

# **ROBOTIC PROCESS AUTOMATION**

## **EMAIL AUTOMATION**

### **INTRODUCTION:**

Email has become the main method of communication for businesses around the world. It is critical to so many parts of your organization, but sifting through the inbox takes up valuable time.

Many organizations look to automation for specific parts of their email operations in order to serve customers more efficiently and allow humans to focus on the messages only they can handle.

Automate's RPA functionality features an intuitive drag-and-drop interface that lets IT and business users quickly and easily automate email actions without writing a line of code. Use Automate for email automation with your overarching enterprise automation strategy.

### **LITERATURE:**

when we require to send a mail number of users it may consume much more time. To avoid this problem we can eradicate this problem using blue prism software.this can be done in two ways as follows creating a bot which generate mail and send it to number of receiver other way is by using VBO's of Email and Excel.

In the first method we create an object studio by entering,opening and composing a mail and is linked with process studio which consist of Ms excel VBO.

The other way is by using VBO'S of Email and Excel.In this we directly import Ms excel and Email VBO'S by attaching the required file and that's by tracing ots path.

We can eradicate this problem using a blue prism software By creating an \_automated process.

This can be done in two ways

- 1.creating a bot which generates the mail and send it to multiple receivers
- 2.Directly importing Ms Excel and E mail VBO's by tracing its path.

In the first method we create an object studio by entering,opening and composing a mail and is linked with process studio which consist of Ms excel VBO

## **THEORITICAL ANALYSIS:**

### **STEP 1:**

As soon as we launch the blue prism software we will find subheading "file". On clicking on it we will find import option where we will import MS Excel and Email VBO's will get imported.we could able to find the VBO's in below path."C:\Program Files\Blue Prism Limited\Blue Prism"

Blue Prism - Robotic Process Automation Software - v6.10.2

File Home Studio Control Analytics Releases Digital Exchange System My Profile

Studio View detail about Processes or Business Objects

new mail

Version history for this object / process:

Date and Time	Type of Edit	By User	Edit Summary
26-6	Import Process or Business Object		
26-6			
26-6			

Choose the input file(s)

Organize New folder

Desktop Downloads Documents Pictures 2020-02 Screenshots The Dark Knight Titanic (1997) [1]

OneDrive This PC Network

Name Date modified Type Size

BPA Object - Calendars 21-06-2021 10:53 XML Document 50 K

BPA Object - Data - OLEDB 21-06-2021 10:53 XML Document 28 K

BPA Object - Data - SQL Server 21-06-2021 10:53 XML Document 142 K

**BPA Object - Email - POP3\_SMT** 21-06-2021 10:53 XML Document 296 K

BPA Object - Google Sheets 21-06-2021 10:53 XML Document 53 K

BPA Object - MS Excel 21-06-2021 10:53 XML Document 495 K

BPA Object - MS Outlook Email 21-06-2021 10:53 XML Document 203 K

BPA Object - MS Word 21-06-2021 10:53 XML Document 161 K

BPA Object - System - Active Directory 21-06-2021 10:53 XML Document 31 K

BPA Object - Utility - Collection Manipul...

BPA Object - Utility - Date and Time Man...

File name: Process/Object (\*.bpprocess;\*.b

Open Cancel

Sign Out Previous: 26-08-2021 15:25, Current: 26-08-2021 21:31, User: 'admin', Connection: LocalDB Connection, Connected To: SQL Server 2017

Type here to search

File Home Studio Control Analytics Releases Digital Exchange System My Profile

Studio View detail about Processes or Business Objects

mail automation

new project 1

Version history for this object / process:

Date and Time	Type of Edit	By User	Edit Summary
26-6	Import Process or Business Object		
26-6			
25-6			
25-6			
24-6			
24-6			

Choose the input file(s)

C:\Program Files\Blue Prism Limited\Blue Prism Automate\VBO\BPA Object - Email - POP3\_SMT.xml Browse...

< Back Next > Cancel

Sign Out Previous: 26-08-2021 15:25, Current: 26-08-2021 21:31, User: 'admin', Connection: LocalDB Connection, Connected To: SQL Server 2017

Type here to search

File Home Studio Control Analytics Releases Digital Exchange System My Profile

Studio View detail about Processes or Business Objects

new mail

Version history for this object / process:

Date and Time	Type of Edit	By User	Edit Summary
26-6	Import Process or Business Object		
26-6			
25-6			
25-6			
24-6			
24-6			

Available?

Yes Yes Yes Yes Yes Yes Yes Yes

22:39 ENG 26-08-2021

22:40 ENG 26-08-2021

Blue Prism - Robotic Process Automation Software - v6.10.2

File Home Studio Control Analytics Releases Digital Exchange System My Profile

Studio View detail about Processes or Business Objects

mail automation new project 1

Version history for this object / process:

Date and Time	Type of Edit	By User	Edit Summary	Available?
26-08-2021 13:18:05	Modification	admin	nothing	Yes
26-08-2021 10:12:06	Creation	admin	Process created	Yes

The file 'Email - POP3\_SMTP.xml' has been imported into the database

Complete Import successful

< Back Next > Cancel

Sign Out Previous: 26-08-2021 15:25, Current: 26-08-2021 21:31, User: 'admin', Connection: 'LocalDB Connection', Connected To: 'SQL Server 2017'

22:40 ENG 26-08-2021

File Home Studio Control Analytics Releases Digital Exchange System My Profile

Import Process / Object

Export Release / Skill

New Ctrl-N Open Ctrl-O

Import

Export

Connections

Exit

Processes Default (Default) 1st process addition of two numbers circular day 3 Email automation mail automation in process MS Excel VBO xl id's import

Objects Default (Default) 2nd process Email - POP3\_SMTP Email - SMTP mail automation mail automation when logged in MS Excel VBO

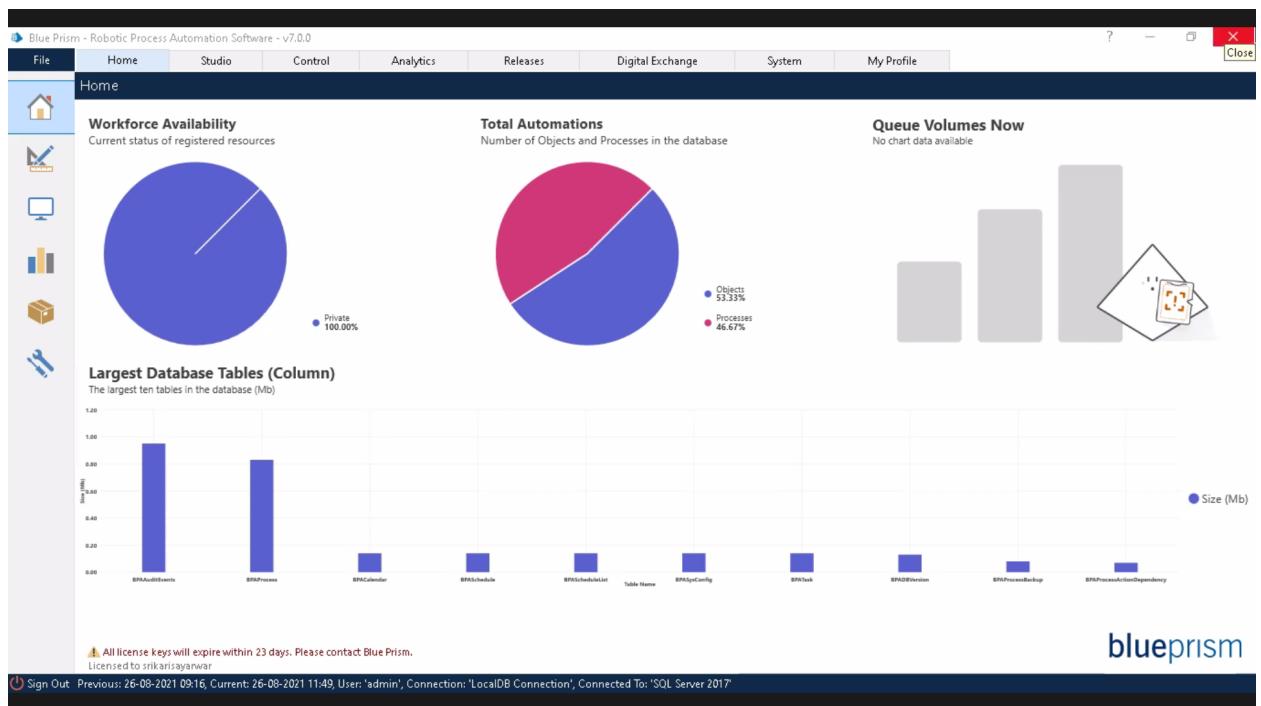
View detail about Processes or Business Objects

new mail

Version history for this object / process:

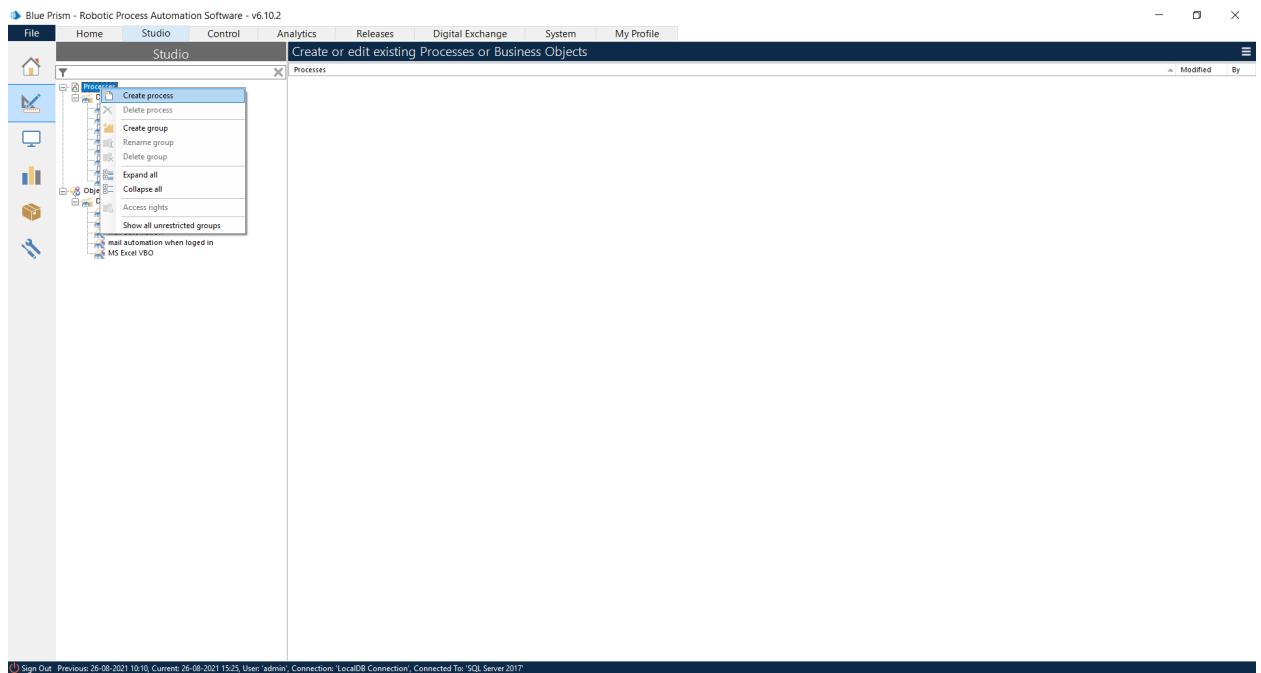
Date and Time	Type of Edit	By User	Edit Summary	Available?
26-08-2021 13:18:05	Modification	admin	nothing	Yes
26-08-2021 10:12:06	Creation	admin	Process created	Yes

