

Workshop: Let's Get Mining

Microsoft Power Platform Conference 2023

Lab 2 – Task Mining for process insights

30 mins

October 2023



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How to generate insights to optimize and automate your process using Task Mining

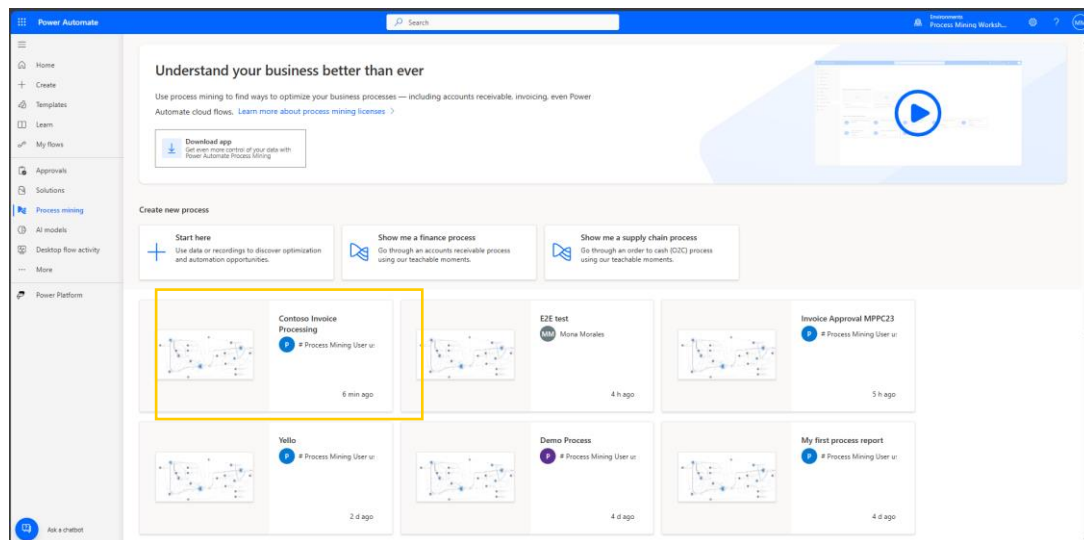
Please ensure that you have completed all the setup steps.

Task Mining

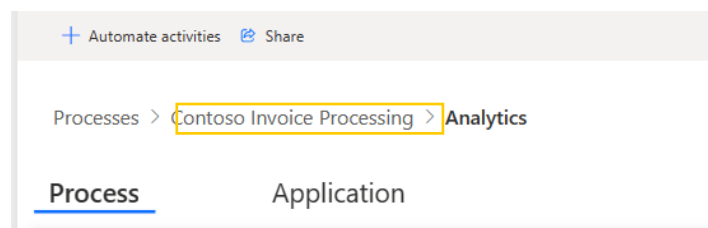
Task mining is a methodology employed to gain a comprehensive understanding of specific tasks within a process, and in the context of your workshop, we'll explore its application to the invoicing process. Through task mining, we'll delve into the intricate details of how individuals interact with software applications during invoicing, uncovering insights into the granular "how" of tasks like data entry and validation. Notably, task mining differs from process mining, as it zooms in on task-level activities rather than providing a holistic view of the entire process. This workshop will equip participants with the tools and knowledge needed to leverage task mining to optimize and streamline their invoicing procedures for enhanced efficiency and accuracy.

Getting Setup with Task Mining in Power Automate

1. In Power Automate on the web go to **Process Mining** from the left navigation.
2. Select the **Contoso Invoice Processing** process.



