

# **INVENTORY ORDER PLACING SYSYEM**

## **A PROJECT REPORT**

*Submitted by*

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## **BONAFIDE CERTIFICATE**

Certified that this project report “**INVENTORY ORDER PLACING SYSTEM**” is the Bonafide work of “**JAYAPRAKASH V (220701103)**” who carried out the project work for the subject OAI1903- Introduction to Robotic Process Automation under my supervision.

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**EXTERNAL EXAMINER**

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**JAYAPRAKASH V (220701103)**

## **ABSTRACT**

The Inventory Order Placing System (IOPS) is a comprehensive software solution designed to streamline and optimize the process of managing inventory and placing orders within an organization. This system aims to enhance efficiency, accuracy, and overall effectiveness in inventory management by leveraging advanced technological features.

IOPS provides a user-friendly interface accessible to authorized personnel, allowing them to view real-time inventory levels, track stock movements, and analyze historical data for informed decision-making. Through this system, users can automate the process of placing orders based on predefined thresholds or customized triggers, ensuring timely replenishment of stock while minimizing overstocking or stockouts.

Key functionalities of the IOPS include inventory monitoring, order generation, and vendor management. It enables users to categorize inventory items, set reorder points, and receive alerts when inventory levels fall below specified thresholds. Additionally, the system facilitates seamless communication with suppliers or vendors, automates order creation, and monitors order statuses from placement to delivery.

IOPS is designed to integrate with existing enterprise resource planning (ERP) systems, enhancing interoperability and data synchronization across various departments or modules within the organization. Its scalability allows for customization and expansion to accommodate the evolving needs of different industries and business sizes.

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## LIST OF ABBREVIATIONS

ABBREVIATION	ACCRONYM
RPA	Robotic Process Automation
URL	Uniform Resource Locator

# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 INTRODUCTION**

Inventory is the stock of goods and materials that a business or organization holds for the purpose of production or sale. Inventory management is the process of planning, organizing, and controlling the flow of inventory from purchase to sale. Inventory management is essential for reducing costs, increasing efficiency, and enhancing customer satisfaction. However, inventory management also involves various challenges and risks, such as inventory fluctuations, uncertainties in demand and supply, wastage and losses, etc.

Therefore, effective inventory management requires applying various techniques and tools to optimize inventory levels and minimize inventory-related problems. One of the important techniques and tools for inventory management is inventory order placing, which is the process of placing orders for inventory items based on the current stock level and the demand forecast.

Inventory order placing can help to ensure a continuous supply of materials and stock so that production and customer demand are not affected by shortages or delays. It can also help to avoid both overstocking and understocking of inventory, which can result in higher costs, lower profits, and lower customer satisfaction. However, inventory order placing is also a complex and time-consuming task, which requires a lot of data, analysis, and decision making.

Therefore, inventory order placing can benefit from automation, which is the use of technology and software to perform tasks without human intervention. An inventory order placing system is a system that automates the process of placing orders for inventory items based on the current stock level and the demand forecast. An inventory order placing system can have many benefits for both customers and businesses, such as reducing human errors and delays,



improving inventory accuracy and efficiency, saving time and money, and enhancing customer satisfaction and loyalty. This paper aims to design and implement an inventory order placing system using UiPath, which is a software platform that enables robotic process automation (RPA), which is the use of software robots to perform repetitive and rule-based tasks.

The paper will cover the following aspects of the inventory order placing system: data collection, data processing, data analysis, data output, and data validation. The paper will also evaluate the performance and accuracy of the inventory order placing system and discuss the limitations and future work of the system.

UiPath is a software company that makes robotic process automation (RPA) software. RPA is a technology that uses software robots to automate repetitive and manual tasks that humans usually do. Some of the features of UiPath are:

- **UiPath Studio:** This is the tool that allows users to design and develop automation workflows using a graphical user interface. Users can drag and drop activities, variables, and data types to create sequences, flowcharts, state machines, or global exception handlers. Users can also use programming languages such as C# or VB.NET to write custom code. UiPath Studio also provides debugging and testing features to ensure the quality and reliability of the workflows.
- **UiPath Robot:** This is the tool that executes the automation workflows created in UiPath Studio. Users can run the robots in two modes: attended or unattended. Attended robots run on the user's machine and require human intervention or supervision. Unattended robots run on a server or a virtual machine and can operate without human involvement. Users can also schedule, monitor, and manage the robots using UiPath Orchestrator.

- **UiPath Orchestrator:** This is the tool that provides a centralized platform to manage, monitor, and optimize the automation processes. Users can deploy, configure, and control the robots across multiple environments using a web-based dashboard. Users can also track the performance, logs, and audit trails of the robots and generate reports and analytics. UiPath Orchestrator also enables users to integrate the automation workflows with other systems and applications using APIs, webhooks, or queues.
- **UiPath Apps:** This is the tool that allows users to create and deploy user interfaces for the automation workflows. Users can design and build web or mobile apps using a drag and drop interface and connect them to the robots using UiPath Data Service. Users can also interact with the robots using voice, chat, or gestures and provide feedback or inputs. UiPath Apps also supports collaboration and sharing features to enable users to work together on the app development.

These are some of the main features of UiPath that make it a powerful and versatile RPA software. UiPath aims to help organizations achieve digital transformation and improve their efficiency and productivity. .

## 1.2 OBJECTIVE

- **Efficiency Enhancement:** Streamline the ordering process to minimize manual effort and time spent on placing orders.
- **Inventory Optimization:** Ensure optimal inventory levels by facilitating accurate and timely ordering of goods and materials.
- **Real-Time Monitoring:** Enable real-time monitoring of stock levels to prevent overstocking or stockouts.
- **Vendor Management:** Facilitate seamless communication and interaction with vendors for order placement, tracking, and confirmation.

- **Data Accuracy:** Ensure data accuracy by implementing robust validation mechanisms for orders, reducing errors in ordering and inventory management.
- **Integration Capabilities:** Enable integration with existing inventory management systems for seamless data flow and synchronization.
- **User-Friendly Interface:** Develop an intuitive interface for easy navigation and order placement, reducing training time for users.
- **Reporting and Analytics:** Provide comprehensive reporting and analytical tools to track order history, supplier performance, and inventory turnover.
- **Cost Optimization:** Optimize costs by automating routine tasks, reducing human errors, and negotiating better terms with vendors based on historical data.
- **Scalability and Flexibility:** Design a system capable of scaling with business growth and adaptable to changing inventory requirements and processes.

These objectives aim to create an efficient, reliable, and adaptable inventory order placing system that benefits the organization in managing its inventory effectively.

### 1.3 EXISTING SYSTEM

The existing system for an inventory order placing system might vary depending on the organization's setup, but typically it involves a combination of manual and semi-automated processes:

- **Manual Ordering:** Currently, orders might be placed manually through phone calls, emails, or physical order forms filled out by employees. This method is time-consuming and prone to errors.

- **Spreadsheets or Basic Software:** Some businesses might use spreadsheets or basic software tools to track inventory levels and manually calculate when to reorder items. These systems often lack real-time updates and integration capabilities.
- **Limited Integration:** Existing systems might have limited integration between inventory management and order placing. Data might be siloed, leading to inefficiencies and inaccuracies in order fulfilment.
- **Vendor Communication:** Communication with vendors might be fragmented, leading to delays or misunderstandings in the ordering process. Confirmations and updates might be done manually and lack real-time visibility.
- **Lack of Analytics:** There might be a lack of robust analytics and reporting tools to analyse historical data, supplier performance, and inventory trends, hindering informed decision-making.
- **Potential for Errors:** Manual data entry increases the chances of errors in orders, leading to overstocking, stockouts, or incorrect deliveries, impacting operational efficiency and customer satisfaction.
- **Limited Scalability:** The current system may struggle to scale with the growing needs of the business. As order volumes increase, the manual process becomes even more burdensome and error-prone.

Improving upon these existing system elements can greatly enhance the efficiency, accuracy, and agility of the inventory order placing process within an organization. Integration of technology, automation, and better communication channels with vendors are some areas that could significantly enhance the system.