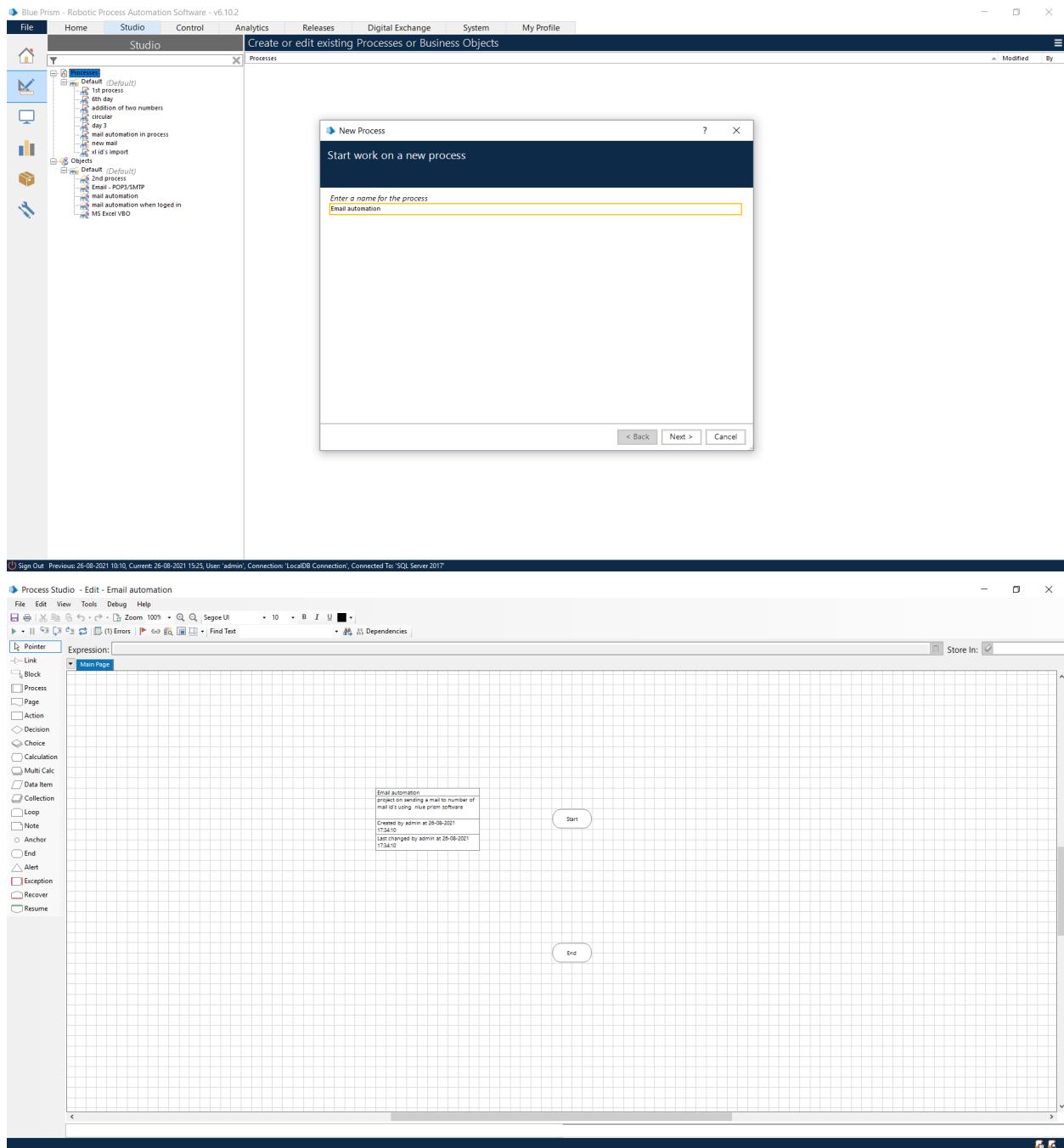
Sign Out Previous: 26-08-2021 10:10, Current: 26-08-2021 19:25, User: 'admin', Connection: 'LocalDB Connection', Connected To: 'SQL Server 2017'



## STEP 2:

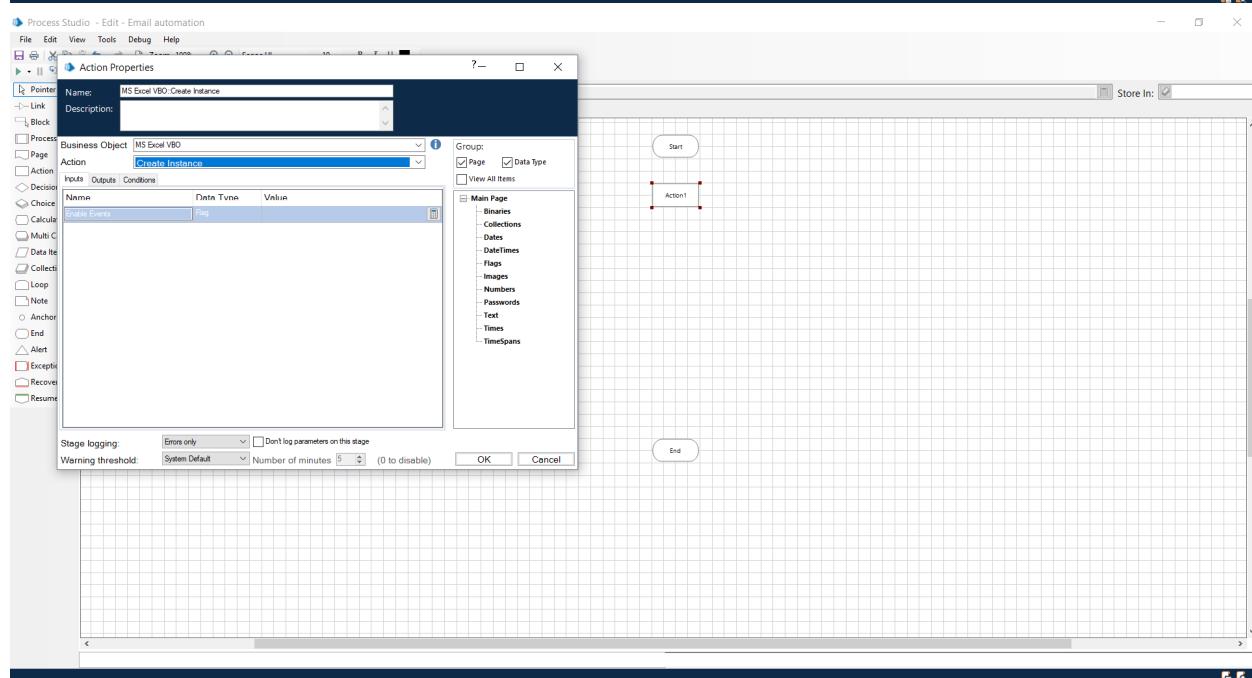
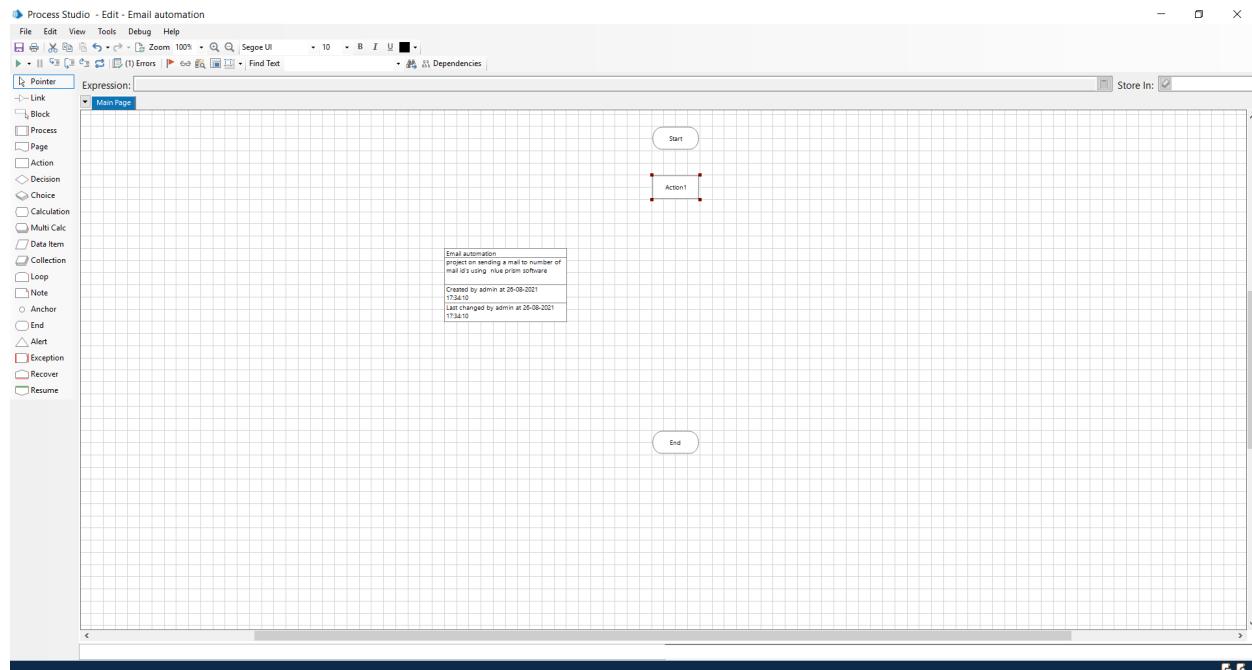
After importing, create an new process in process studio.

