

SmartDocSorter

Intelligent Document Categorization and Processing System

The automated process sorts scanned documents, which lack explicit identification, into their appropriate folders. Once sorted, the process dynamically initiates a series of task-specific actions based on the document type. These actions range from dispatching emails to relevant stakeholders, to extracting and inputting data from the documents into Excel spreadsheets, among other operations.

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Planned changes

No.	Date	Version	Type of Change
1	18.01.2024	1.1	Initiate Workflow Development
2	Future	1.2	Incorporate a broader array of test cases. This should include both isolated scenarios and integrated systems tests to thoroughly assess all aspects of the workflow.
3	Future	2.0	Once the Action Center Workflow is operational, integrate it seamlessly. Subsequently, conduct rigorous testing to ensure compatibility and efficiency.
4	Future	2.1	Focus on simplifying the project. This involves removing unnecessary components and optimizing existing processes.
5	Future	2.2	Enhancement of Project Descriptions

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1 General

1.1 Initial situation

The existing procedure involves the uploading of scanned documents to the SharePoint folder labeled "Company Documents." Once uploaded, these documents are manually accessed by the contract team, who perform specific actions based on the document's content. For instance, if a document is a reminder, the accounting department is notified accordingly. After the necessary actions are taken, the document is then categorized and stored in the relevant folder. The proposed improvement is to streamline this process by implementing a Robotic Process Automation (RPA) solution. This automation aims to eliminate the need for manual intervention, thereby increasing efficiency and accuracy in handling and processing these documents.

1.2 Process description

The process begins with the upload of scanned documents in formats such as PDF, JPG, or PNG. Given that these documents are scanned, there may be variations in their quality. UiPath OCR technology is employed to interpret and extract data from these documents. The content of each file is then analyzed and categorized using a Language Learning Model (LLM). This categorization process assigns a relevant folder number to each document. In cases where automatic categorization is unsuccessful, the document is redirected to the UiPath Action Center for manual categorization and folder number assignment.



Figure 1 Example scanned document

The documents are sorted into five distinct categories: offers, reminders, invoices, other, and payment confirmations. Once categorized, each file is moved to its designated folder.

For reminders, the system checks the 'PaymentInformation.xlsx' file to verify if the corresponding invoice has already been paid. If the invoice is paid, the supplier is contacted for verification of the reminder. If unpaid, the accounting department is notified to process the payment.

	A	B	C	D
1	Supplier	Order Number	Date of Payment	Receipt of Payment Confirmation
2	Global Tech Solutions	ORD-1000	15.01.2024	Confirmed
3	Harmony Industrial Parts	ORD-1001	15.01.2024	Confirmed
4	Bright Future Electronics	ORD-1002	15.01.2024	Confirmed
5	Eco-Friendly Manufacturing	ORD-1003	15.01.2024	-
6	Precision Auto Parts	ORD-1004	15.01.2024	-
7	Innovative Design Works	ORD-1005	15.01.2024	Confirmed
8	Oceanic Shipping Co.	ORD-1006	15.01.2024	Confirmed
9	Sky High Construction	ORD-1007	-	-
10	Green Energy Suppliers	ORD-1008	15.01.2024	Confirmed
11	Reliable Textiles Inc.	ORD-1009	-	-
12	Global Tech Solutions	ORD-1010	15.01.2024	Confirmed
13	Harmony Industrial Parts	ORD-1011	15.01.2024	Confirmed
14	Bright Future Electronics	ORD-1012	15.01.2024	Confirmed
15	Eco-Friendly Manufacturing	ORD-1013	-	-
16	Precision Auto Parts	ORD-1014	-	-
17	Innovative Design Works	ORD-1015	15.01.2024	Confirmed
18	Oceanic Shipping Co.	ORD-1016	15.01.2024	Confirmed
19	Sky High Construction	ORD-1017	-	-
20	Green Energy Suppliers	ORD-1018	15.01.2024	Confirmed
21	Reliable Textiles Inc.	ORD-1019	-	-
22	Global Tech Solutions	ORD-1020	15.01.2024	Confirmed
23	Harmony Industrial Parts	ORD-1021	15.01.2024	Confirmed
24	Bright Future Electronics	ORD-1022	15.01.2024	Confirmed
25	Eco-Friendly Manufacturing	ORD-1023	-	-
26	Precision Auto Parts	ORD-1024	-	-
27	Innovative Design Works	ORD-1025	15.01.2024	Confirmed
28	Oceanic Shipping Co.	ORD-1026	15.01.2024	Confirmed

Figure 2 PaymentInformation.xlsx

Invoices trigger an automated email to the accounting team, prompting them to take necessary action. Offers and other documents do not initiate any further automated process.

Finally, when a payment confirmation is received, this information is methodically recorded in an Excel file for record-keeping and future reference. This automated workflow aims to streamline document handling, enhance efficiency, and reduce manual errors in the administrative processes.