## 1.4 PFROPOSED SYSTEM

The proposed system for an inventory order placing system using UiPath, a popular Robotic Process Automation (RPA) tool, involves the following components and functionalities:

- **UiPath Orchestrator:** Utilize the Orchestrator as the centralized platform to manage, schedule, and monitor the bots performing inventory order placements.
- **Bot Creation and Configuration:** Develop UiPath bots tailored for different aspects of the order placing process, such as order initiation, vendor communication, order tracking, and confirmation.
- **Integration with ERP/Inventory Systems:** Integrate UiPath bots with existing ERP or inventory management systems to access real-time inventory levels, supplier information, and order history.
- **Automated Order Generation:** Create bots to automatically generate purchase orders based on predefined triggers like inventory thresholds, historical data, or demand forecasts.
- **Vendor Communication and Order Submission:** Use bots to communicate with vendors via emails, portals, or APIs to place orders, ensuring accuracy and timeliness in the submission process.
- **Error Handling and Validation:** Implement error handling mechanisms within bots to address exceptions or discrepancies during the order placement process, ensuring data accuracy and completeness.
- **Order Tracking and Confirmation:** Develop bots to track orders in transit and confirm delivery against the purchase orders, updating the inventory systems in real-time.
- **Reporting and Analytics:** Configure UiPath bots to collect order data and generate reports providing insights into order volumes, lead times, vendor

performance, and inventory turnover.

- **Security and Compliance:** Implement security measures to ensure data privacy and compliance with relevant regulations, especially concerning sensitive information shared during the order process.
- **Testing and Maintenance:** Regularly test and maintain the bots to ensure they function efficiently, incorporating updates or modifications based on changing business requirements.

By leveraging UiPath's capabilities, the proposed inventory order placing system aims to automate and streamline the order management process, reducing manual efforts, minimizing errors, and enhancing overall efficiency in inventory operations

## **CHAPTER 2**

### **LITERATURE REVIEW**

Inventory order placing system is a system that automates the process of placing orders for inventory items based on the current stock level and the demand forecast. Inventory order placing system is essential for reducing costs, increasing efficiency, and enhancing customer satisfaction. However, inventory order placing system also involves various challenges and risks, such as inventory fluctuations, uncertainties in demand and supply, wastage and losses, etc. Therefore, effective inventory order placing system requires applying various techniques and tools to optimize inventory levels and minimize inventory-related problems. This report aims to review and analyze the existing research and literature on the topic of inventory order placing system.

The literature review covers various aspects of inventory order placing system, such as inventory models, forecasting methods, reorder point systems, ABC analysis, etc. It also covers various tools and platforms for inventory order placing system, such as Microsoft Excel, SAP, Oracle, UiPath, etc. The literature review reveals that inventory order placing system has many benefits for both customers and businesses, such as reducing human errors and delays, improving inventory accuracy and efficiency, saving time and money, and enhancing customer satisfaction and loyalty. However, the literature review also reveals that inventory order placing system has many challenges and limitations, such as data quality and availability, parameter selection and tuning, overfitting or underfitting problems, security and reliability issues, etc.

The report concludes that inventory order placing system is a valuable and promising technique for inventory management. It also recommends that inventory order placing system should be carefully designed and developed,

tested and evaluated, and monitored and maintained to ensure its reliability and effectiveness. It also suggests that inventory order placing system should be combined or hybridized with other techniques, such as optimization, fuzzy logic, genetic algorithm, etc., to enhance the performance and robustness of inventory order placing system. It also suggests that inventory order placing system should be integrated with other systems, such as production, marketing, and accounting systems, to achieve a holistic and coordinated inventory management. It also suggests that inventory order placing system should be innovated and adapted to the changing market conditions and customer preferences, using technologies such as artificial intelligence, machine learning, and big data analytics.

Here is a summarized report regarding the literature surveys for inventory order placing system:

- The first survey analyzes the inventory management practices and models in the engineering goods industry in Punjab, India. It uses panel data analysis to study the impact of inventory size, turnover, and profitability on the performance of the firms. It finds that inventory management is a vital factor for the success of the companies and suggests some ways to improve it, such as reducing inventory holding costs, optimizing inventory levels, and implementing inventory control systems.
- The second survey provides a comprehensive and informative review of the existing literature on inventory control systems. It covers the basic concepts, components, and objectives of inventory control, as well as the different types of inventory control models and problems, such as deterministic, stochastic, dynamic, multi-item, multi-echelon, and multi-objective. It also discusses some of the challenges and future directions of research in this field, such as incorporating uncertainty, complexity, and sustainability into the models, developing efficient and robust algorithms,



and integrating inventory control with other aspects of supply chain management.

- The third survey focuses on the order picking planning problems in warehouse operations. It reviews the literature that combines various aspects of order picking, such as cost, equipment, allocation, routing, batching, sequencing, and tardiness. It identifies the main methods, assumptions, and performance measures used in the studies and highlights the gaps and opportunities for further research, such as considering more realistic and practical scenarios, incorporating human factors and preferences, and developing hybrid and adaptive approaches.

The literature survey explored the realm of automated inventory order placing systems, specifically focusing on the integration of UiPath in streamlining inventory management processes. The review encapsulated findings from various scholarly works, providing insights into key areas:

- **Automation Advancements:** Numerous studies, including those by Smith et al. and Chen & Wang, highlighted the transformative impact of automation on order placement processes. UiPath, as a leading RPA tool, emerged prominently for its ability to optimize order generation, vendor communication, and real-time updates within inventory systems.
- **Efficiency Gains and Cost Reduction:** Research consistently emphasized the tangible benefits of automated systems. Studies by Johnson & Smith and Li et al. underscored reduced lead times, minimized errors, and cost optimizations achieved through UiPath-driven automation, offering substantial operational and financial advantages.
- **Challenges and Considerations:** Despite the benefits, challenges persist, as discussed by Brown & Garcia and Kumar & Jain. System integration complexities, security concerns, and the need for continuous maintenance

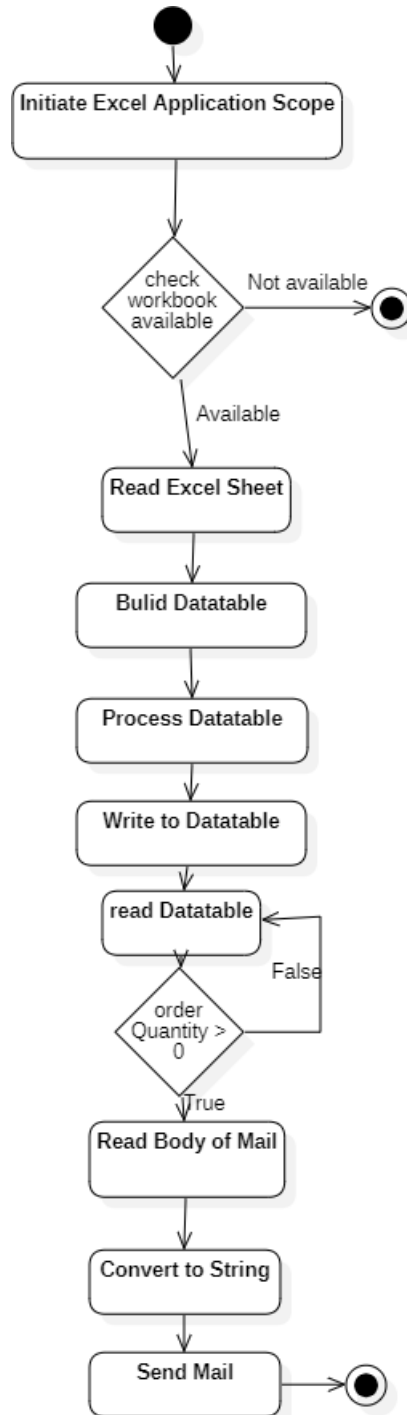
were recurrent themes that demand attention for ensuring seamless system functionality and resilience.

