

Process Definition Document: Invoicing Process



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1 INTRODUCTION

1.1 DOCUMENT PURPOSE

The Process Definition Document is used for summarizing the invoicing process. It describes the sequence of executed actions, conditions, and process rules before automation. It aims to clarify how it is performed manually by the user on a click-by-click level, as well as how to handle the possible business exceptions that may occur.

1.2 OBJECTIVE

Automate the invoices creation process with an amount less than \$30,000, which represents around 80% of the total number of invoices issued monthly.

The above aims to:

- Increase the availability of the resources assigned in the billing area.
- Mitigate the number of invoices issued erroneously.

1.3 AUTOMATION PRE-REQUISITES

To automate the invoice-creation process, the digital worker must have:

- A created account in the RPA Showcase web application.
- Credentials to access the email inbox account where the billing information is received.

2 PROCESS DESCRIPTION (As Is)

The invoice-creation process is manually performed by the billing team every Monday or the next closest business day. The team inputs the billing information from the previous week, downloads the PDF invoices, and sends an email to the finance team for a final review before issuing them to the clients.

The billing team is open to suggestions to **enhance and optimize** the process before its automation.

2.1 PROCESS SUMMARY

Element	Description
Department	Billing
Description	An invoice-creation process on the RPA Showcase platform
Execution schedule	Every Monday or the next closest business day
Input data	List of purchase's information received by email
Output data	PDF invoices created and ready to be reviewed before sending them to the client

2.2 APPLICATIONS USED

The following table includes a complete list of all the applications used during the execution of the automated process.

Application name	Version	Access methods	Comments
RPA Showcase	N/A	User and password provided by the billing team.	Obtain it by creating an account on the RPA Showcase page
Email	N/A	User and password provided by the billing team.	Use any email for development purposes
Excel	N/A	N/A	

2.3 PROCESS MAP

To improve the understanding of the process prior to its automation, this section includes a set of diagrams to provide a high-level and detailed explanation of the steps the billing team follows to perform it.

2.3.1 High-level process map

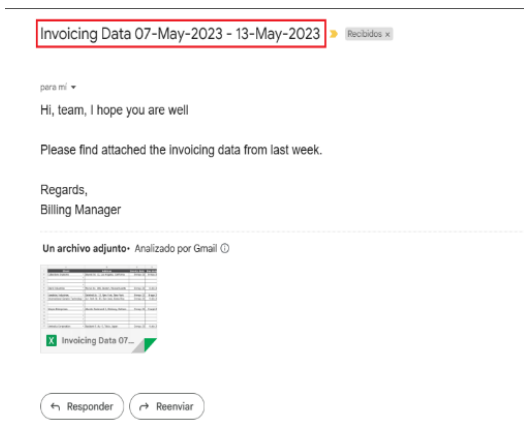
You can find the diagram containing an overview of the process attached in the folder downloaded from the RPA Showcase page or [here](#).