3. From the breadcrumbs select **Contoso Invoice Processing** to go to the details page to see all the recordings.



- You can see all the existing recordings under **Recordings**. Click **See all**, you will be able to see all the recordings.

| Recordings | | | | | | | + New recording |
|--|-------------------------------|----------|-------------------------------|------------|------------------|----------|---------------------------------|
| Name | Created by | Created | Modified by | Modified ↓ | Ready to analyze | Status | |
| Preston Morales 12/1/2020, 11:01 AM | # Process Mining User user002 | 20 h ago | Mona Morales | 11 min ago | Yes | Analyzed | |
| Wasanthi Gamage 12/7/2020, 6:46 PM | # Process Mining User user002 | 20 h ago | Mona Morales | 11 min ago | Yes | Analyzed | |
| Egon Nilsson 12/7/2020, 6:48 PM | # Process Mining User user002 | 20 h ago | Mona Morales | 11 min ago | Yes | Analyzed | |
| Christopher Reed 12/7/2020, 6:30 PM | # Process Mining User user002 | 20 h ago | Mona Morales | 11 min ago | Yes | Analyzed | |
| Preston Morales 12/7/2020, 6:38 PM | # Process Mining User user002 | 20 h ago | Mona Morales | 11 min ago | Yes | Analyzed | |
| Shakti Menon 12/1/2020, 11:06 AM | # Process Mining User user002 | 20 h ago | Mona Morales | 11 min ago | Yes | Analyzed | |
| Process Mining User user002 9/26/2023, 9:09 PM | # Process Mining User user002 | 19 h ago | # Process Mining User user002 | 19 h ago | Yes | Analyzed | |

[See all](#)

These recordings are a grouping of the step by step activities that were taken in your organization by people involved with the invoice processing process.

- Let's now take a look at other features on the details page of the process.

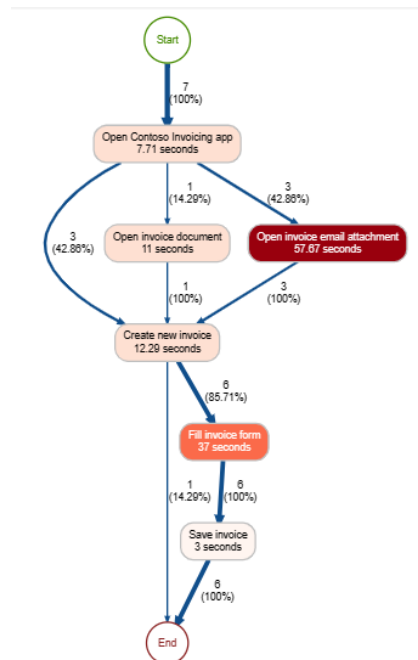
The screenshot displays the 'Contoso Invoice Processing' process details in Power Automate. The top navigation bar features buttons for '+ New recording', 'Analytics', 'Analyze', 'Create activity names', and 'Delete process'. The main content area is divided into two sections: 'Details' and 'Shared with'. The 'Details' section includes fields for Description, Owner, Created, Status, Modified by, Modified, Automation status, and Analyzed recordings. The 'Shared with' section shows a list of users with roles like Owner, Co-owners, and Contributors. Below these sections is a 'Recordings' table with columns for Name, Created by, Created, Modified by, Modified, Ready to analyze, and Status. The table lists several recordings, all marked as 'Analyzed'. A 'See all' link is at the bottom of the table.

- **+ New Recording** - You can create a new recording by clicking **+ New Recording** (We will create a new recording in an upcoming exercise)
 - **Analytics** - You can see the process map and insights by clicking **Analytics**
 - **Share** - You can share your processes with your team members by clicking **Share**
 - **Analyze** - You can click **Analyze** to analyze your processes
 - **Delete** - You can delete your Processes by clicking **Delete**
- Now select **Analyze** from the command bar to analyze all the available recordings together. The analysis will take a few minutes to complete. During this process, a status message is displayed under the New recording button. If you run into an error during the analysis stage, click **Analyze** to trigger this action again.