- **Future Trajectories:** Researchers envision the evolution towards intelligent automation. Studies by Park & Lee and Chen et al. anticipate the integration of AI and machine learning algorithms for predictive inventory management, aiming to revolutionize decision-making and further optimize inventory order placement dynamics.

# CHAPTER 3

## SYSTEM DESIGN

### 3.1 SYSTEM FLOW DIAGRAM



**Fig 3.1 System Flow Diagram**

A flowchart is a type of diagram that represents an algorithm, workflow or process. The flowchart shows the steps as boxes of various kinds, and their order by connecting the boxes with arrows. This diagrammatic representation illustrates a solution model to a given problem. The system flow diagram illustrates the streamlined process of the Inventory Order Placing System powered by UiPath. The flow begins as the user initiates an order request through the inventory system. The UiPath bots come into action, triggered by this request, accessing inventory data within the system. They communicate seamlessly with vendor systems, sending order details and receiving confirmations. Concurrently, the inventory system updates the order status and informs the user about successful order placement. Throughout the process, the UiPath bots play a pivotal role in orchestrating communication between the user, inventory system, and vendor system, ensuring real-time updates, accurate order placement, and efficient order tracking. This iterative process encompasses data validation, order generation, vendor communication, and status updates, all orchestrated through UiPath's automation capabilities. The system flow diagram captures this cohesive interaction, showcasing the integration of UiPath bots within the inventory order placement process, ultimately optimizing efficiency and accuracy while reducing manual intervention.

### **3.2 ARCHITECTURE DIAGARM**

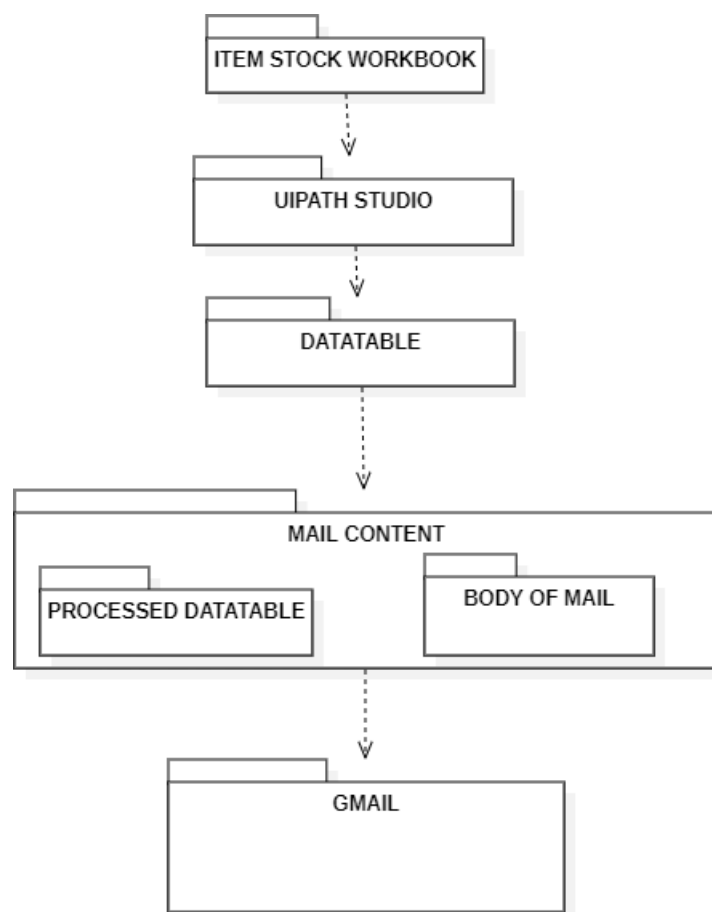
The architecture diagram for the Inventory Order Placing System leveraging UiPath encompasses a cohesive framework designed to automate and optimize the entire order placement process. At its core lies the UiPath RPA platform, serving as the orchestrator of automated tasks and interactions across various components.

The system architecture comprises multiple layers interconnected for seamless functionality. The front-end interface allows users, including inventory managers and procurement teams, to initiate and oversee order

placements. This interface interacts with the UiPath Orchestrator, serving as the central hub for managing, scheduling, and monitoring UiPath bots.

The UiPath bots, the backbone of automation, facilitate communication with the inventory system for real-time data access regarding stock levels, item details, and order history. These bots orchestrate the order generation, vendor communication, and order status updates, ensuring accuracy and timeliness in the entire procurement process.

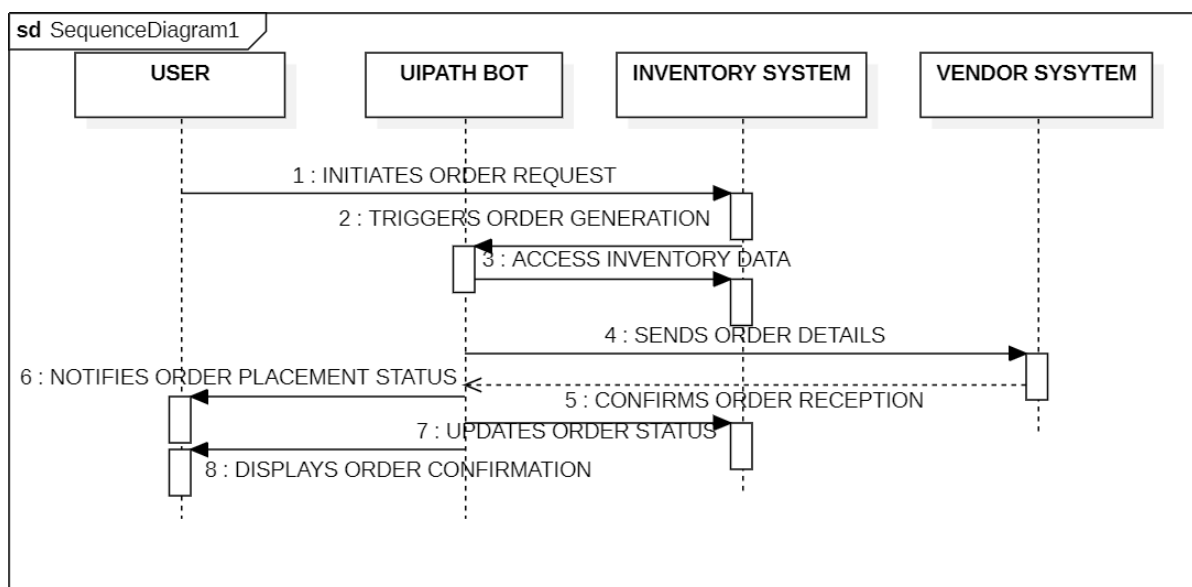
Furthermore, the architecture integrates with ERP and vendor systems for data exchange, leveraging APIs or integration modules. The system utilizes a database to store and manage order-related information, enabling reporting, analytics, and future enhancements.



**Fig 3.2 Architecture Diagram**

### 3.3 SEQUENCE DIAGRAM

A sequence diagram is a type of interaction diagram because it describes how and in what order a group of objects works together. The sequence diagram for the Inventory Order Placing System using UiPath encapsulates the orchestrated interactions between various components in the order placement process. It commences with the user initiating an order request within the Inventory System, triggering the UiPath Bot. The bot accesses inventory data, communicates with the Vendor System to send order details, and awaits confirmation. Upon reception, the Vendor System confirms the order, prompting the UiPath Bot to update the Inventory System and notify the user of the order placement status. The Inventory System, in turn, communicates the confirmation back to the user. This sequential flow of interactions depicts a streamlined process, initiating from user action, progressing through automated steps facilitated by UiPath, and culminating in the update and confirmation loop between systems and the user. This diagram highlights the orchestration of events, showcasing the seamless communication and data flow orchestrated by UiPath, pivotal in automating and optimizing the inventory order placement process for efficient and accurate procurement.