2.3.2 Detailed level process map

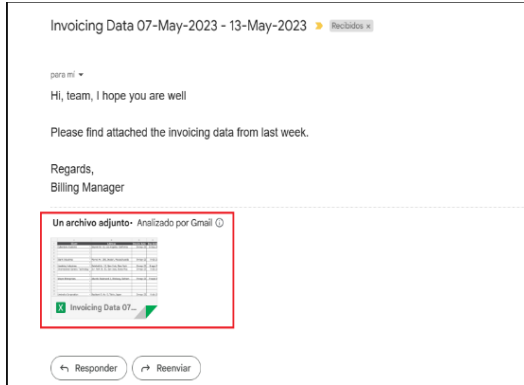
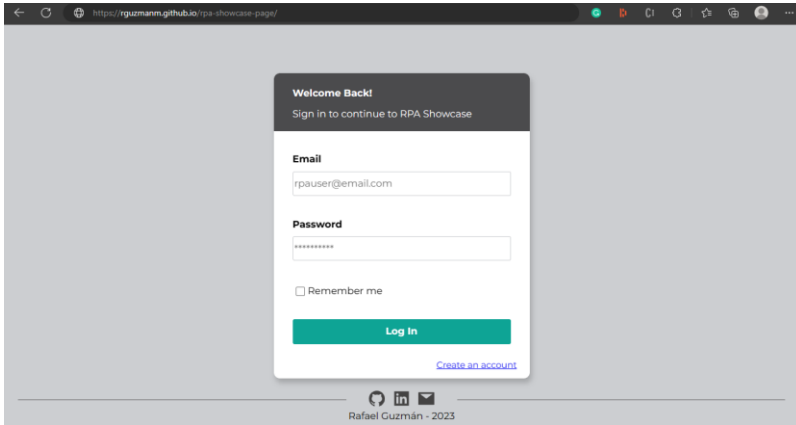
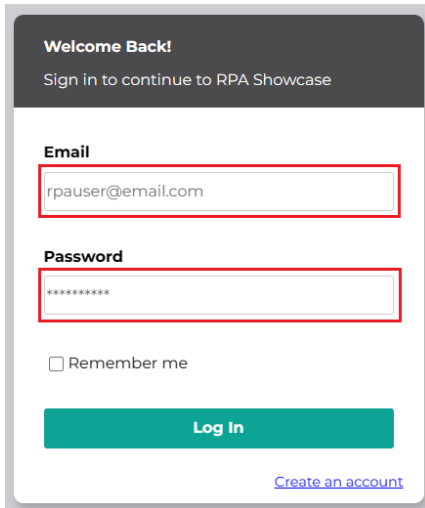
You can find the diagram containing the detailed steps to perform the process in the folder downloaded from the RPA Showcase page or [here](#).

2.4 DETAILED PROCESS ACTIONS

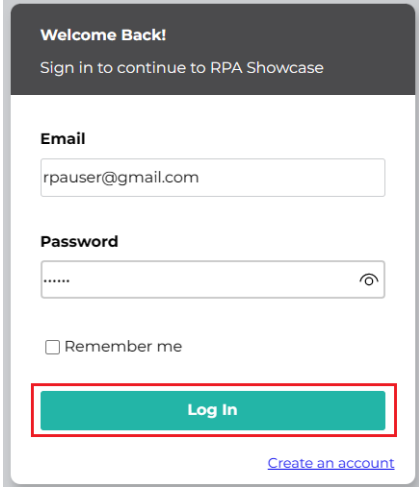
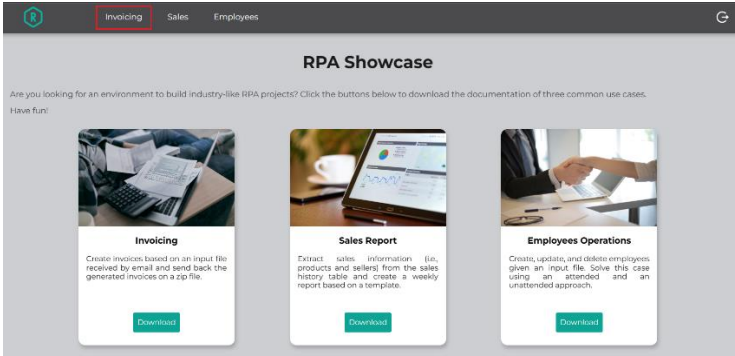
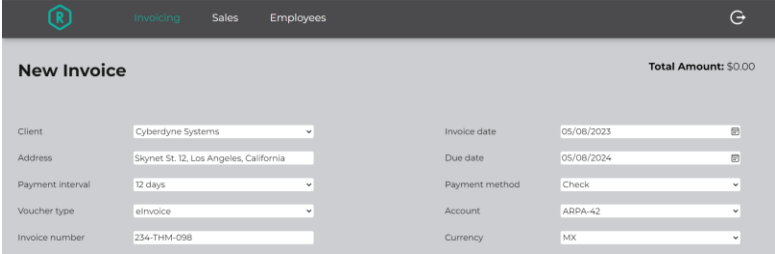

The following table contains the click-by-click process documentation.