7. Once the analysis is completed, select **Analytics**. For task mining, analysis only exists in the web.

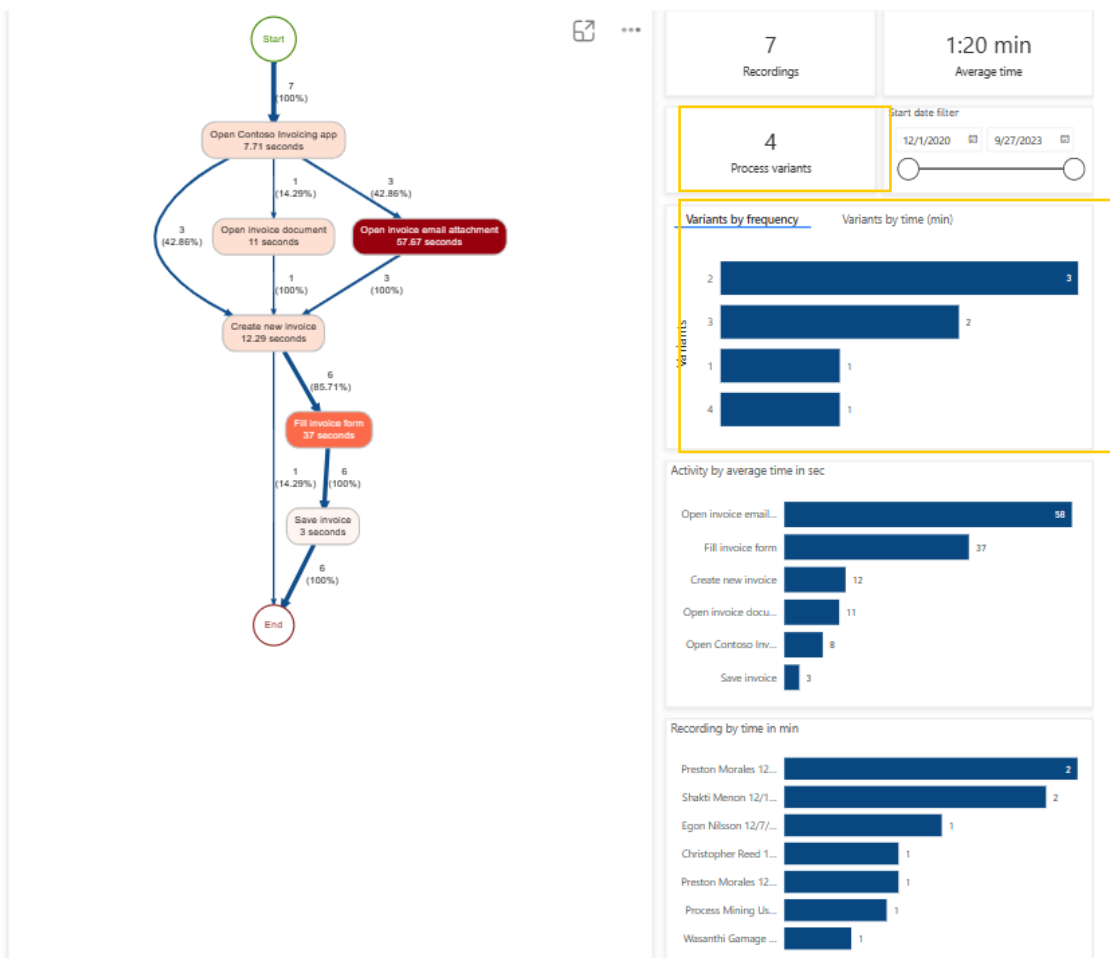
You should see a process map with the following steps in the invoicing processing process and their related durations. Neat right!?