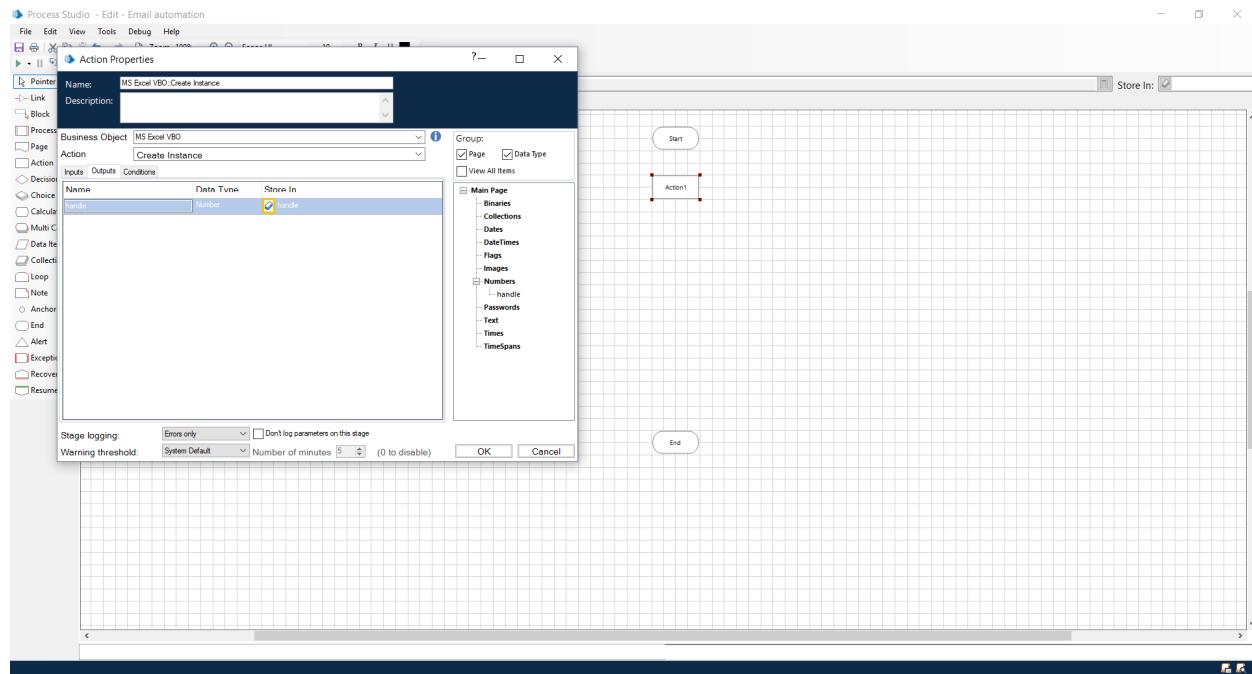




## STEP 3:

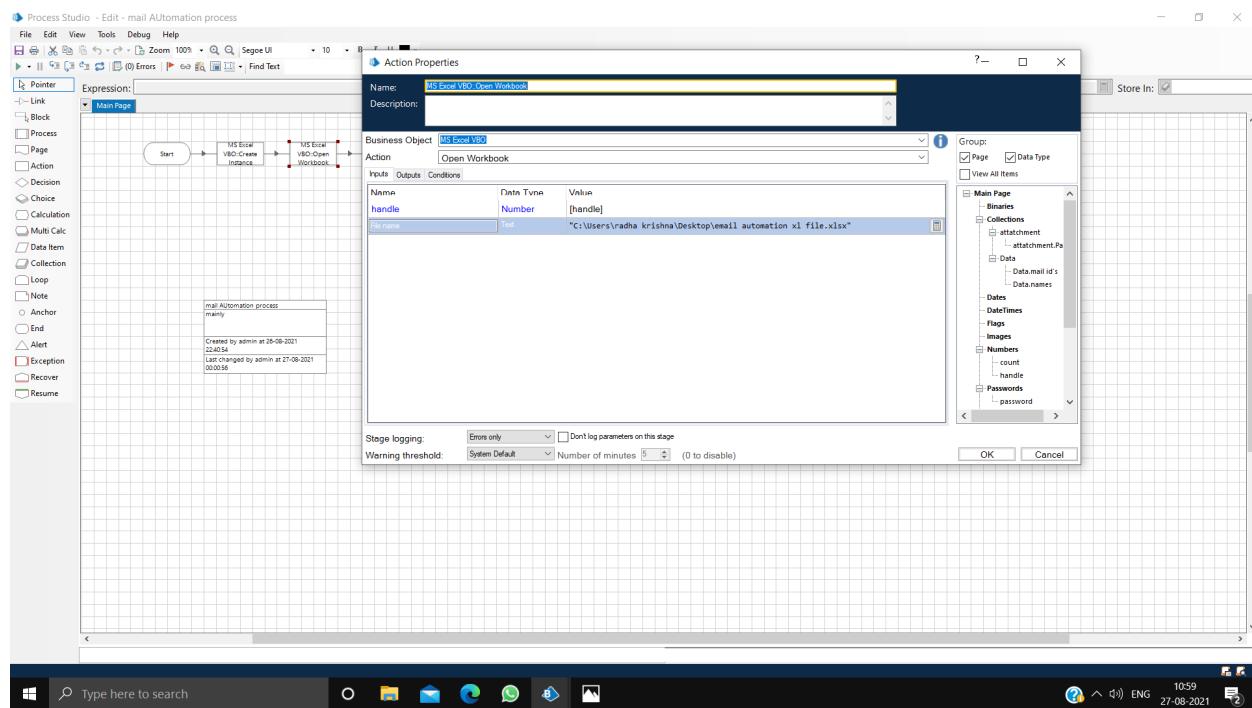
After creating and entering into process drag and drop the action stage to create an instance and fill it as shown below by using MS Excel object process.

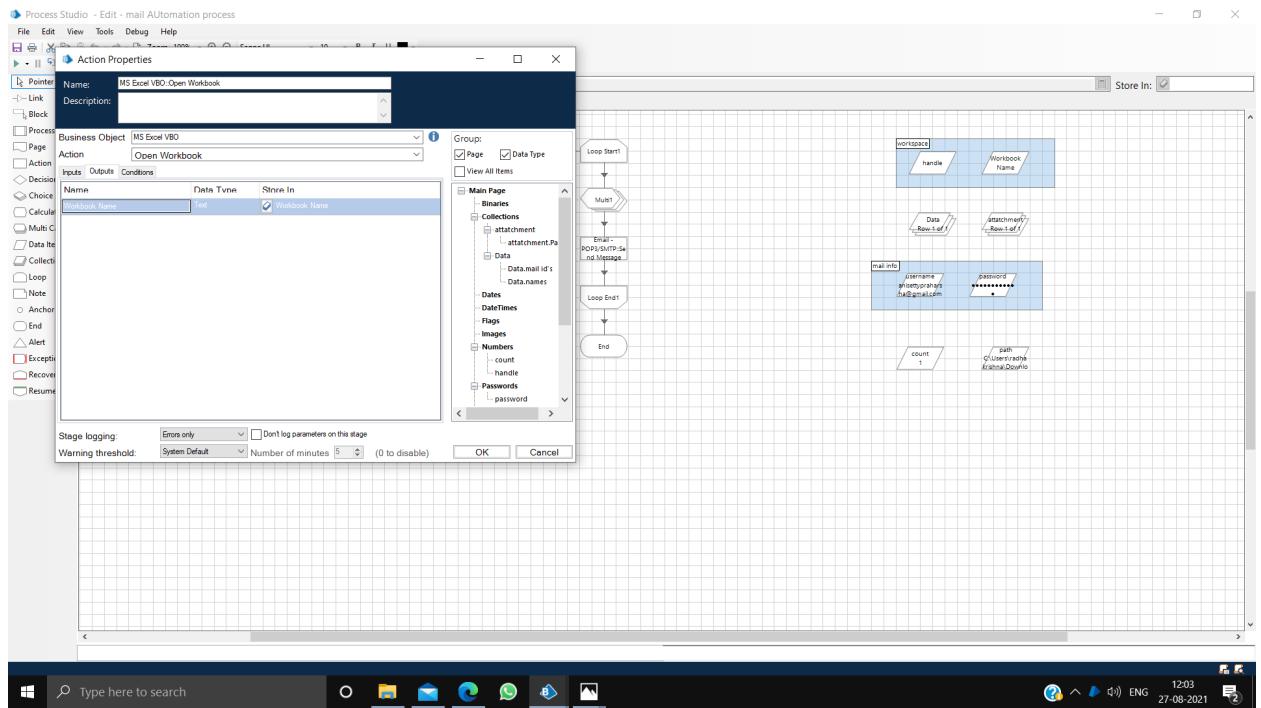




## STEP 4:

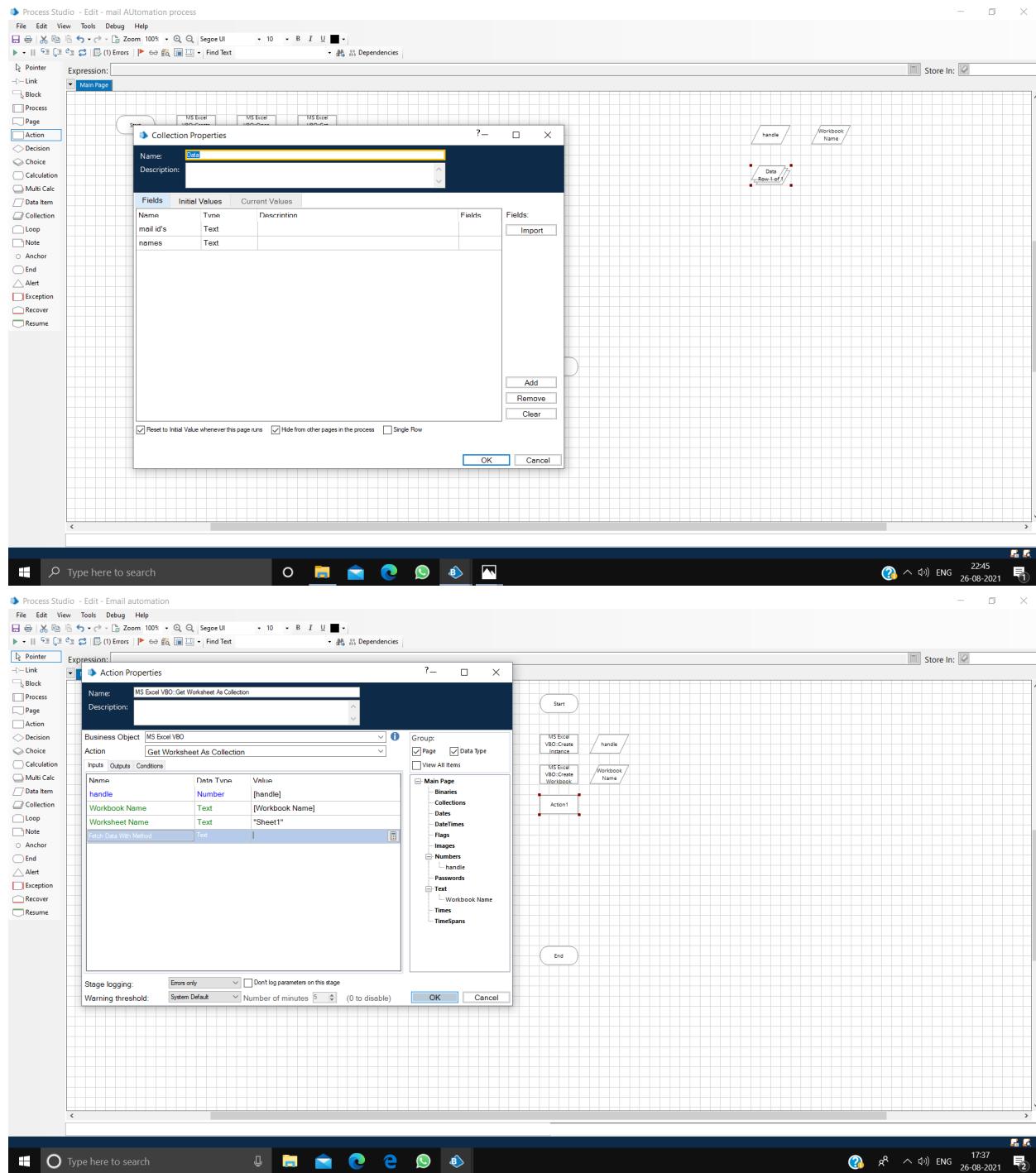
Now, drag and drop another action stage to open a work book.