#	Description	Screenshot	Comments
1	Search in the email inbox for the message with the subject: "Invoicing Data [start date] - [end date]"		If the email is not found, send an email to the billing manager to notify him.

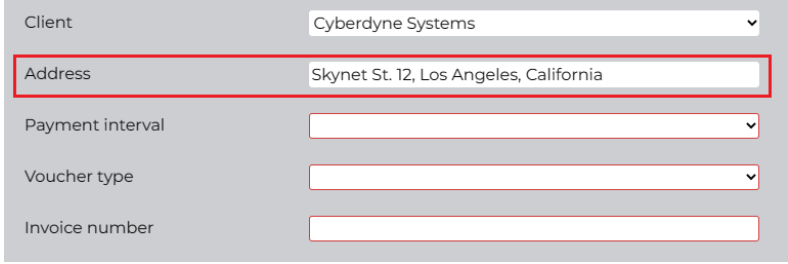
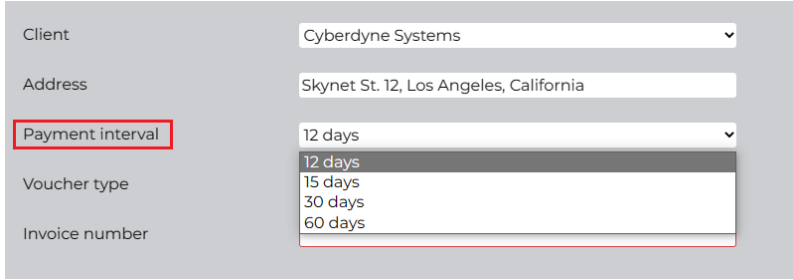
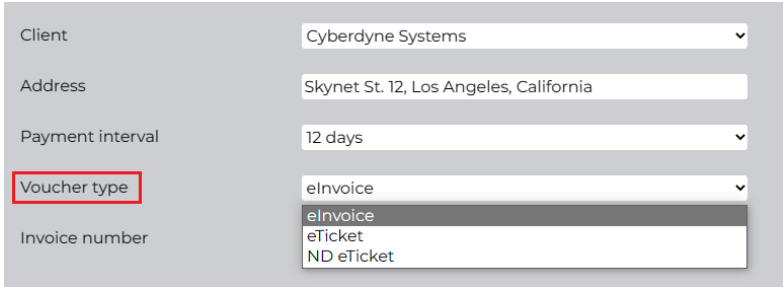
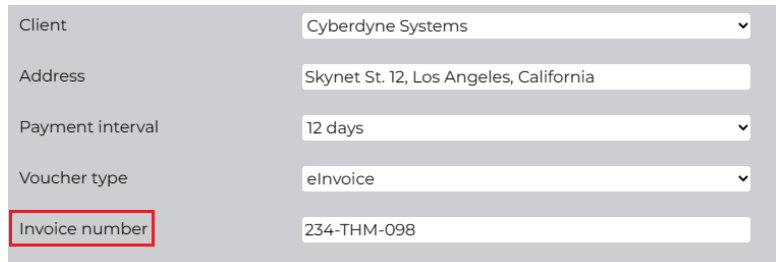
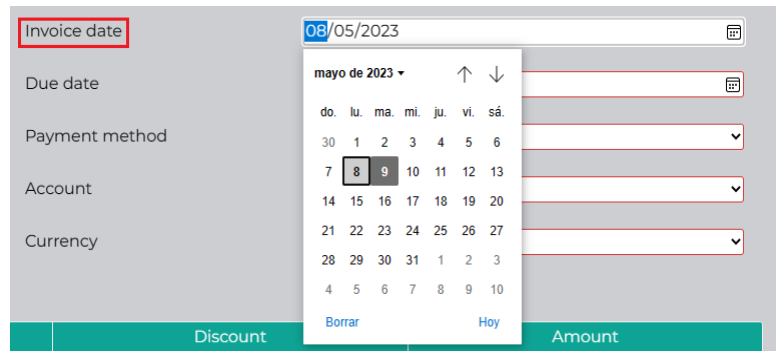