- Open Contoso Invoicing app (8.5 seconds)
- Open invoice email attachment (57.67 seconds)
- Open invoice document (11 seconds)
- Create new invoice (6.17 seconds)
- Fill invoice form (37 seconds)
- Save invoice (3 seconds)

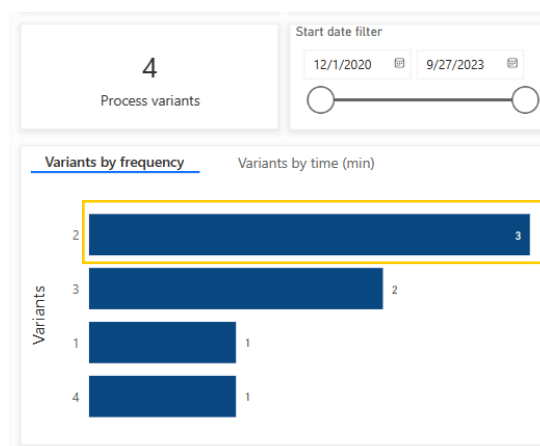


The process map makes it possible to visualize and analyze processes. By looking at a graphical representation of how your business processes are performed, you can gather insights about where improvement opportunities exist. Different activity combinations and variants are shown separately on the process map.

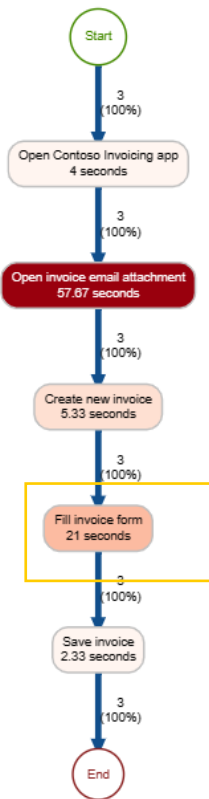
Now look at other parts of the process report. A **process variant** is a unique path from the very beginning to the very end of the process. In other words, a process variant is a specific activity sequence, like a “trace” through the process, from start to end. Each variant differs from the others by at least one activity. You can see additional metrics, frequency of the activities, as well as throughput time, on the process map. Frequency shows you the total number of recordings/cases passing through it. Throughput time is the time between the very first event of the case and the very last.



- Click on the most frequent variant (the 1st blue box under Variants by frequency). This filters the process map and all other statistics to reflect only that first variant. The process map may take a few seconds to update.

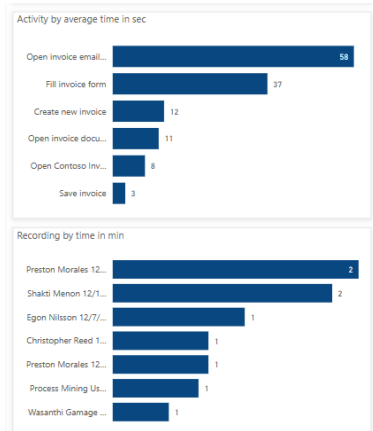


That filtering creates a simpler process map of the most frequent process variant. Notice in this variant the **Fill invoice form** is the second longest activity.



Let’s check out how this process variant performs based on time.

- 9. To clear the filter, click on a white space in the process map, or select **Clear filters** in the top right corner.
- 10. Take a look at the **Activity by average time in sec** and **Recording by time in min**.



The **Open invoice email attachment** and **Fill invoice form** activities take the most time. And **Preston Morales** and **Shakti Menon** are the two employees that take the most time to complete.