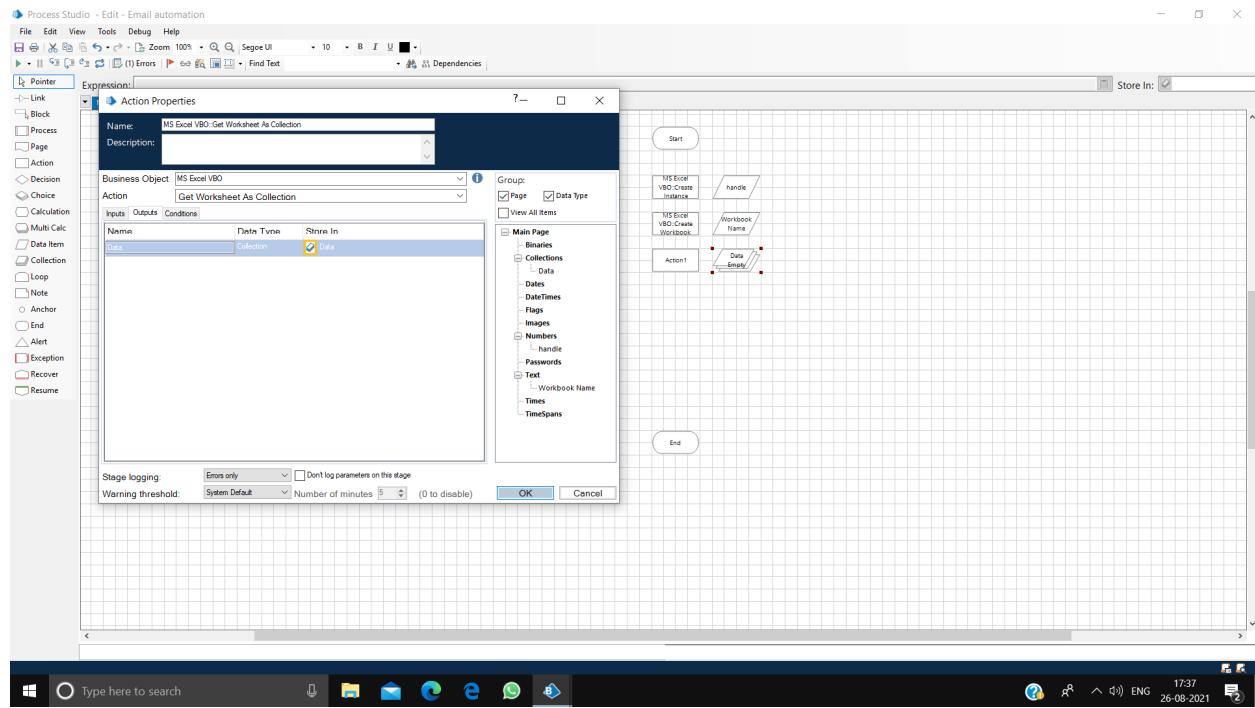




## STEP 5:

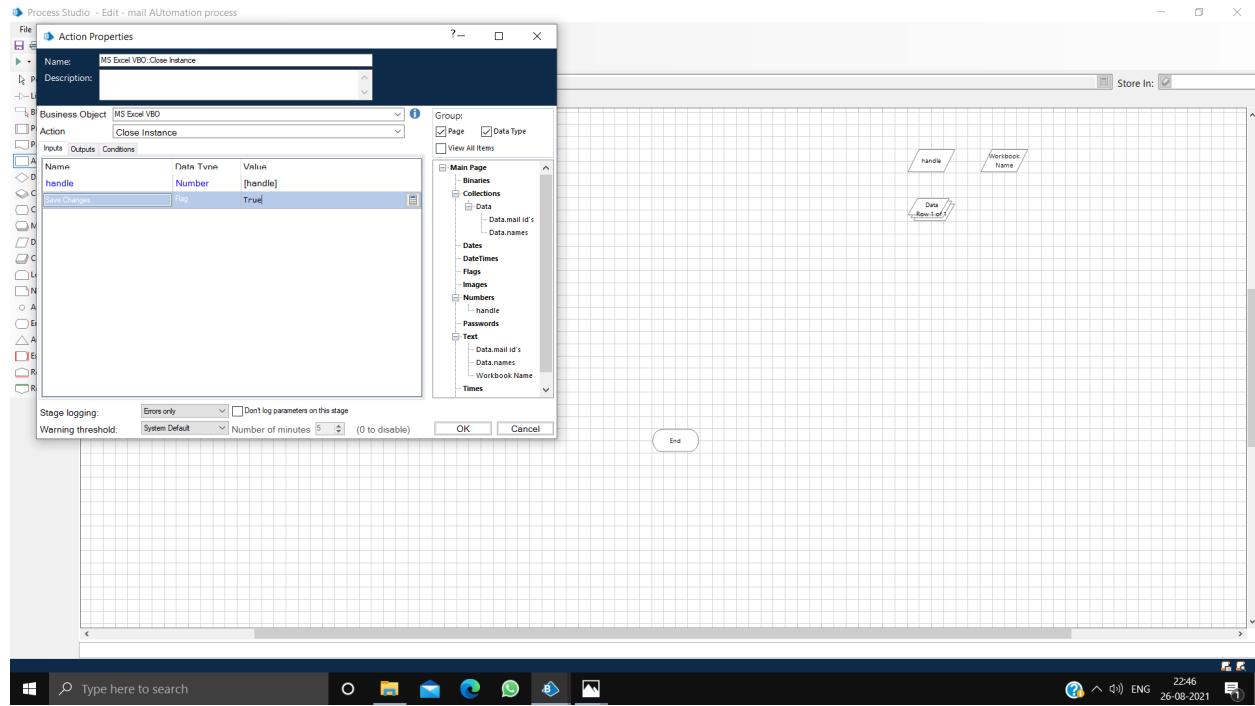
-In this step we will get the information of mail id's as collection by using action  
"get worksheet as collection"





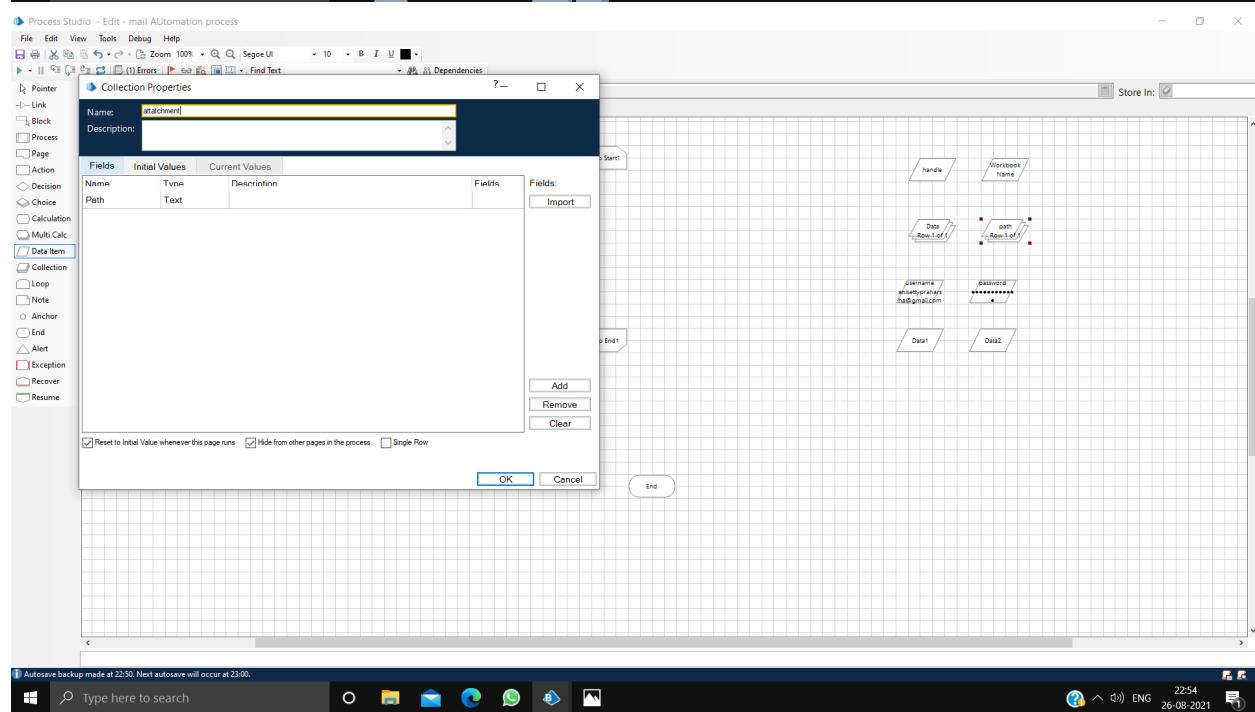
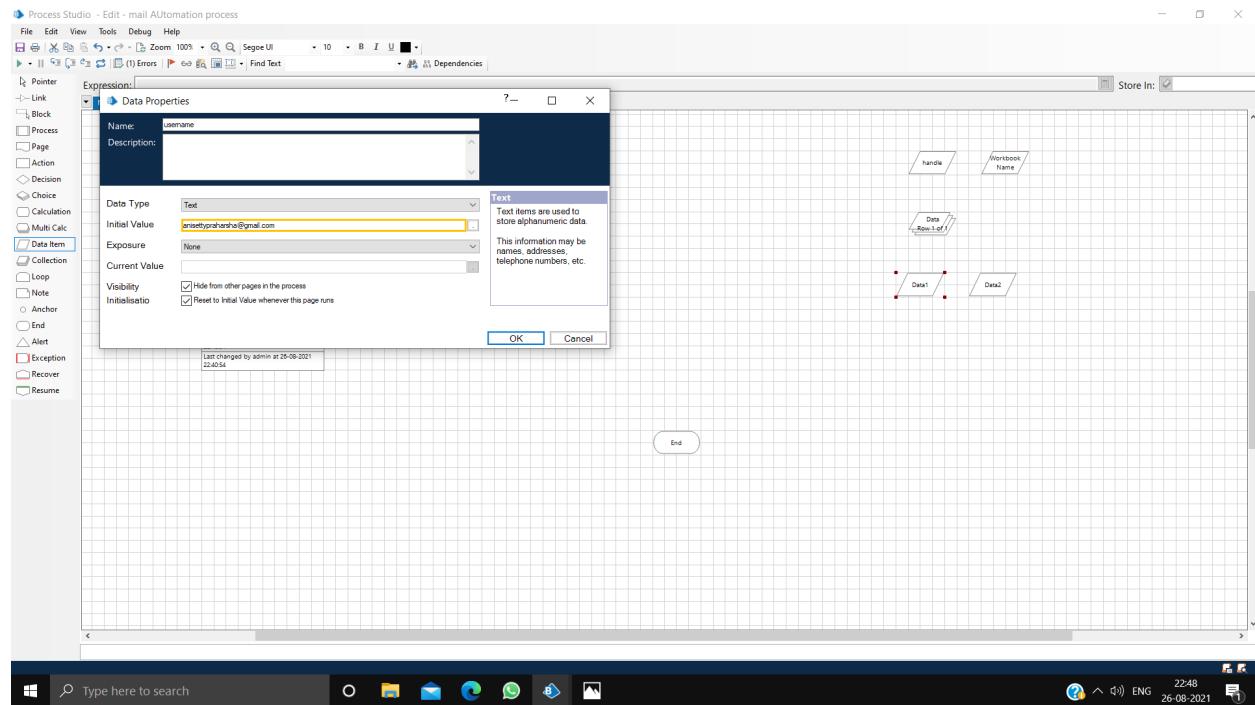
## STEP 6:

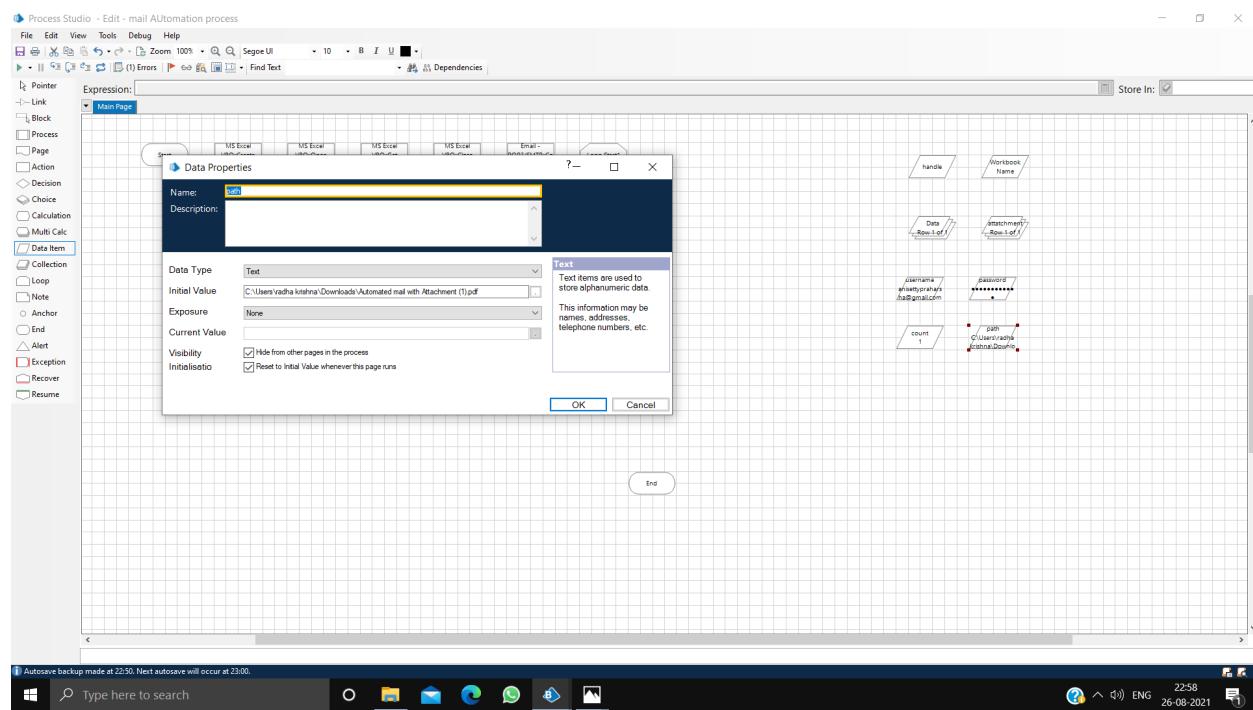
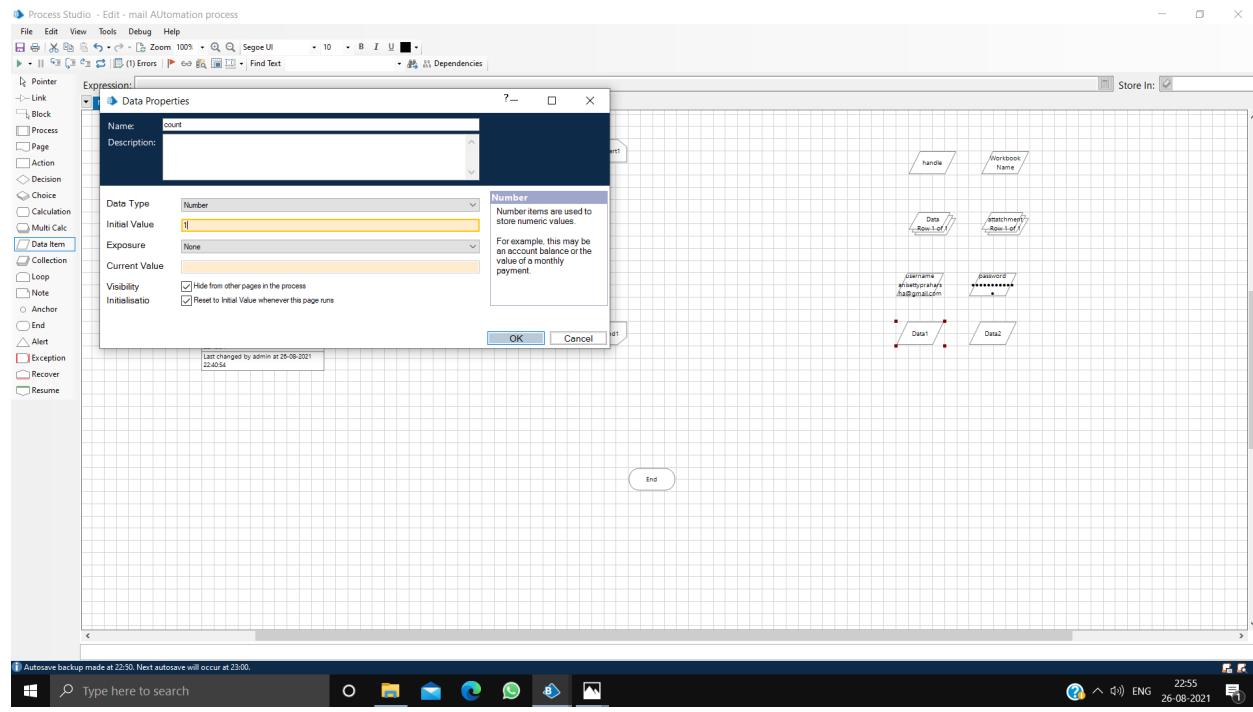
This step is for closing instance using action stage which we opened at the step 3.

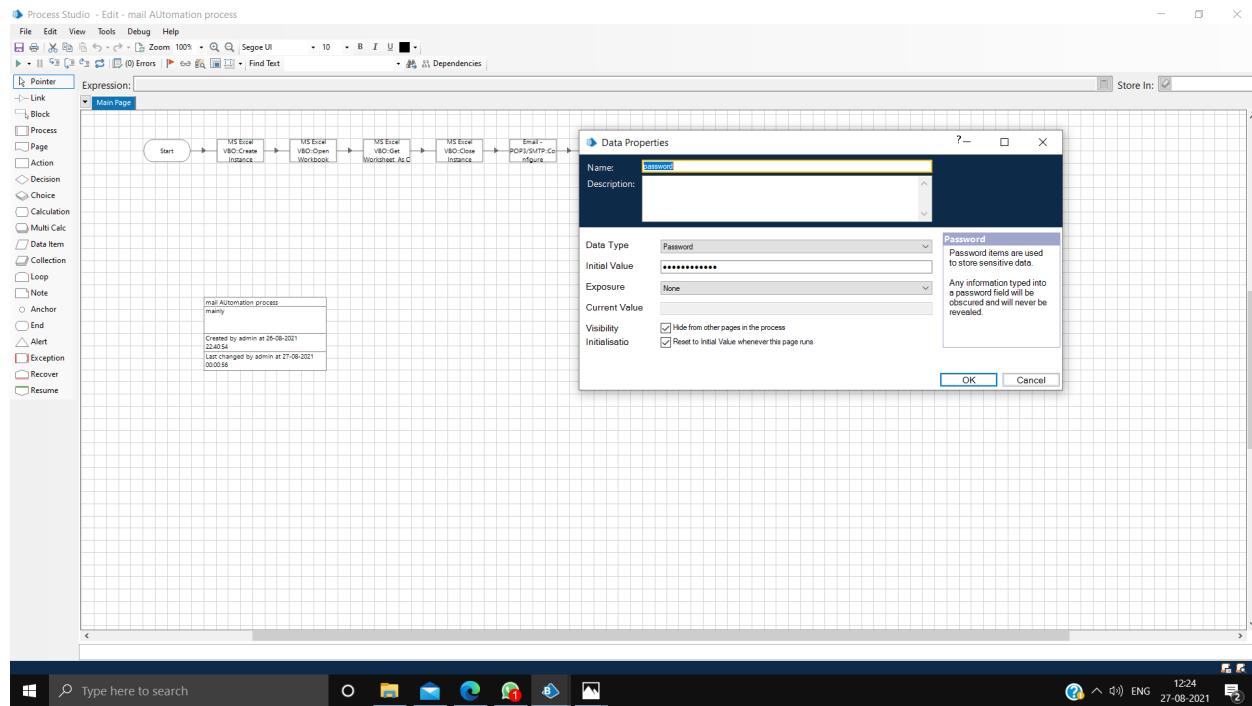


## STEP 7:

Create data elements of username,password,count,path and a collection for attachments.