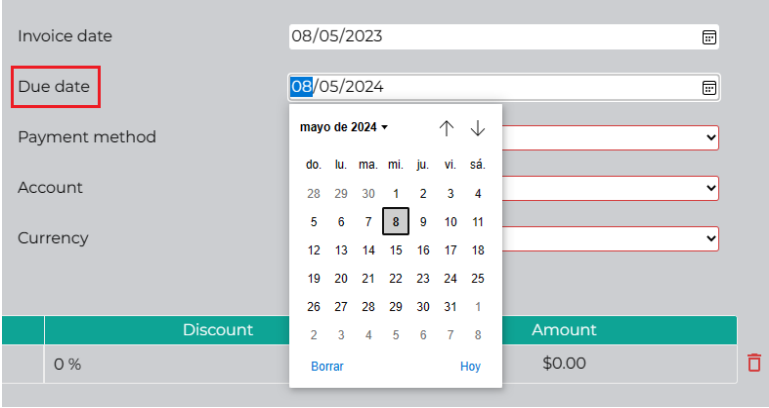
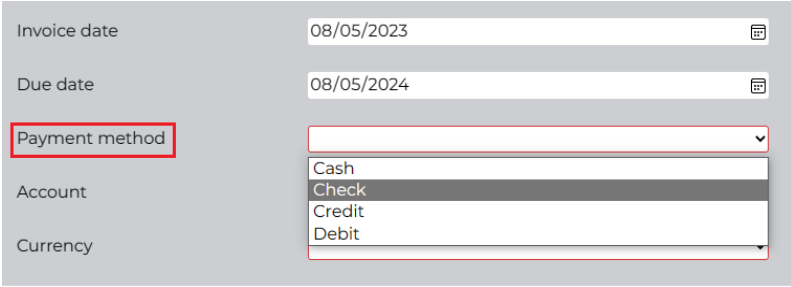
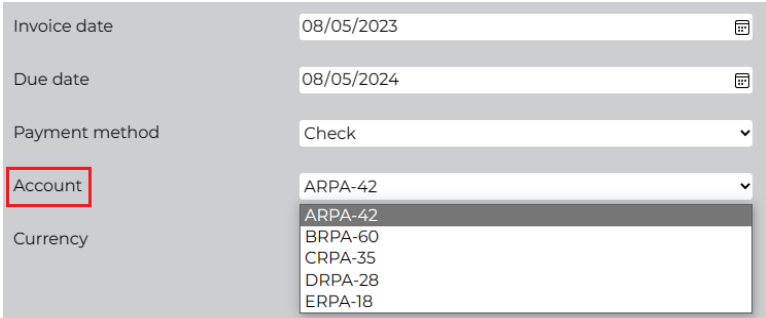
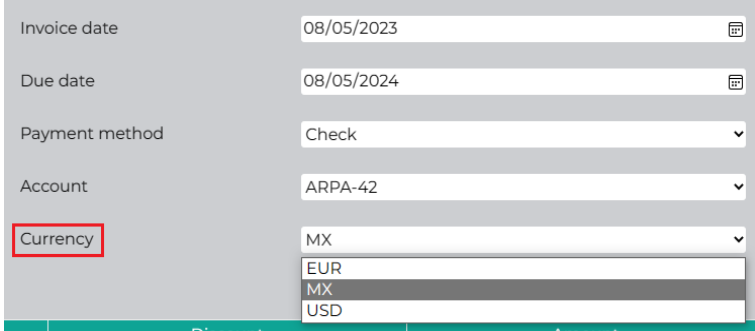
2	Download the attachment containing the invoicing data		If the attachment is not found, send another email to the billing manager requesting for it.
3	Open the RPA showcase page in a Chrome browser		Url: https://rguzmann.github.io/rpa-showcase-page/
4	Enter the username and password		Click on the "Create an account" link to get the username and password
5	Click the "Log In" button		