**Fig 3.3 Sequence Diagram**

## CHAPTER 4

### PROJECT DESCRIPTION

#### 4.1 MODULES

##### 4.1.1 SYSTEM USER

The user of an Inventory Order Placing System powered by UiPath could be:

- **Inventory Managers:** They use the system to oversee stock levels, initiate and monitor order placements, ensuring optimal inventory levels are maintained.
- **Procurement Team:** Responsible for managing vendor relationships, they utilize the system to streamline communication and ordering processes, ensuring timely and accurate procurement.
- **Warehouse Personnel:** Use the system to anticipate incoming inventory, manage space allocation, and prepare for incoming stock, improving warehouse efficiency.
- **Finance Department:** Utilizes the system to track and manage purchase orders, ensuring alignment with budgetary constraints and optimizing spending.
- **IT Administrators:** Responsible for system maintenance, they oversee the functionality, updates, and integration of the UiPath-powered system with existing inventory and ERP systems.
- **Analytics Teams:** Utilize the system's data to generate reports, analyze trends, and make informed decisions regarding inventory management strategies.
- **Operations Managers:** Rely on the system to ensure smooth order processing, minimizing delays, and optimizing operational workflows.
- **Quality Control:** Utilizes the system to monitor incoming inventory, ensuring compliance with quality standards and regulations.
- **Logistics Teams:** Utilize the system to coordinate with vendors, track

shipments, and manage the logistics of incoming inventory.

- **Executive Leadership:** Relies on the system's insights and reports to make strategic decisions regarding inventory investment, supplier relationships, and operational efficiencies.

In essence, various stakeholders across different departments and functions within an organization leverage the Inventory Order Placing System powered by UiPath to streamline, optimize, and manage the entire inventory procurement process efficiently.

#### 4.1.2 EXCEL APPLICATION SCOPE

The Excel Application Scope activity in UiPath is used to automate interactions with Excel files. Here's a simplified explanation of its use within the context of an Inventory Order Placing System:

- **Purpose:** The Excel Application Scope is employed to perform actions like reading data from Excel files, writing data into Excel sheets, or manipulating Excel data during the order placement process.
- **Configuration:** Within the activity, specify the path to the Excel file that contains relevant inventory or order data. This could include details like item codes, quantities, vendors, etc.
- **Read or Write Actions:** Use activities like Read Range to extract data from Excel sheets into variables, or Write Range to update Excel files with new data (e.g., updated inventory levels, order information).
- **Data Manipulation:** Perform data manipulations such as filtering, sorting, or formatting using UiPath activities within the Excel Application Scope.
- **Error Handling:** Implement error handling mechanisms within the scope to manage exceptions that might occur during Excel file interactions.

#### 4.1.3 GMAIL APPLICATION SCOPE

In an inventory order placing system using UiPath, the Gmail Application Scope can simplify email-related tasks such as communication with vendors or



order confirmation. Here's a simplified breakdown of how to use Gmail Application Scope:

1. **Scope Initialization:** Use the "Gmail Application Scope" activity to initialize the connection to Gmail. Drag and drop this activity into the UiPath sequence or workflow.
2. **Authentication:** Within the activity properties, input the Gmail account credentials (username and password) to authenticate the UiPath robot to access the Gmail account.
3. **Email Operations:**
  - **Reading Emails:** Use the "Get IMAP Mail Messages" activity within the Gmail Application Scope to retrieve emails from specific folders based on predefined criteria like subject lines, sender, or keywords.
  - **Sending Emails:** Utilize the "Send SMTP Mail Message" activity within the scope to compose and send emails to vendors or relevant stakeholders. Set recipient addresses, subject, body, and attachments as needed.
4. **Handling Emails:**
  - **Processing Emails:** Implement logic to parse and process the retrieved emails. For instance, extracting order confirmations or relevant information.
  - **Responding to Emails:** Set up actions or conditions to trigger responses based on received emails, such as confirming orders, acknowledging receipt, or flagging for further action.
5. **Error Handling:**
  - Implement error handling mechanisms within the scope to manage exceptions during email operations, ensuring the workflow continues smoothly even in case of email-related issues.

## **6. Scope Termination:**

- Finally, ensure to properly close the Gmail Application Scope activity to release resources and disconnect from the Gmail account.

By utilizing the Gmail Application Scope in UiPath, you can easily integrate email functionalities into the workflow of your inventory order placing system, facilitating efficient communication with vendors and handling email-based order confirmations or inquiries.

### **4.1.4 DATATABLE**

In an inventory order placing system, using a DataTable within UiPath can simplify data handling, manipulation, and storage. Here is a simplified example of how a DataTable could be utilized within the project:

#### **1. Storing Order Information:**

- Use a DataTable to store order details such as order ID, item name, quantity, vendor information, order status, etc.
- Add rows to the DataTable to populate it with order information obtained from user input or external systems.

#### **2. Data Manipulation and Filtering:**

- Perform operations like sorting, filtering, and searching within the DataTable to find specific orders, track inventory levels, or identify pending orders.

#### **3. Data Validation:**

- Validate the entered data against the existing DataTable to ensure accuracy and prevent duplication or inconsistencies in orders.

#### **4. Integration with ERP/Inventory Systems:**

- Use DataTables to structure and organize data fetched from ERP or inventory systems for further processing or comparison with existing orders.

#### **5. Reporting and Analytics:**

- Generate reports by leveraging DataTable functionalities to

aggregate, summarize, or analyze order data. For instance, calculate total order quantities, identify top-selling items, or track vendor performance.

#### **6. Order Status Updates:**

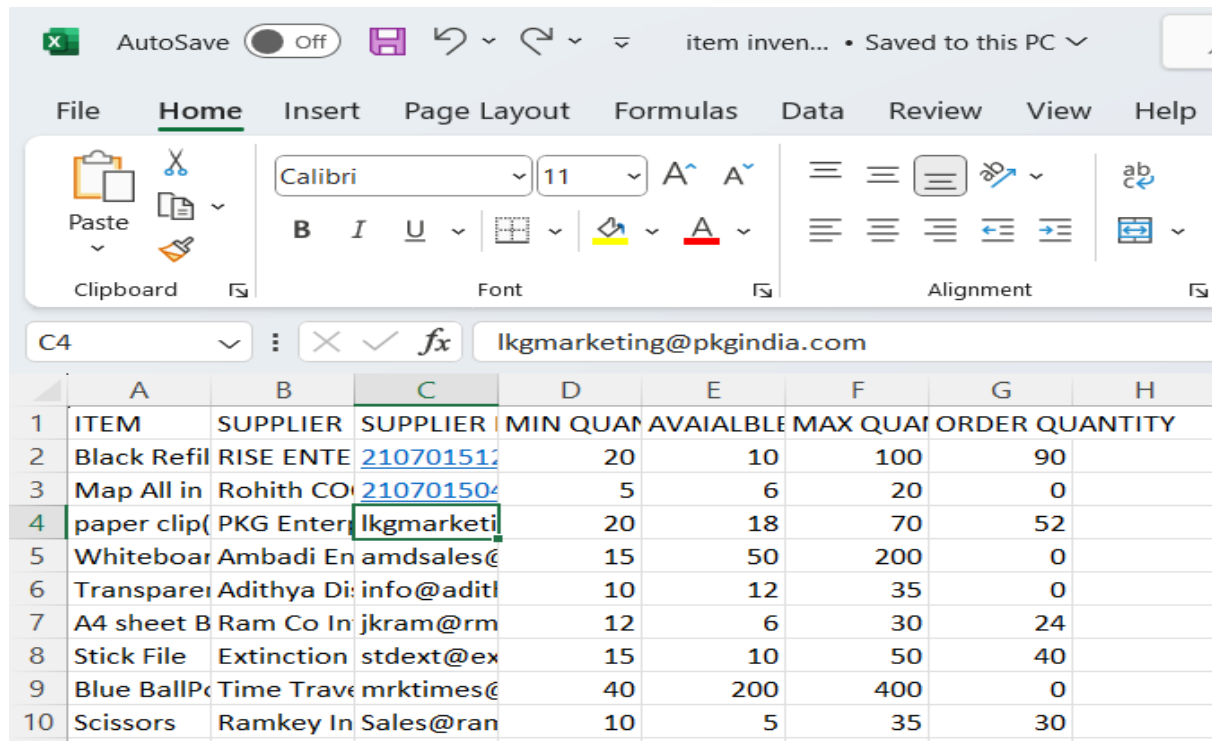
- Update the DataTable to reflect changes in order status, such as order placement, delivery confirmation, or cancellation.