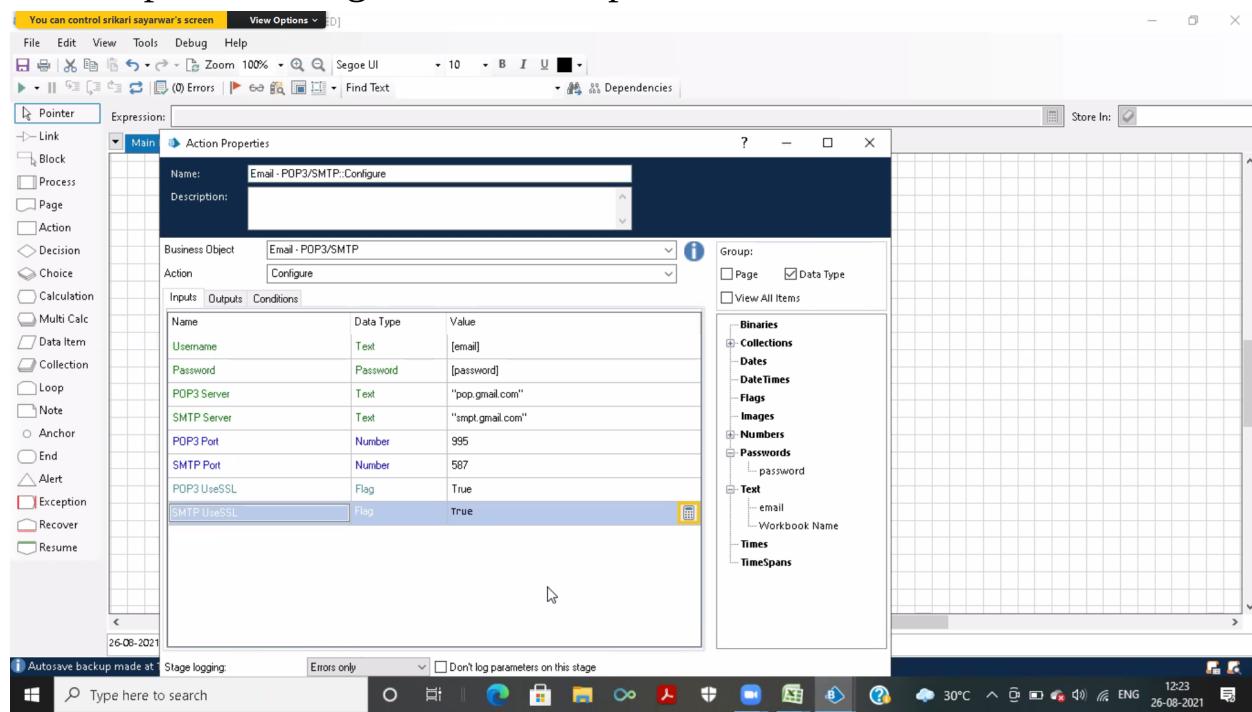






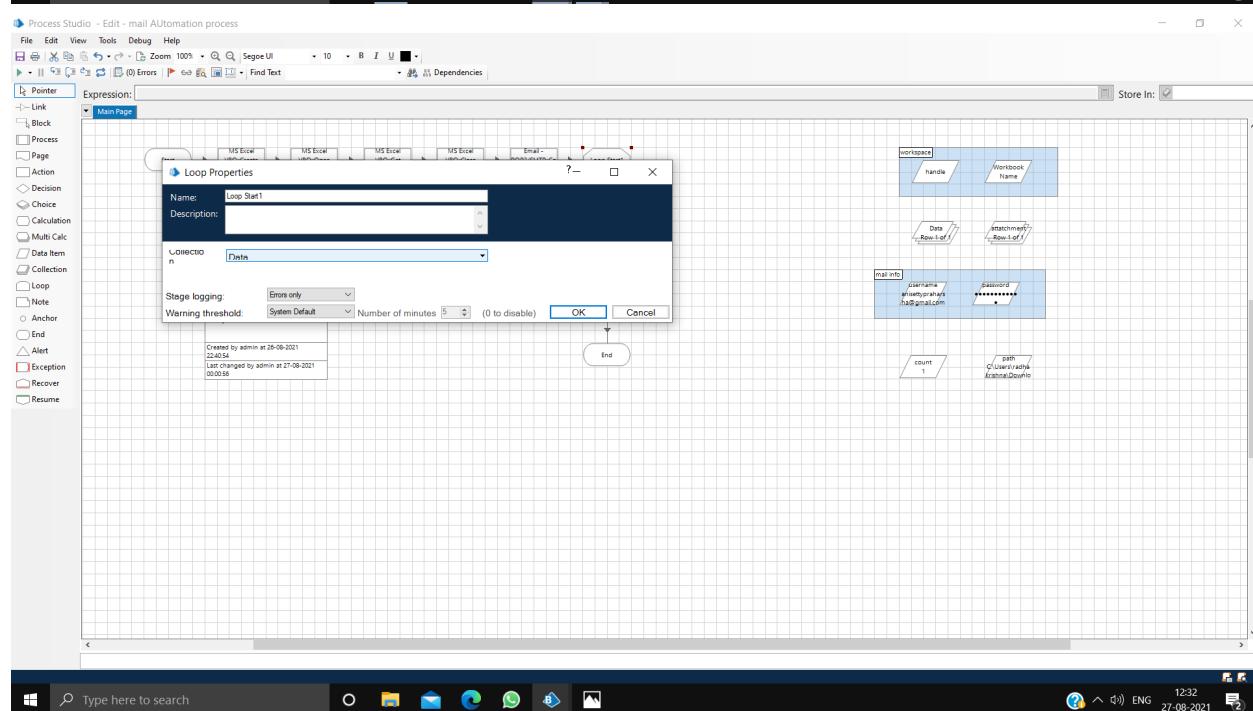
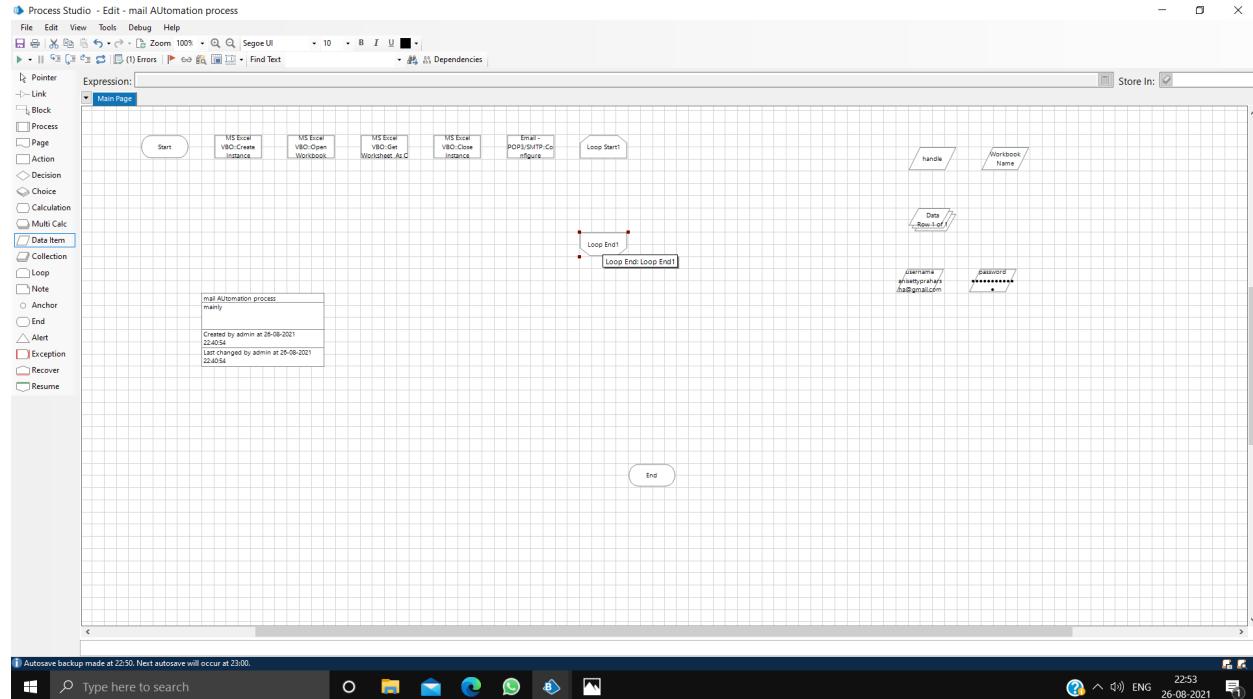
## STEP 8:

This step is to configure the Email path.



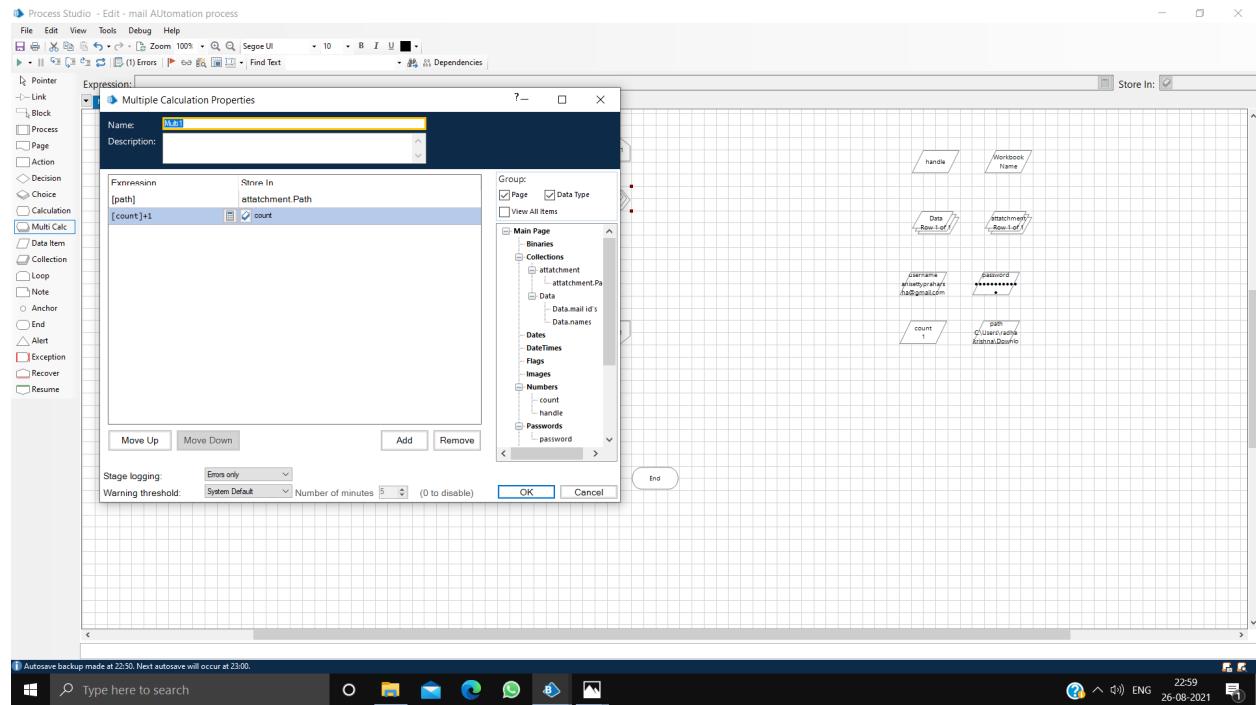
## STEP 9:-

In this step we will create a loop with collection of data.