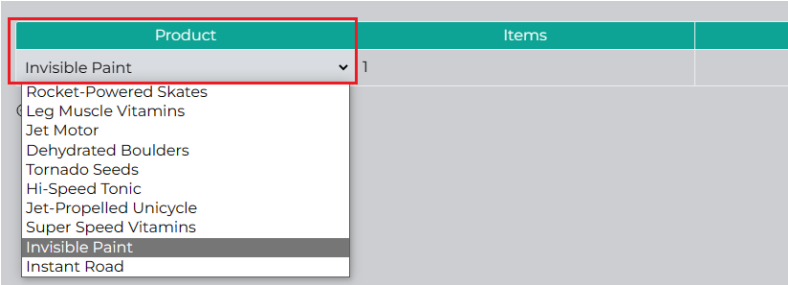
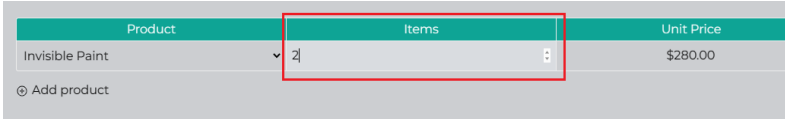
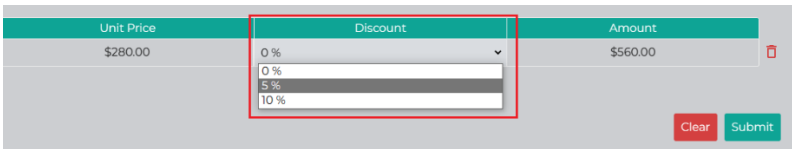
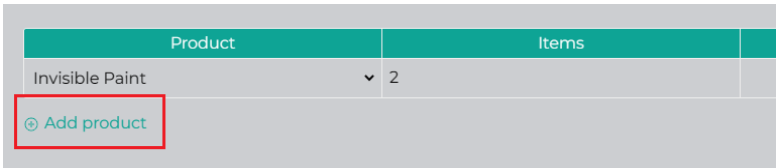
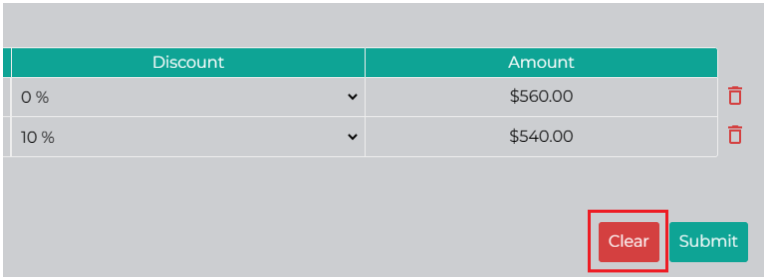


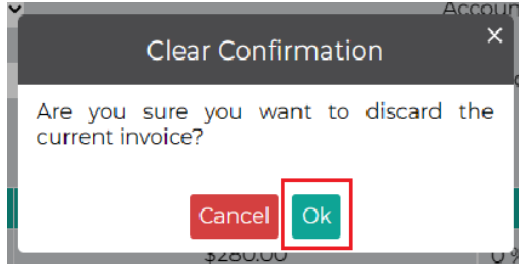
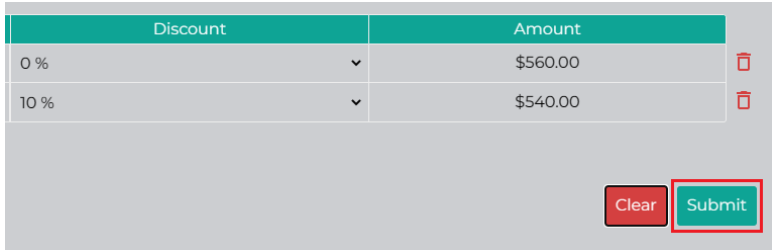
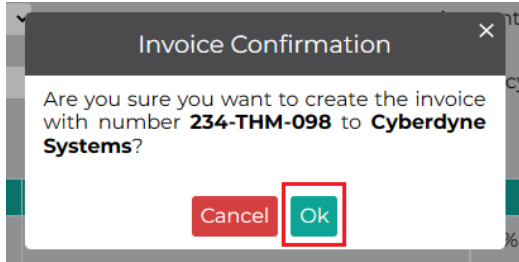
			