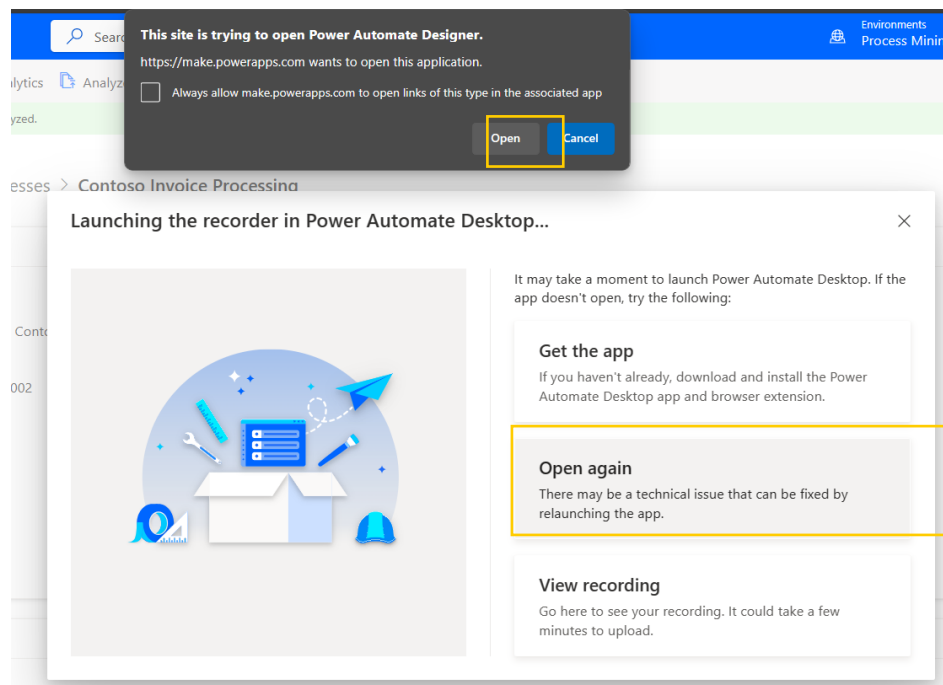
Create your first recording

Are you ready to make your first recording of the invoice processing process? Let's dive in!

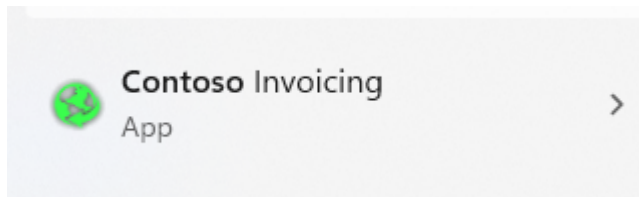
1. Got back to the details page by selecting **Contoso Invoice Processing**.

Processes > **Contoso Invoice Processing** > Analytics

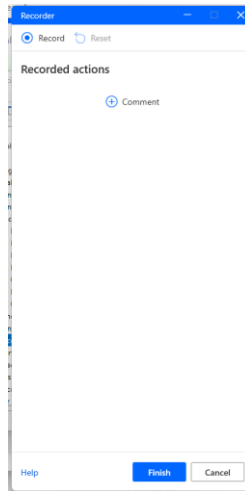
2. Select **+ New recording** from the command bar.
3. A modal will appear. If you completed the prerequisites, the **Power Automate Desktop** app should launch. If it does not select **Open again** > **Open**.



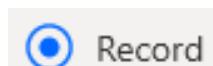
4. You may have to authenticate with the email and password given to you.
5. Open the **Contoso Invoicing app** that you downloaded from the prerequisites.



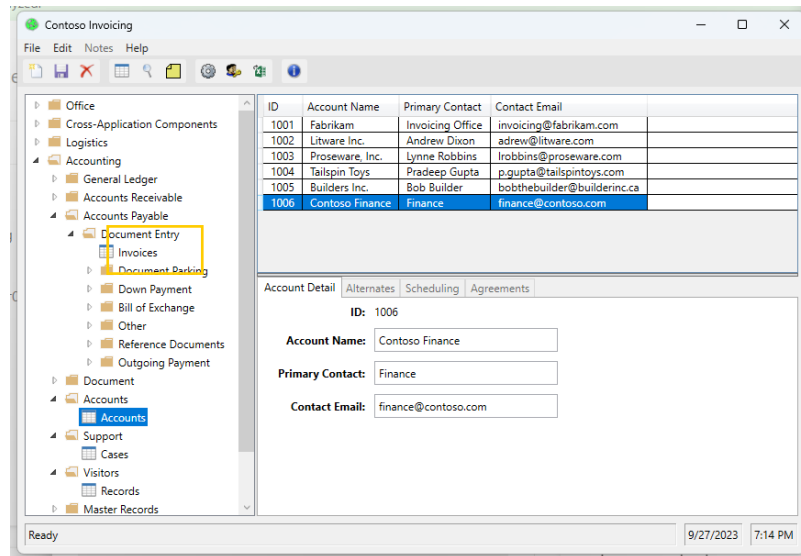
6. The recorder should have launched and should look like this.