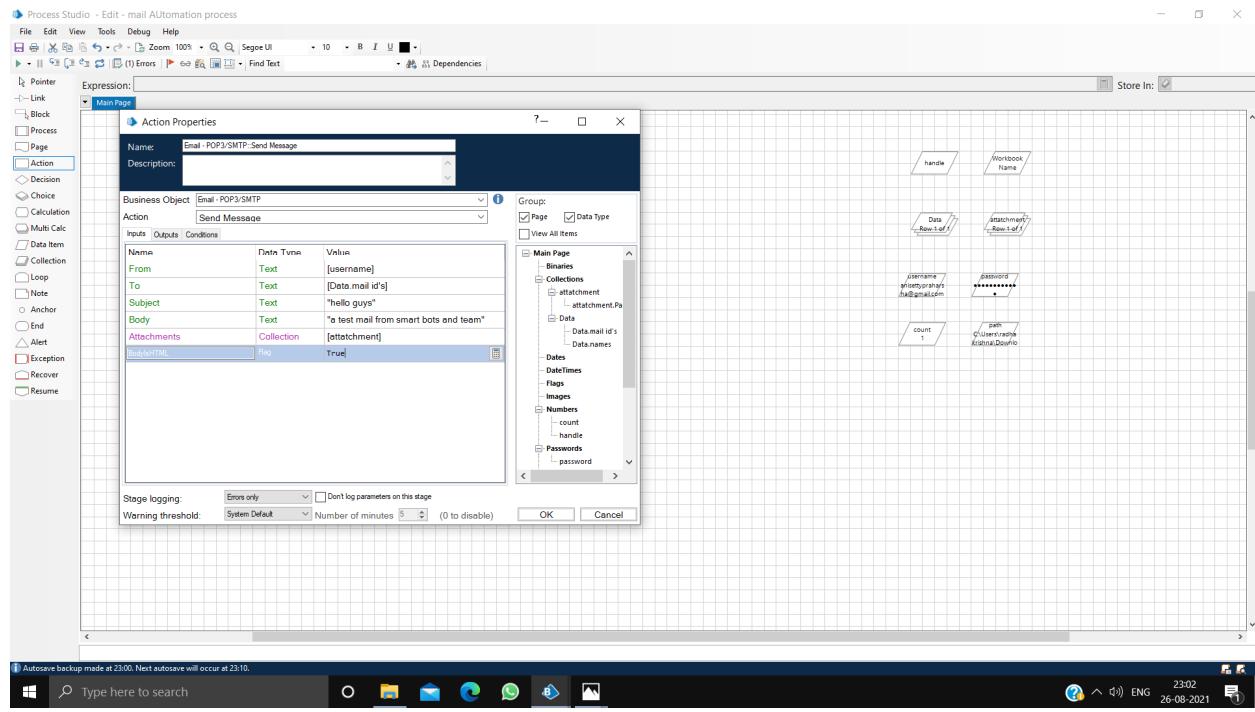
## STEP 10:-

Here we insert "multi cal" stage to increment the count and trace the path for each mail.



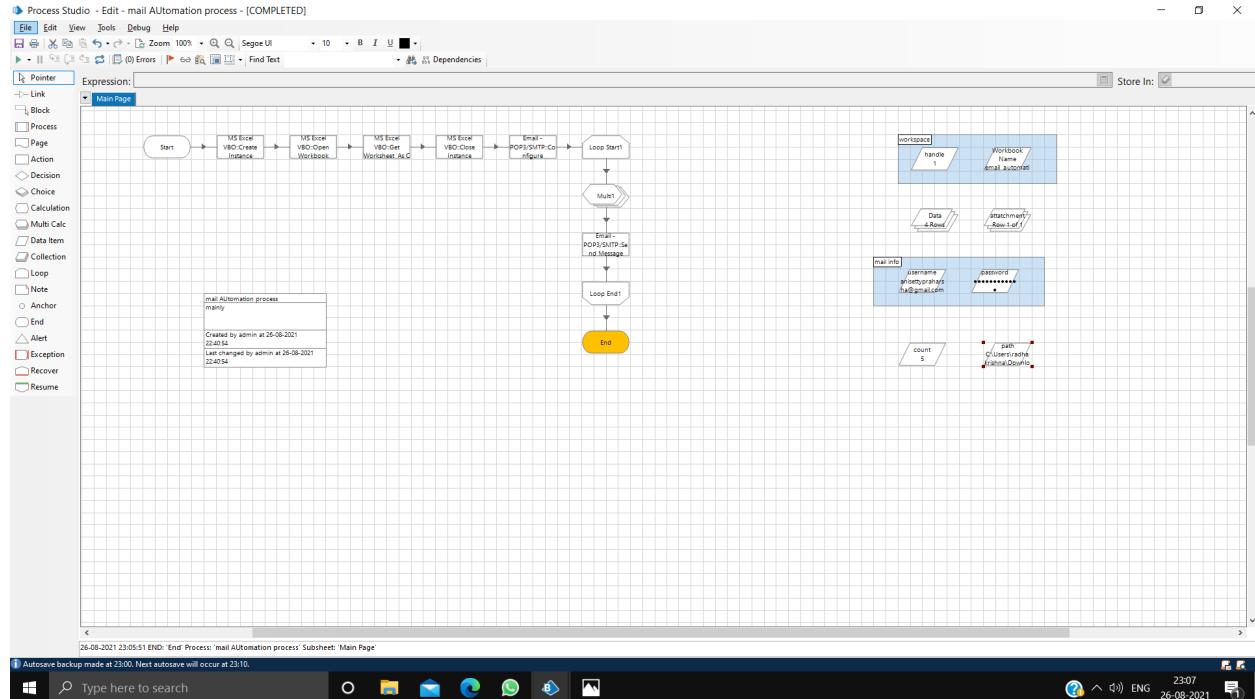
## STEP 11:-

In this stage we will write the subject and body of the mail using the action stage as shown below.



## STEP 12:-

By linking all the stages the flow gets completed. By running the process the mails are sent.



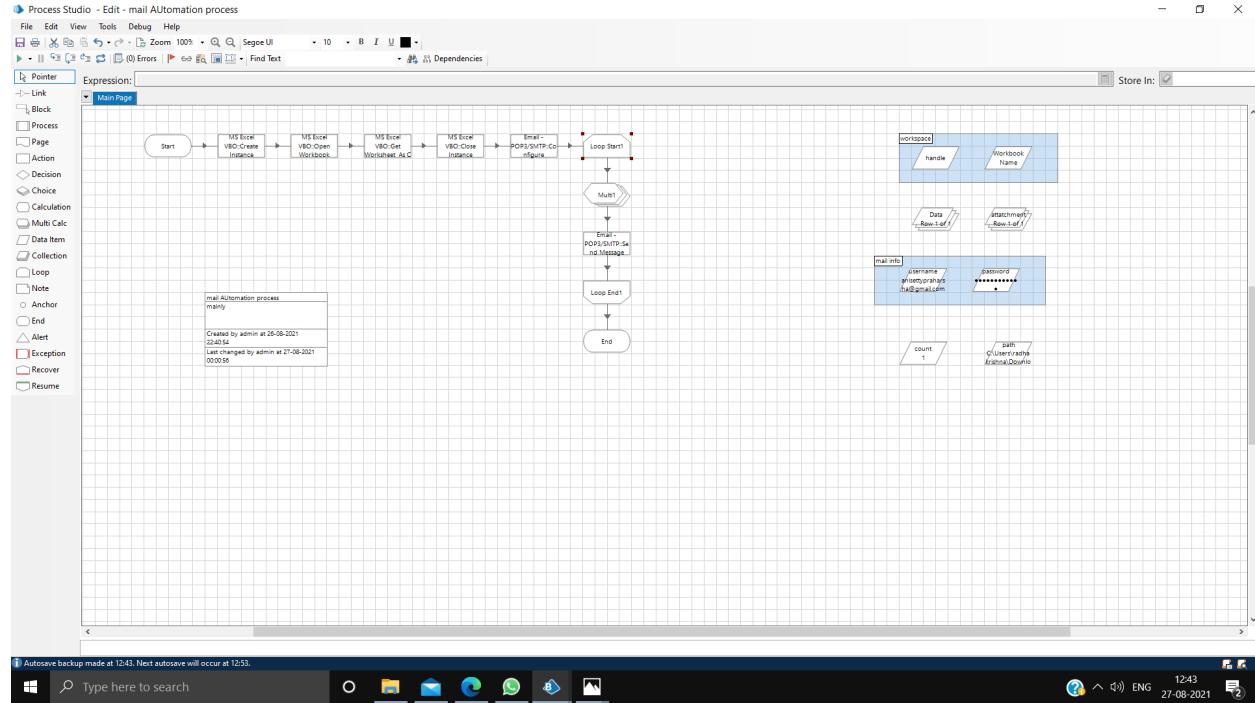
# EXPERIMENTAL INVESTIGATION:

You can send multiple attachments by separating their paths using a comma; for example, c:\File1.docx, c:\File2.pptx.

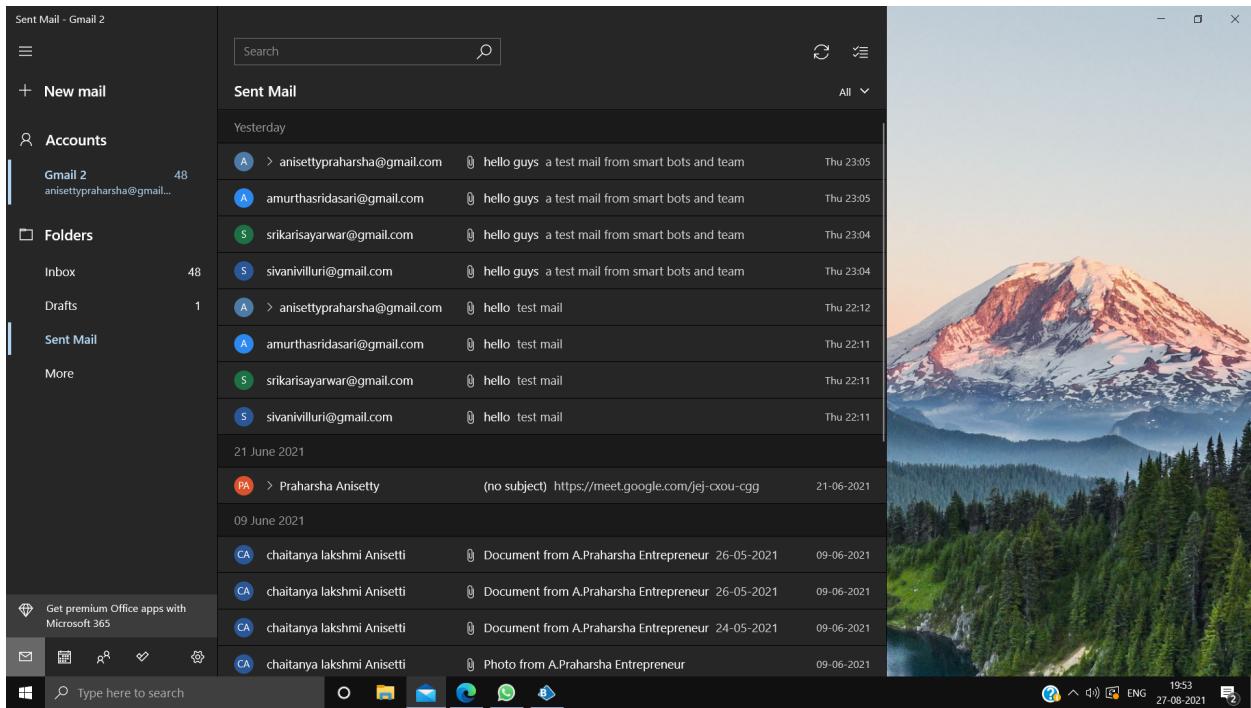
If we use comma between the paths we can create more attachment paths. And we can send many attachments at a time

While the process is running, keep your hands off the mouse and keyboard. The robot will be moving the mouse and pressing keys. If you interfere with its operation, the process may get interrupted with errors. You can send multiple attachments by separating their paths using a comma.