6	Wait for the main page to load and click in the "Invoicing" option from the top menu		
7	Fill in the invoice form for each of the records in the attachment retrieved from the email		
7.1	Select the Client from the dropdown menu		
7.2	Fill in the Address field		This field supports 255 characters max.

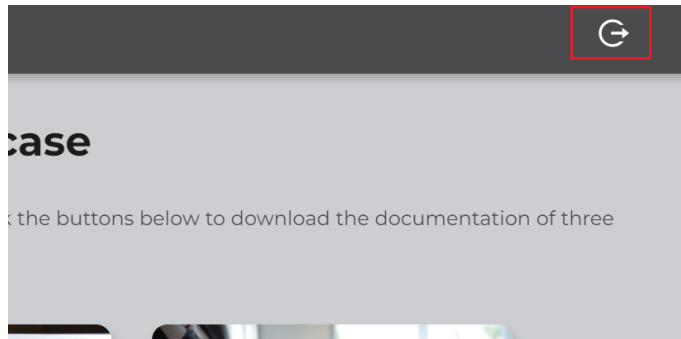
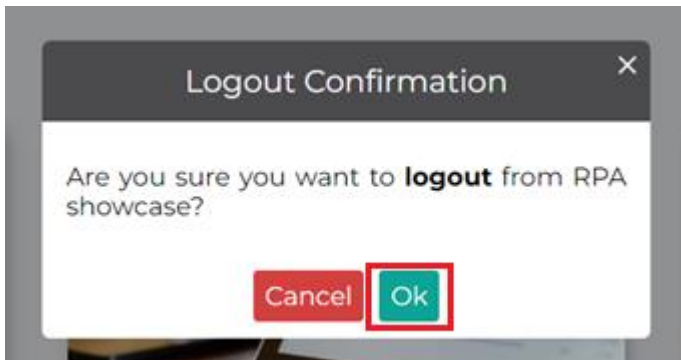


			
7.3	Select the Payment Interval from the dropdown menu		
7.4	Select the Voucher type from the dropdown menu		
7.5	Fill in the Invoice Number field		The invoice number must have a valid format: <i>[3 digits]-[3 letters]-[digits]</i> (e.g. 234-THM-098)
7.6	Fill in the Invoice Date field		Format: <i>mm/dd/yyyy</i>

7.7	Fill in the Due Date field		<p>It must always be date after the Invoice Date.</p> <p>Format: <i>mm/dd/yyyy</i></p>
7.8	Select the Payment Method from the dropdown menu		
7.9	Select the Account from the dropdown menu		
7.10	Select the Currency from the dropdown menu		