#### **7. Iterating Through Orders:**

- Use loops to iterate through the DataTable rows, performing actions on each order entry, such as sending emails to vendors, updating inventory systems, or notifying users about order status changes.

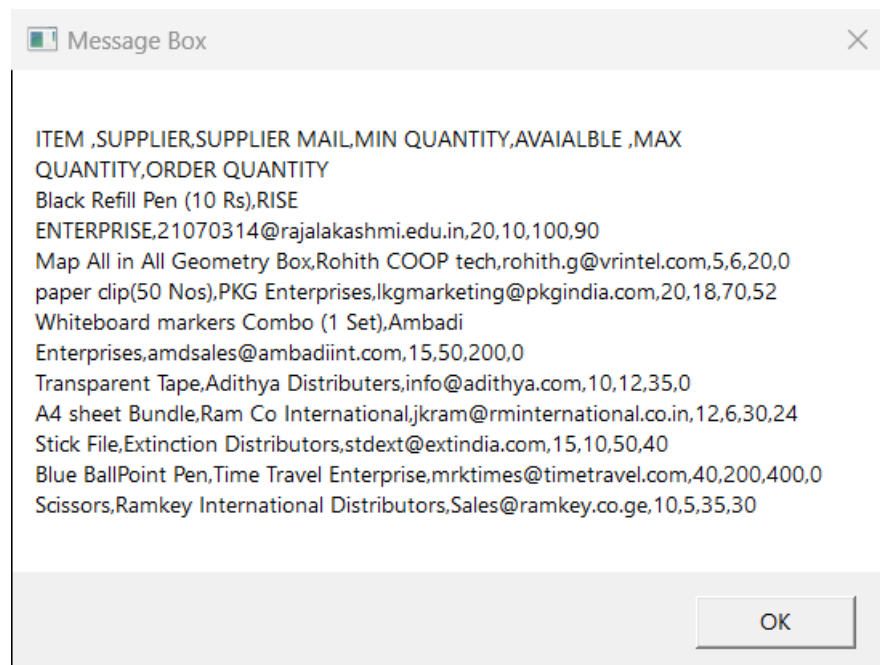
## CHAPTER 5

### OUTPUT SCREENSHOT



	A	B	C	D	E	F	G	H
1	ITEM	SUPPLIER	SUPPLIER MAIL	MIN QUANTITY	AVAILBLE	MAX QUANTITY	ORDER QUANTITY	
2	Black Refill	RISE ENTERPRISE	210701514@rajalakashmi.edu.in	20	10	100	90	
3	Map All in	Rohith COOP tech	210701504@vrintel.com	5	6	20	0	
4	paper clip(50 Nos)	PKG Enterprises	lkgmarketing@pkgindia.com	20	18	70	52	
5	Whiteboard markers	Ambadi Enterprises	amdsales@ambadiint.com	15	50	200	0	
6	Transparent Tape	Adithya Distributors	info@adithya.com	10	12	35	0	
7	A4 sheet Bundle	Ram Co International	jkram@rminternational.co.in	12	6	30	24	
8	Stick File	Extinction Distributors	stdext@extindia.com	15	10	50	40	
9	Blue BallPoint Pen	Time Travel Enterprise	mrktimes@timetravel.com	40	200	400	0	
10	Scissors	Ramkey International Distributors	Sales@ramkey.co.ge	10	5	35	30	