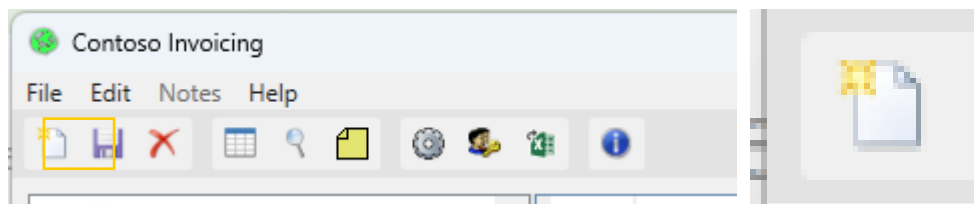
7. **IMPORTANT:** It is strongly recommended you get familiar with steps below before you begin recording. This allows you to finish the recording in one shot without the need to go back and forth with this manually which may alter results. If your first few recordings were not very good. Feel free to delete the recording after and practice more until you have a good recording.
8. **IMPORTANT:** To help with the resilience of UI automation playbacks, it is recommended to minimize other apps from your desktop except the Contoso app.
9. In the **Recorder** app select **Record**.



10. In the **Contoso Invoicing** app, click **Invoices**.

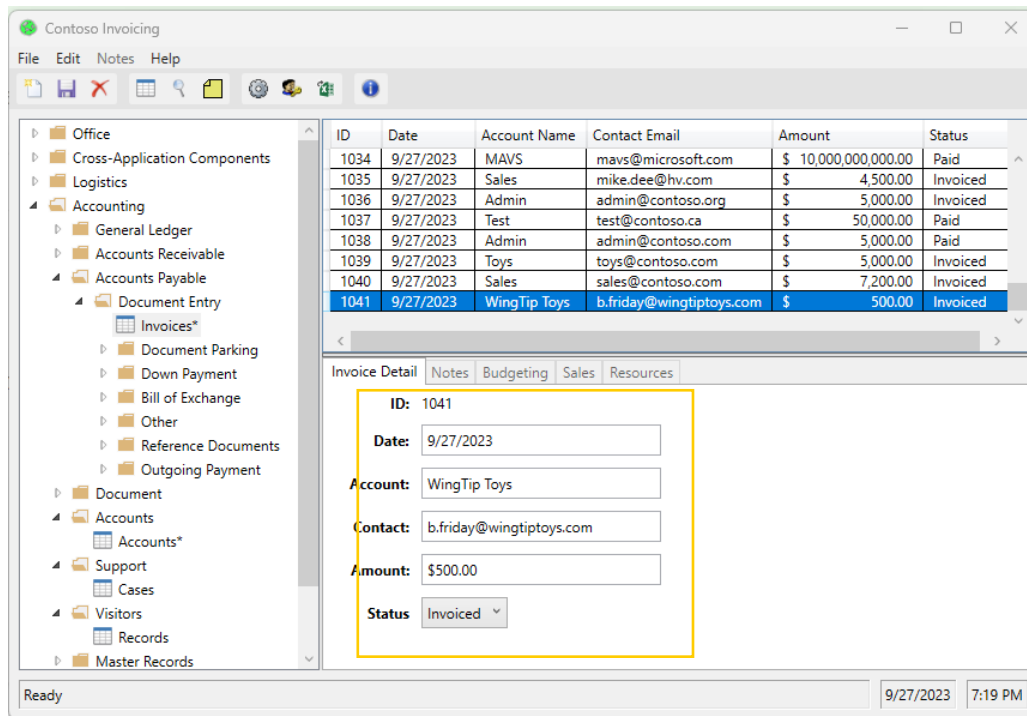


11. Create a new record by clicking **New record** icon in the top left corner.

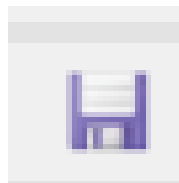