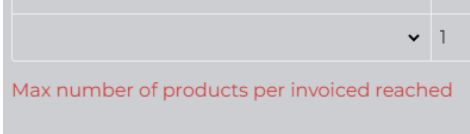
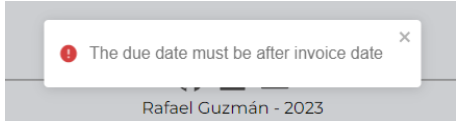
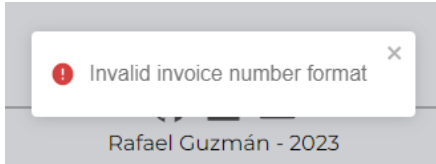
8	For each product of the current invoice, enter the list of products considering the number of items and possible discounts.		The screenshot represents how the products table must look like after entering all the products. The Unit price and the Amount will be auto populated
8.1	Select the Product from the dropdown menu		
8.2	Fill in the Items field		This field only supports values greater than 0
8.3	If a discount is indicated apply it by selecting the right option from the dropdown menu		
8.4	If there are more products in the invoice, click the "Add product" button below the table and repeat 8.1-8.3 steps		
9	If the invoice doesn't meet all validation conditions, discard the invoice by clicking the "Clear" button		

9.1	Click "Ok" to confirm you want to discard the current invoice																	
10	If the invoice meets all validation conditions, click the "Submit" button																	
10.1	Click "Ok" to confirm you want to submit the invoice																	
11	Wait for the PDF invoice to be downloaded	<div><div>Invoice</div><div><div><div>Client: Cyberdyne Systems</div><div>Invoice Number: 234-THM-098</div><div>Date: 2023-05-08</div><div>Due Date: 2024-05-08</div><div>Voucher Type: eInvoice</div></div><div><div>Account: ARPA-42</div><div>Currency: MX</div><div>Payment Interval: 12 days</div><div>Payment Method: Check</div><div>Address: Skyline St. 12, Los Angeles, California</div></div></div><table><thead><tr><th>Product</th><th>Items</th><th>Unit Price</th><th>Discount</th><th>Amount</th></tr></thead><tbody><tr><td>Invisible Paint</td><td>2</td><td>\$280.00</td><td>0 %</td><td>\$560.00</td></tr><tr><td>Leg Muscle Vitamins</td><td>3</td><td>\$200.00</td><td>10 %</td><td>\$540.00</td></tr></tbody></table><div>Total: \$1,100.00</div><div><div>Terms and conditions</div><div><div>1. The Seller shall not be liable to the Buyer directly or indirectly for any loss or damage suffered by the Buyer.</div><div>2. The Seller warrants the product for one year from the purchase date.</div><div>3. Any purchase order received by the seller will be interpreted as accepting this offer and the sale offer in writing. The buyer may purchase the product in this offer only under the Terms and Conditions of the Seller included in this offer.</div></div></div></div>	Product	Items	Unit Price	Discount	Amount	Invisible Paint	2	\$280.00	0 %	\$560.00	Leg Muscle Vitamins	3	\$200.00	10 %	\$540.00	<div>If the File Explorer window appears, chose a name following the next convention:</div> <div>[invoice number] [Client Name] [invoice date].pdf</div> <div>234-THM-098 Cyberdyne Systems 05.08.2023.pdf</div>
Product	Items	Unit Price	Discount	Amount														
Invisible Paint	2	\$280.00	0 %	\$560.00														
Leg Muscle Vitamins	3	\$200.00	10 %	\$540.00														

