straightforward.

The analysis performed by the analytical suite helps users to track the operations and determine issues. There is no need for any integration since everything is inbuilt and set right out of the box.

Rule-based Exception Handling

RPA system allows users to deploy bots using rules-based exception handling. This feature proactively handles the exception. For example, RPA robot reports an exception, and then the actions given below are triggered:

- The same process is re-assigned to a different bot by the server.
- The current bot retries the same process and removes the previous bot from production.
- If retry is successful, the server maintains the reassignment and raises an alert to report exception & resolution.

- If retry is unsuccessful, it stops the current bot and raises an alert to report exception as well as failed resolution.

Hosting and Deployment Options

The RPA system provides deployment options across virtual machines, terminal services, and cloud. Cloud deployment is one of the best among all the other deployment options, which attracts most of the users due to its scalability and flexibility. Therefore, businesses can install RPA tools on desktops and deploy it on servers to access data for completing repetitive tasks. RPA systems can automatically deploy robots in a group of hundreds. Similarly, multiple bots can be used to run different tasks within a single process while processing a high volume of data.

4.2 Disadvantages of RPA

Some of the major drawbacks of Robotic Process Automation software are given below:

Potential Job Losses

If a robot can work faster with a more consistent rate, then it is assumed that there will be no need for human input. It is the main concern for the employees, and this results as a major threat to the labor market. However, this thinking is not accurate. Amazon has shown a great example of this limitation. The employment rate has grown rapidly during a period where they have increased the number of robots from 1000 to over 45000.

Initial Investment Costs

RPA is still in the stage of innovation, and so it can present challenges that may result in unwanted outcomes. Therefore, it isn't easy for organizations to decide whether they should invest in robotic automation or wait until its expansion. A comprehensive business case must be developed when considering the implementation of this technology; otherwise, it will be useless if returns are only marginal, which may not worth taking the risk.

Hiring Skilled Staff

Many organizations believe that to work with RPA, the staff must have significant technical knowledge of automation as robots may require programming skills and an

awareness of how to operate them. It further forces organizations to either hire a skilled staff or train existing employees to expand their skills.

An automation company can be a little beneficial during initial installation and set-up. But the skilled staff can only adopt and manage the robots in the long-term.

5.APPLICATIONS

Data migration and entry

Legacy systems still perform critical functions at companies. For example, legacy billing systems need to interface with other systems and such systems may not have the capability to pull relevant data from APIs. In such cases, employees manually migrate data using formats like CSV. RPA can prevent such manual labor and potential clerical errors it brings.

Furthermore such systems that keep data up to date enable improved analysis and decision making. We are living in a day when even marketing has 5000 applications to choose from. RPA can help integrate applications and allow for more holistic analyses.

Data updates

Most departments including HR, customer service and marketing routinely need to update customer/personnel data which is constantly changing. Setting up bots for auto updating relevant data from forms or email can ensure that departments can access fresh and correct data.

Data validation

Most data validation controls can be embedded in databases. However, there's data validation tasks such as cross checking data against publicly available data, for which RPA automation is more suitable than other tools

Extracting data from PDFs, scanned documents and other formats

Screen scraping, OCR (Optical Character Recognition) and basic pattern recognition technologies enable data extraction from almost any format, reducing the need for keying in data. Feel free to review a data driven list of machine learning powered solutions. These can

be easily integrated to RPA solutions to extract data and process documents.

6.CONCLUSION/RESULT

RPA has the ability to both minimize errors and improve efficiency, and, moving forward, will be critical for creating a seamless operational environment.

Repetitive work will be accomplished more quickly and efficiently, so humans can be free to focus on more human-centric strengths such as reasoning, judgment, and emotional intelligence.

By implementing an [RPA solution](#), you may come up against some resistance and challenges. What will help your RPA onboarding is completing the groundwork upfront and emphasizing a clear vision to both your management team and personnel.

7.FUTURE SCOPE

Scope of RPA

RPA has provided an excellent solution for organizations to replace repetitive, mundane, rule-based processes with software bots. It is now helping organizations who were looking to increase their workflow accuracy and efficiency. First, RPA was widely adopted in the **IT** sector. It amazed many big organizations as well as small and medium enterprises with outstanding results. Later, it was adopted in other sectors like Finance, Accounting, **Banking**, etc.

RPA tools are already being used in several organizations. This is going to be the most important thing in the upcoming years. Experts have predicted some points for the future of this technology

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RPA Jobs

It is just a myth that many people will lose their job with the arrival of RPA technology. The truth is that RPA has created plenty of job options for aspirants. However, it requires a particular skillset and knowledge. Therefore, it is clear that when the tasks are automated with the help of software robots, there will be new job opportunities. For example, we have already seen the replacement of horse carriage by cars and other transportation machines. It can be referred to as the automation of transportation. But, plenty of jobs were created in the automotive field with the automation of transportation.

In conclusion, advancement in technology only requires the unique creativity and cognitive skills of the human brain. So, RPA will help people to learn new things and reskill themselves.

People with RPA knowledge have lots of job options to choose from and get into employment in the new technology. An RPA developer can be usually assigned to perform three roles in the industry:

- **Process Designer**

The Process Designer analyzes business requirements and processes. He further monitors the changes that occur after the implementation of bots during the development or testing phase.

- **Automation Architect**

An Automation Architect is responsible for building an RPA project with the help of RPA tools to solve real-world problems.

- **Production Manager**

Once the Automation Architect has built the project and rolled into the production, the Production Manager ensures that the processes are being triggered correctly. He also monitors whether all the exceptions are handled.

The following table illustrates the average salary of RPA developers in the US according to the positions in the market:

Positions	Salary (per year)
Developer	\$97,631
Junior Developer	\$61,024
Business Process Analyst	\$73,380
Senior Developer	\$108,325