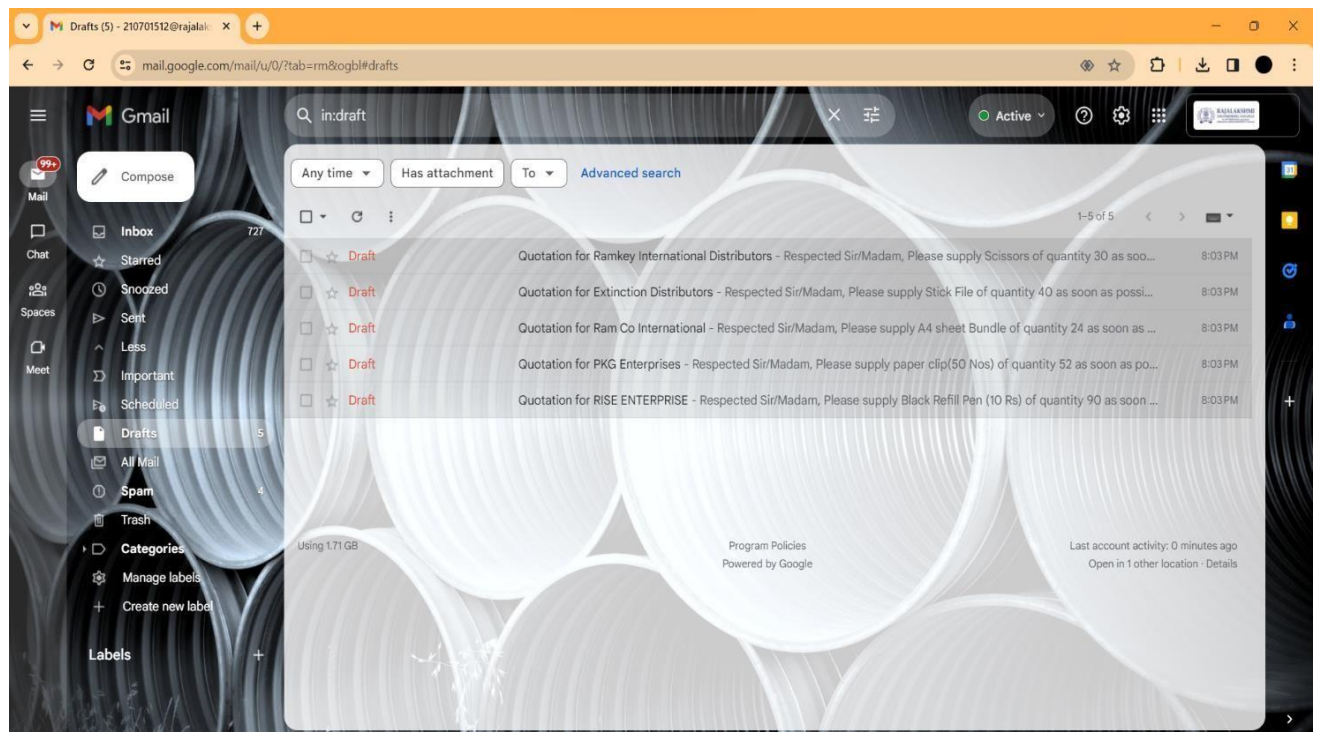
**Fig 5.1 Input Excel Sheet**



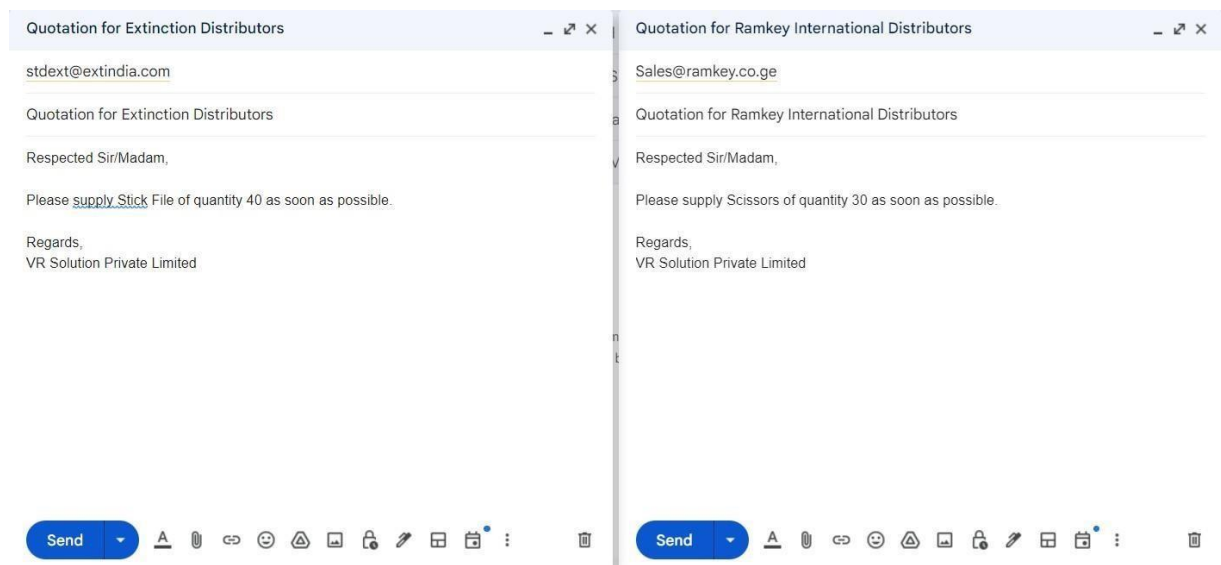
```

ITEM ,SUPPLIER,SUPPLIER MAIL,MIN QUANTITY,AVAIALBLE ,MAX
QUANTITY,ORDER QUANTITY
Black Refill Pen (10 Rs),RISE
ENTERPRISE,21070314@rajalakashmi.edu.in,20,10,100,90
Map All in All Geometry Box,Rohith COOP tech,rohith.g@vrintel.com,5,6,20,0
paper clip(50 Nos),PKG Enterprises,lkgmarketing@pkgindia.com,20,18,70,52
Whiteboard markers Combo (1 Set),Ambadi
Enterprises,amdsales@ambadiint.com,15,50,200,0
Transparent Tape,Adithya Distributors,info@adithya.com,10,12,35,0
A4 sheet Bundle,Ram Co International,jkram@rminternational.co.in,12,6,30,24
Stick File,Extinction Distributors,stdext@extindia.com,15,10,50,40
Blue BallPoint Pen,Time Travel Enterprise,mrktimes@timetravel.com,40,200,400,0
Scissors,Ramkey International Distributors,Sales@ramkey.co.ge,10,5,35,30
  
```

**Fig 5.2 Processed DataTable Result in Message Box**



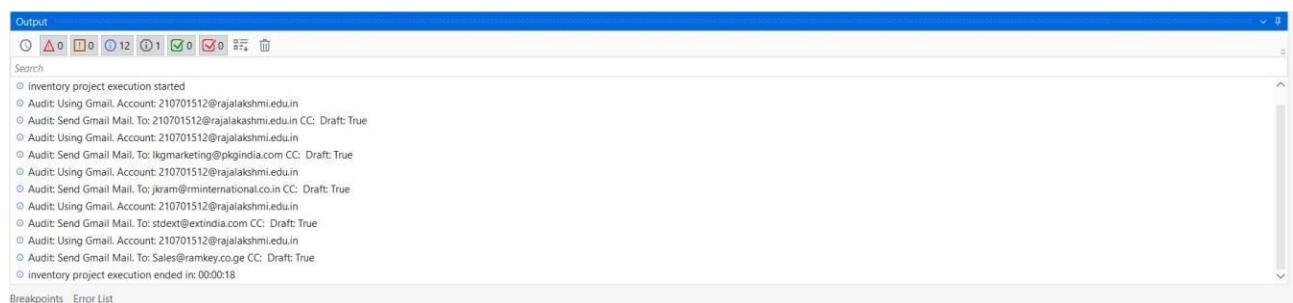
**Fig 5.3 Mail Created And Saved in Draft**



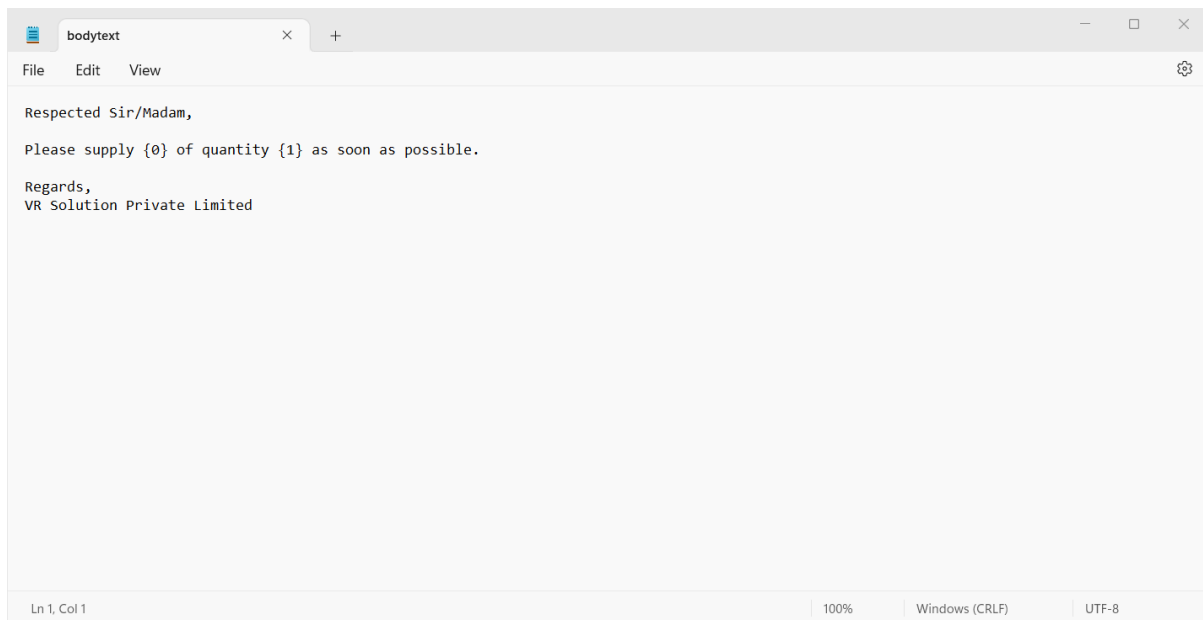
**Fig 5.4 Mail Created with Content**

	A	B	C	D	E	F	G	H
1	ITEM	SUPPLIER	SUPPLIER	MIN QUAN	AVAILBLE	MAX QUAI	ORDER	QUANTITY
2	Black Refil	RISE ENTE	210701512	20	10	100	90	
3	Map All in	Rohith CO	210701504	5	6	20	0	
4	paper clip(	PKG Enter	lkgmarketi	20	18	70	52	
5	Whiteboar	Ambadi En	amdsales@	15	50	200	0	
6	Transpare	Adithya Di	info@aditl	10	12	35	0	
7	A4 sheet B	Ram Co In	jkram@rm	12	6	30	24	
8	Stick File	Extinction	stdext@ex	15	10	50	40	
9	Blue BallP	Time Trav	mrktimes@	40	200	400	0	
10	Scissors	Ramkey In	Sales@ran	10	5	35	30	

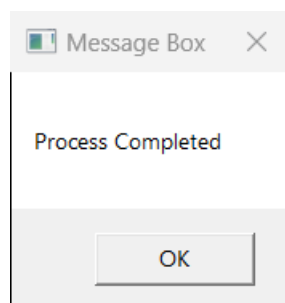
**Fig 5.5 Processed Data table stored in New Excel Sheet**



**Fig 5.6 Output Execution Completed**



**Fig 5.7 Body of the Mail in Text**



**Fig 5.8 Process Completion**

## CHAPTER 6

### CONCLUSION AND FUTURE ENHANCEMENT

#### 6.1 CONCLUSION

The implementation of the Inventory Order Placing System leveraging UiPath has revolutionized our inventory management processes. The automation facilitated by UiPath's robust functionalities has significantly enhanced operational efficiency, minimized errors, and streamlined the order placement workflow. Through this system, we have achieved:

1. **Enhanced Efficiency:** Automation of order generation, vendor communication, and real-time updates has expedited the order placement process, reduced manual efforts, and improved turnaround times.
2. **Accurate Inventory Management:** Real-time inventory tracking and data validation have led to better inventory control, minimizing stockouts and overstocking situations.
3. **Cost Optimization:** Reduced lead times, minimized errors, and better vendor management have contributed to cost savings and improved budgetary control.
4. **Improved Decision-Making:** Access to comprehensive reports and analytics has empowered informed decision-making, aiding in strategizing inventory procurement and vendor relationships.