12	Update the "Status" and "Message" columns for the current invoice	<table><thead><tr><th>Invoice Number</th><th>Currency</th><th>Products</th><th>Items</th><th>Discount</th><th>Status</th><th>Message</th></tr></thead><tbody><tr><td>045-MVX-983</td><td>EUR</td><td>Rocket-Powered Skates</td><td>4</td><td></td><td>Success</td><td>Completed</td></tr><tr><td></td><td></td><td>Hi-Speed Tonic</td><td>9</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>Tornado Seeds</td><td>10</td><td>5%</td><td></td><td></td></tr><tr><td></td><td></td><td>Dehydrated Boulders</td><td>2</td><td></td><td></td><td></td></tr><tr><td>342-GHB-071</td><td>USD</td><td>Jet-Propelled Unicycle</td><td>1</td><td></td><td>Business Exception</td><td>Amount greater than \$30,000</td></tr><tr><td></td><td></td><td>Jet Motor</td><td>3</td><td>10%</td><td></td><td></td></tr><tr><td>873-XYO-138</td><td>MX</td><td>Rocket-Powered Skates</td><td>1</td><td></td><td>Failure</td><td>Unexpected error</td></tr><tr><td>654-GHP-546</td><td>EUR</td><td>Leg Muscle Vitamins</td><td>9</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>Hi-Speed Tonic</td><td>2</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td>Jet-Propelled Unicycle</td><td>1</td><td></td><td></td><td></td></tr></tbody></table>	Invoice Number	Currency	Products	Items	Discount	Status	Message	045-MVX-983	EUR	Rocket-Powered Skates	4		Success	Completed			Hi-Speed Tonic	9						Tornado Seeds	10	5%					Dehydrated Boulders	2				342-GHB-071	USD	Jet-Propelled Unicycle	1		Business Exception	Amount greater than \$30,000			Jet Motor	3	10%			873-XYO-138	MX	Rocket-Powered Skates	1		Failure	Unexpected error	654-GHP-546	EUR	Leg Muscle Vitamins	9						Hi-Speed Tonic	2						Jet-Propelled Unicycle	1				The possible statuses are: "Success", "Business Exception", and "Failed"
Invoice Number	Currency	Products	Items	Discount	Status	Message																																																																										
045-MVX-983	EUR	Rocket-Powered Skates	4		Success	Completed																																																																										
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		Hi-Speed Tonic	2																																																																													
		Jet-Propelled Unicycle	1																																																																													
13	Once all the invoices are processed, create a ZIP file with all of them and send it by email to the billing manager	<p>Invoicing process finished 07/May/2023 – 13/May/2023</p> <p>Hi,</p> <p>The invoice creation process finished successfully. Find attached the process results as well as the PDF Invoices.</p> <p>Best regards, Invoicing Robot.</p> <div><div>Invoicing Data 07-05-2023 to 13-05-2023.xlsx (14 K)</div><div>Invoices.zip (12 K)</div></div>	<p>Include the updated Excel document containing the invoices' status.</p> <p>Subject: Invoicing process finished [start date] – [end date]</p>																																																																													
14	Click the logout button from the RPA Showcase app																																																																															
15	Accept the logout pop up																																																																															

2.5 BUSINESS EXCEPTIONS

Before submitting any invoice, make sure it does not fall in the following cases. Otherwise, take the actions described below.

Exception name	Description	Action to be taken
Max. number of products	<p>Due to company policies, all invoices should contain 14 products maximum. The RPA Showcase app prevents adding more products once the limit is reached.</p> 	Discard the invoice, as described in step 9, set the status as "Business Exception," and add the message: "Invoice is not compliant with the max. number of products policy."
Invoice max amount	<p>Total invoice amount exceeds \$30,000 regardless of currency</p>	Discard the invoice, as described in step 9, set the status as "Business Exception," and add the message: "Invoice amount greater than \$30,000."
Due date	<p>The due date is before the invoice date.</p> 	Discard the invoice, as described in step 9, set the status as "Business Exception," and add the message: "Invalid due date."
Invoice number pattern	<p>The invoice number doesn't follow the convention described in step 7.5.</p> 	Discard the invoice, as described in step 9, set the status as "Business Exception," and add the message: "Invalid invoice number."
Missing information	<p>Any of the invoice fields is missing</p>	Discard the invoice, as described in step 9, set the status as "Business Exception," and add the message: "Missing information."

3 ADDITIONAL COMMENTS

- For demonstration purposes you can use **any email** as the billing manager contact.
- Use your imagination: Feel free to play with the input file to create new automation scenarios.



4 ADDITIONAL SOURCES OF DOCUMENTATION

Additional sources of documentation		
Process recordings	N/A	
High-level process map	High-level diagram	
Detailed level process map	Detailed diagram	
Input files	Input file	Example input file
Output files	Output file	Expected result's file