## FLOW CHART:



# RESULT:



## ADVANTAGES:

### 3 Helpful Ways to Use RPA for Email

Considering the amount of time that opening, reading, responding to, and managing email takes out of most people's days, it's no surprise that [RPA](#) could have a positive impact when it comes to email. A study by McKinsey estimates that professionals spend 28% of their working hours each week managing email. But most job descriptions don't list "manage email" as a main responsibility which means there's a whole lot of the actual job to fit into 72% of the workweek. The obvious benefit of using RPA for email is time savings. Let's delve into some specific ways you can employ RPA for email to save time.

#### 1. Launch tasks based on incoming email

Think about the tasks you have to perform because you receive an email. In a

customer-facing role, that might be providing order information (when did my order ship? Can I get a copy of my invoice?). In other roles, that might be to generate reports for sales or management. In IT, you'll have help desk requests for password resets. Email automation can take care of a number of tasks coming into your inbox without manual effort.

## 2. Automatically route attachments from incoming email

Whether it's an invoice, a receipt for archival, an Excel report, or another type of document, you can set up tasks with RPA to identify the attachment and follow rules for processing. Maybe the invoice is sent through AP processes, the receipt is sent to your document management system, and the Excel report is filed for reference later on. While [Outlook automation](#) does exist within the platform, it's limited by only being able to file emails within Outlook. An RPA bot could file your document or Excel within an EDMS or in SharePoint.

## 3. Automate outgoing email

The possibilities for automating outgoing email are endless, but here are a few use cases. HR might need to email all employees within a certain region every other Tuesday to remind them to get their time off requests in before the end of the pay period. Sales support might need to generate and send a monthly sales report to each individual representative with their totals for the month.

Customer Service might need to send individual emails to every customer confirming that a recurring order is about to ship. You can also set up bots to send emails based on triggers so that an email only sends if a certain activity happens.

Automating email in this way not only reduces that 28% figure, but it also helps you to be more agile and on-the-ball. The right information, document, or reminder can get to the right place at the right time, dependably, even if you are out of the office or busy with other value-adding work.

## Disadvantages :

1. Attrition. Although [RPA bots don't always displace workers](#), it is a possibility. Moreover, because organizations can add bots to handle increasing workloads, they won't need to hire the additional workers who would have otherwise handled that growing volume of work.

"Vendors push that RPA eliminates work that's boring and redundant, but in reality, there were people who earned their money doing that work. So, there is work being eliminated and jobs and hours that are being cut," Weilerstein said. "It's a real worry for people, and it's also a question of optics for business."

2. Sprawling technology. As organizations add more bots to perform more tasks, they risk creating an unwieldy collection that becomes more difficult and more costly to manage and maintain.

"That can happen if you're not governing it right, if understanding who has responsibility for what isn't formalized [and] if you're just building bots and throwing them into production," Abel said, stressing the need for effective governance and an effective RPA center of excellence to avoid such scenarios.

3. Added complexity. Similarly, RPA can [create layers upon layers of software](#) when it's not effectively documented, managed and governed, Weilerstein said.

It creates complexity that could make business improvements harder to achieve.

"RPA makes it easy for businesses to cope with changing business processes, and that makes it easy for them to do it piecemeal rather than updating the software in a systematic way. The problem with that is, if something goes wrong, it makes it difficult to troubleshoot to find out what went wrong," Weilerstein said. "It's having all the layers that makes the entire picture more complicated."

4. Magnification of problematic processes. According to experts, organizations that don't first review and, if necessary, reengineer and optimize processes before automating them risk automating problematic processes. This means amplifying inefficiencies, errors and anything else that was wrong with the process in the first place. It also adds costs, which could negate any expected ROI, and introduce new risks.

5. Thwarted transformation. Executives who see RPA as a tactical point-by-point offering rather than a tool that's part of a holistic strategy will get more limited benefits, according to Martelon. Enterprise leaders who want RPA to support their digitization objectives [must have a strategic plan](#) for prioritizing their automation projects and understand how those projects fit

into their overarching strategic visions.

## **Applications:**

### **Generating Mass Emails**

If there is a need for sending mass emails frequently, then RPA can be a great option to automate the process.

**Given below are the main applications of automated software robots:**

- Report generation.
- Revenue forecasting.
- Beneficial to QA processes.
- Data validation and auditing.
- Data replication and migration.
- Customer Relationship Management and other operational sales activities.

**Here are 3 of the most effective RPA tools:**

- UiPath

- Blue prism
- Automation Anywhere

## Conclusion:

The MS Excel VBO is a fairly new object that was made available to Blue Prism 6.3 developers. It has significantly simplified the task of sending emails compared to earlier versions. In this project, we completed the building of the process by getting the bot to send an email to the requester . We saw that after the search is complete, the email properties, message body, and attachments are all stored into a collection that we can retrieve by looping.

We have covered one of the most common applications that Blue Prism processes have to interact with on a day-to-day basis: Microsoft Excel. We have seen how to open an Excel file, read its contents to a collection, and write to a cell.

## Future Scope of Robotic Process Automation:

The technology is advancing rapidly in almost all the fields, not in a minute but in every second. With this quick development in technology, tremendous growth has been observed in the global automation industry. The usage of automation techniques is in continuous growth and it is anticipated for the predictable future. The robotic process automation is one of the revolutions in the automation industry, and it is expected to increase higher potential in

terms of utilization and staff implementation in the upcoming year. [Robotic Process Automation](#), particularly focuses on the process automation of those industries which are mostly business oriented and are handled by humans. Using RPA, all the operations would be automated easily, but it is expected that it will replace the human jobs because in the future the robotics oriented automated tools will be highly effective.

The robotic process automation is basically a software in which a robot is involved and used to perform human activities. These robots are used to carry out the organizational tasks and they are organized in such a way that they can manage any data or actions for the current applications which are used to carry out several business processes. The [robots](#) which are involved in RPA has to be trained and once they are trained, they can be automatically used to carry out the preferred functions. The operations which are automated involves a wide range of manipulation of data, activating responses and improving communications within several systems. The main objective of RPA is to decrease the need for the extra workforce, to carry out the large volume of IT jobs which are related to support the remote infrastructure, workflow, and other back-office processes related to the financial field, accounting, human resources, customer services and supply chain management. With RPA, it is possible to perform the work seamlessly, as it saves a lot of time and also helps to reduce the chances of human errors. The RPA software utilizes multi level features for data collection, configures the digital data and connecting it to a server or a website.

Well, the future scope of RPA is relatively very high. There are various human jobs which can be easily automated using RPA tools and technology. The [future scope of RPA](#) can be observed in the field of data entry and data rekeying jobs. These tasks could be easily automated with RPA. The various repetitive tasks such as formatting, data assembling or anything which requires a series of steps are easily carried out with the help of RPA. The other computer-supported processes which utilize a set of procedures are also performed through RPA. The RPA would be helpful in improving the data collection and these data can be analyzed in a better way, if all the tasks which are carried out by humans today are performed by robots. During the

upcoming year, a tremendous growth is observed in the field of RPA and therefore it will deliver higher technological abilities towards significantly reducing the risk of incorrectly regulatory reporting, including the improved data analytics and higher data accuracy. The RPA in the market is progressing rapidly and acceptance of this robotic automated technique could help to restructure the business process management marketplace. This is due to the following benefits of RPA:

1. Efficiency: The software robots are highly efficient they can operate 24/7 without taking any break.
2. Accuracy: In order to carry out data entry task, the robots can perform it in the same way as the human beings without making any mistakes.
3. Cost Reduction: The software robots help to reduce the organizations cost.
4. Change management can be performed easily by the RPA as it reserves the application and data integrity.
5. Enhanced audit and monitoring compliance: A detail audit logs are offered by the robots by allowing the advanced business analytics and enhanced compliance.

The RPA's influence will go to range within the organizations. Nowadays, most of the organizations are executing RPA to automate their various business processes, its impact will become higher in the future. The RPA will be utilized in different ways and through maximum processes as compared to the present utilization within an organization. RPA will not only focuses on its internal processes, in addition to this, it will also going to emphasis on external as well as customer-oriented processes from now. The incoming email sorting is one of the examples in which the huge productivity can be delivered by the smart robots. This analysis shows that the influence of RPA within the organization would be greater in the forthcoming years than the previous years in terms of overall business. An amount of this will occur when implementation of RPA begins to change from the initial and proof of concept to real production. The RPA is tested in most of the organizations and its usefulness is proved in every

situation and thus it can be taken at the succeeding level by most of the businesses. Further innovation can be seen in the RPA area at this stage and new applications would also arise positively.

It has been observed that if any of the automation tools are integrated with other tools it will function flawlessly. The RPA will be utilized with other types of technologies as well because most of the companies realized that the automated tools do not function properly alone but they will give their best results when combined with the other tools. It does not mean that the RPA would not provide appropriate results alone. Definitely, you will get the proper outcomes, the next step is not just to grow the RPA technology alone, but it can be expanded into other tools which the organization is using. The RPA is more versatile, commanding and big tool, which alone can solve several functions, but the finest consequences would be gained by utilizing the [RPA](#) with the other tools. RPA performs the tasks very well on its own, but in the future, those who are practicing the RPA, expects that it will create a more powerful total workforce when it is incorporated with the tasks carried out by human employees. The RPA will be used together with the process and work management tools, that is the tools like Kofax Total Agility, in which the features like case management is involved.

Well, the subsequent step in the Robotic Process Automation is the self-learning competencies and Artificial Intelligence. The RPA will develop itself as RPA 2.0. The AI would not be similar to this innovative technology. It will move further than a rule-based technology and begin to combine the various features of artificial intelligence. The discussion will move away from the RPA towards the Smart process automation in the upcoming year. This transition will lead to inventions that make the business processes more smarter than today. In order to make the changes completely, the digital transformation platforms can be utilized.

### **Career Scope of RPA:**

The [scope of RPA](#) is infinite and huge. In fact, it is anticipated that the RPA will

be the future of IT automation. If someone wants to build his or her career in RPA this particular field will automatically grow their career views. The field of Artificial Intelligence is one of the prospects and it would include the innovative level of decision making and job implications. Also, the RPA would show its great prospects in the banking domain, where the robots will go to be utilized to practically perform all the calculations and transactions. It will also show its consequences in more leading-edge technology in the area such as automobiles and aircraft manufacturing. It is highly anticipated that regular as well as online courses are going to barb up extremely in the next approaching years. Most of the RPA tools such as RPA Blue Prism, UiPath, automation anywhere are already being used in the business. The candidate who wants to build their career in the field of RPA can learn any of this tool to implement the RPA in the future.

## BIBILOGRAPHY:

sources we used to complete our project are:

1.Oreilly library - topic: Robotics Process Automation

website:

<https://www.oreilly.com/library/view/robotic-process-automation/9781789610444/3e8039ec-2870-4252-b3e7-9dda3b27f0b4.xhtml>

2.Blue Prism tutorial - topic: Email and surface Automation

website:

[https://www.tutorialspoint.com/blue\\_prism/blue\\_prism\\_email\\_surface\\_automation.htm](https://www.tutorialspoint.com/blue_prism/blue_prism_email_surface_automation.htm)

3.Geeksforgeeks tutorial - topic: RPA Email automation

website:

<https://www.geeksforgeeks.org/robotic-process-automation-rpa-email-automa>

tion-using-uipath/