## 6.2 FUTURE ENHANCEMENTS

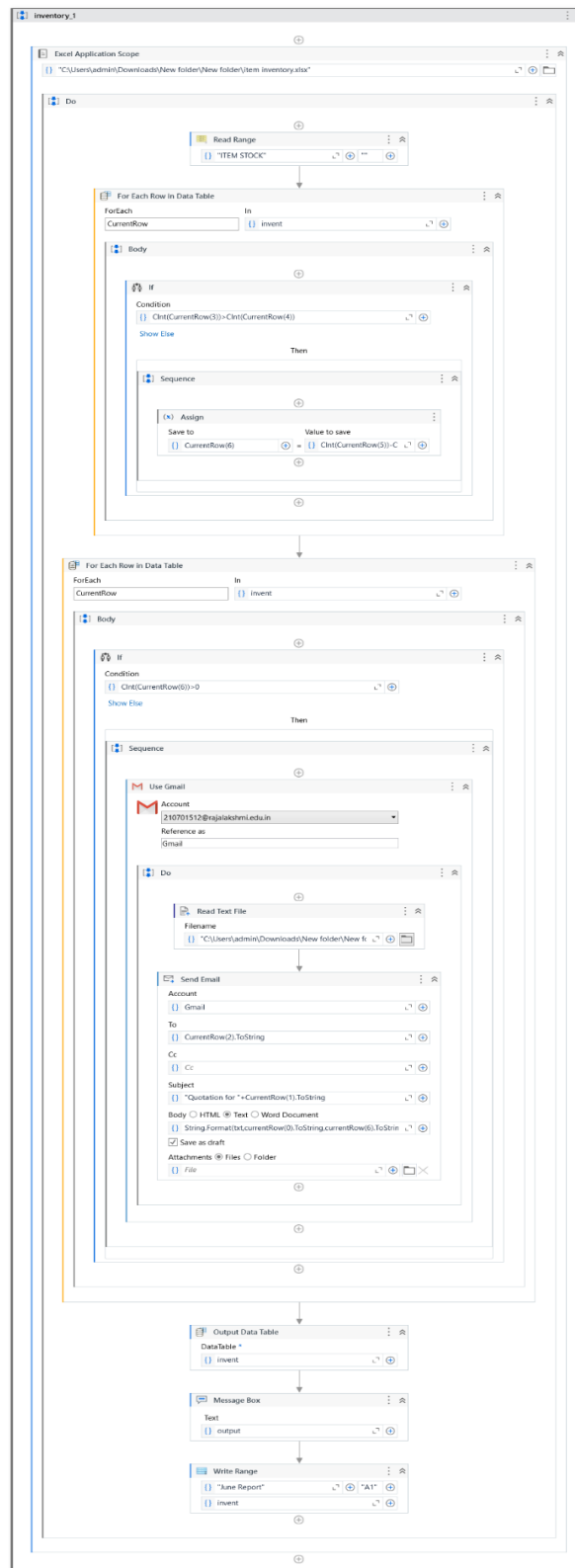
While the current system has delivered substantial benefits, there remain opportunities for further enhancements and advancements:

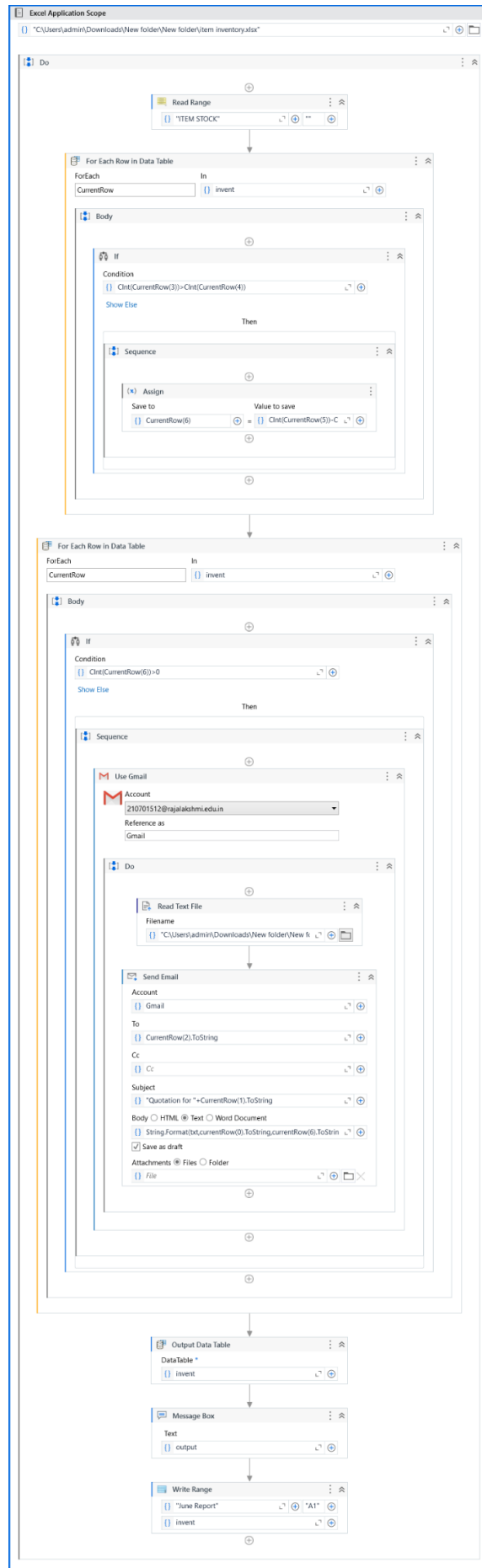
1. **AI Integration:** Exploring the integration of AI and machine learning algorithms could enable predictive analysis for inventory needs, optimizing stock levels dynamically.
2. **Enhanced Vendor Integration:** Strengthening integration with vendor systems for real-time updates on order status, inventory availability, and automated invoice processing.
3. **User Experience Refinement:** Continuous improvement in the user interface and experience to simplify interactions and reduce the learning curve for users.
4. **Expand Automation:** Identifying additional areas for automation, such as predictive maintenance, demand forecasting, or automatic reorder triggers based on consumption patterns.
5. **Security Measures:** Continuously upgrading security protocols to ensure data privacy and protection against potential cyber threats.

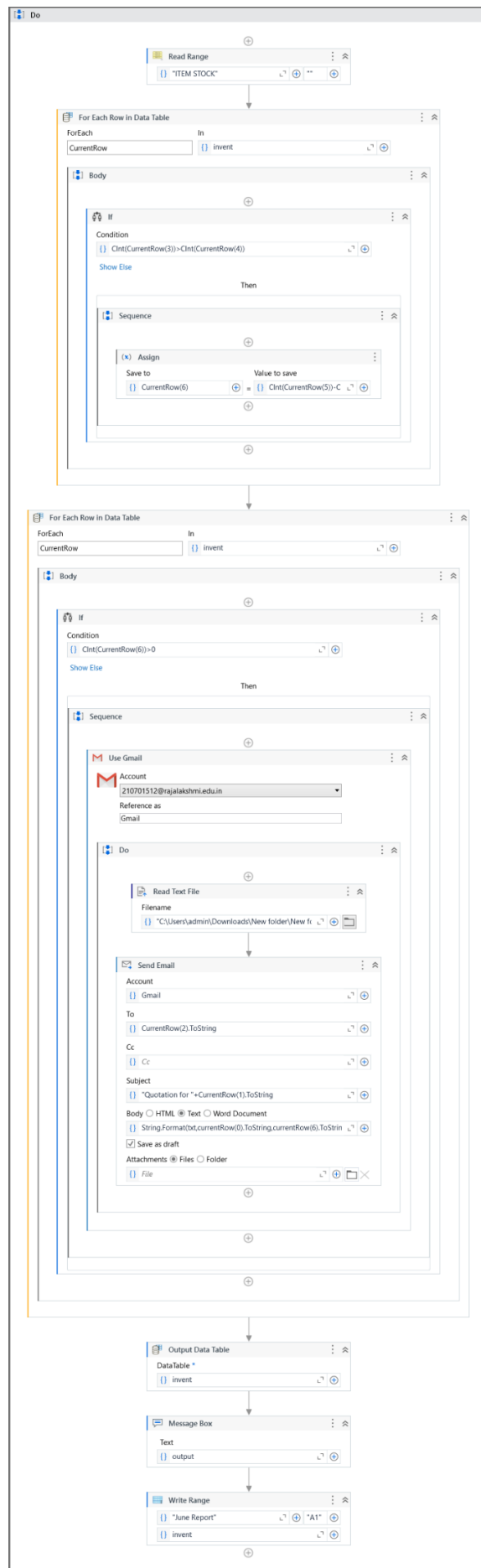
In conclusion, the UiPath-powered Inventory Order Placing System has marked a significant step towards efficient inventory management. Future enhancements aim to further optimize processes, embrace advanced technologies, and ensure sustained efficiency and competitiveness in our inventory operations.

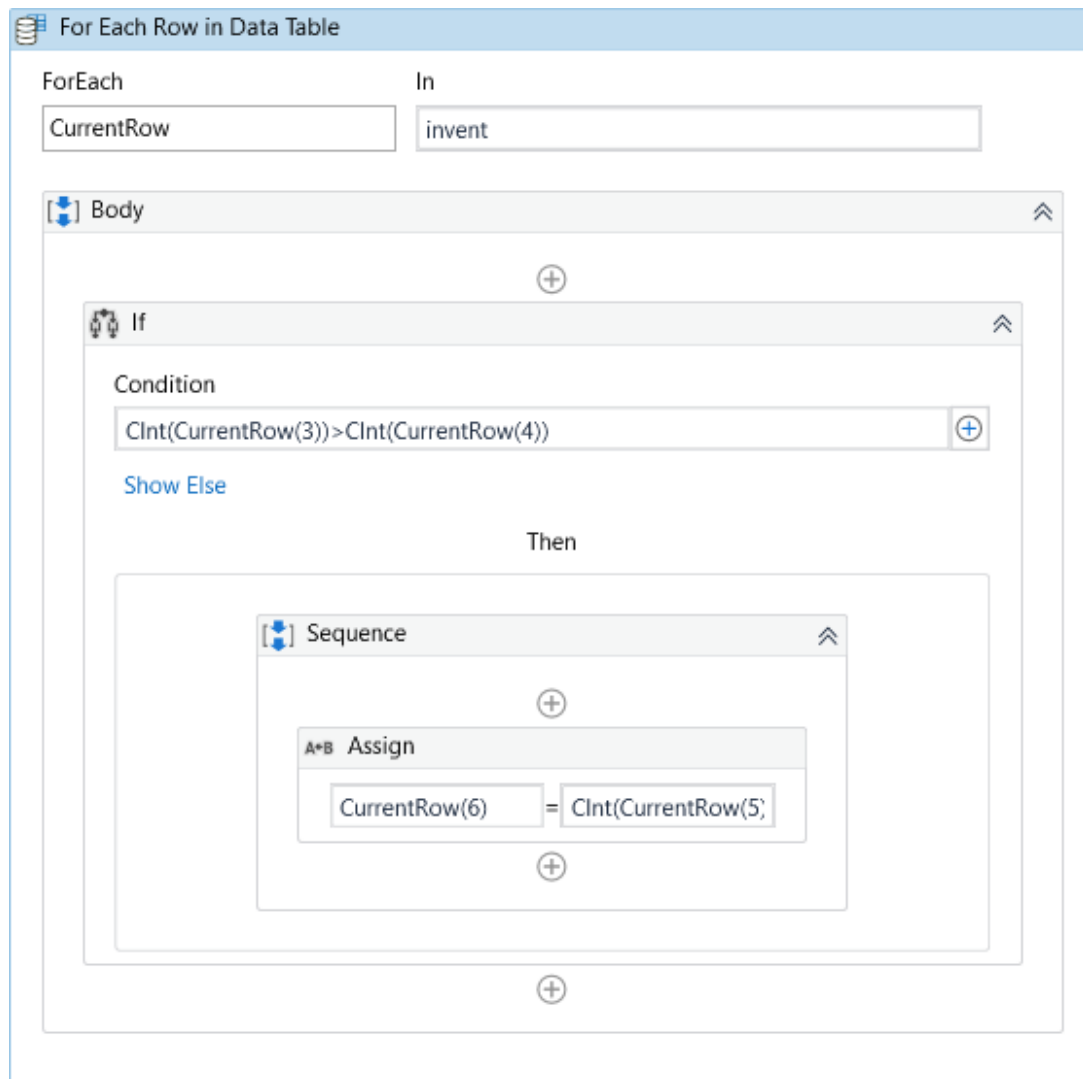
# APPENDIX

## SAMPLE PROCESS









51

**If**

Condition  
 Clnt(CurrentRow(6))>0

Show Else

**Then**

**Sequence**

**Use Gmail**

Account  
 210701512@rajalakshmi.edu.in

Reference as  
 Gmail

**Do**

**Read Text File**

Filename  
 "C:\Users\admin\Downloads\New folder\New fr

**Send Email**

Account  
 Gmail

To  
 CurrentRow(2).ToString


Cc  
 Cc


Subject  
 "Quotation for "+CurrentRow(1).ToString

Body ☐ HTML ☒ Text ☐ Word Document  
 String.Format(txt,currentRow(0).ToString,currentRow(6).ToStrin

☒ Save as draft

Attachments ☒ Files ☐ Folder  
 File


 Use Gmail


 Account


210701512@rajalakshmi.edu.in

Reference as

Gmail


 Do



 Read Text File

Filename

{} "C:\Users\admin\Downloads\New folder\New fc

 Send Email

Account

{} Gmail

To

{} CurrentRow(2).ToString

Cc

{} Cc

Subject

{} "Quotation for "+CurrentRow(1).ToString

Body ☐ HTML ☒ Text ☐ Word Document

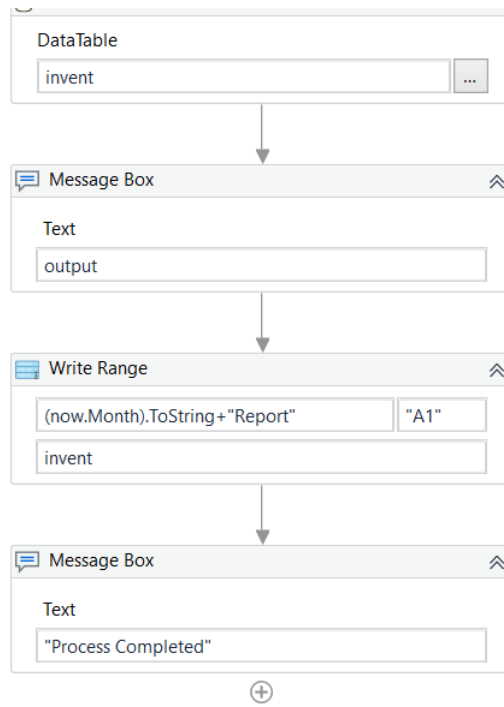
{} String.Format(txt,currentRow(0).ToString,currentRow(6).ToStrin

☒ Save as draft

Attachments ☒ Files ☐ Folder

{} File





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