12. Use these values to complete the recording (Note you can also use any arbitrary values)

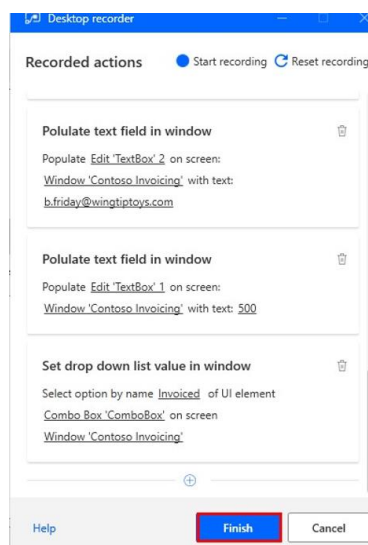
- a. **Date:** 10/06/2023
- b. **Account:** WingTip Toys
- c. **Contact:** b.friday@wingtip toys.com
- d. **Amount:** \$500
- e. **Status:** Invoiced



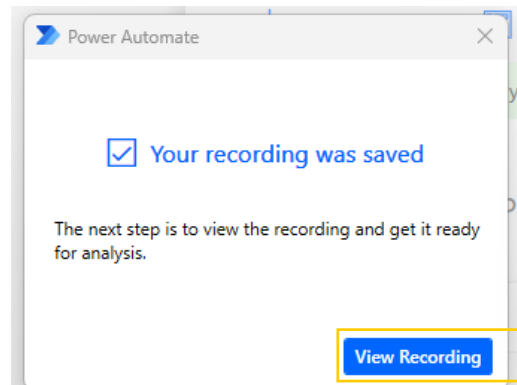
13. Click **Save** in the top left corner.



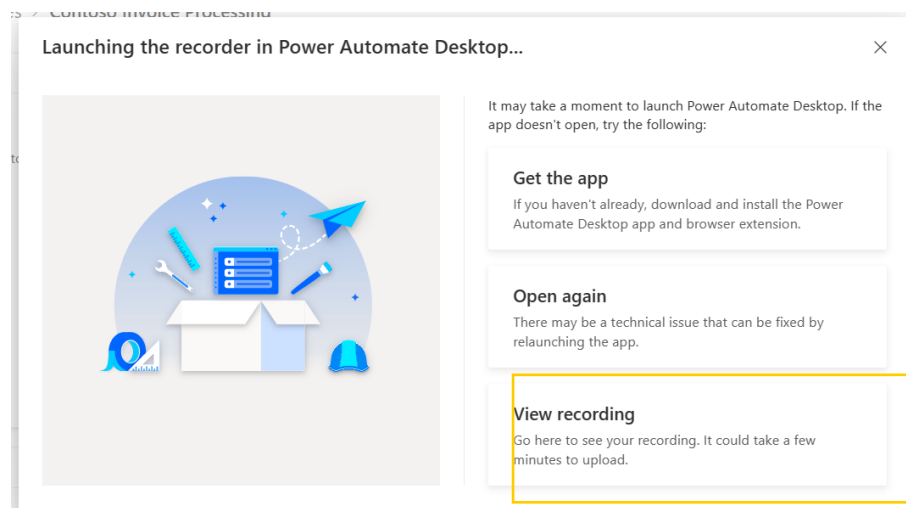
14. Click **Finish** in the Desktop recorder and close the **Contoso Invoicing** app.



15. A new window will appear, select **View Recording**.



16. Go back to the Power Automate web portal and select **View recording**.



17. If the window is not present, navigate back to “Processes” and open “Contoso Invoice Processing”. Then click the last recording.

18. When you click on a specific action, you will be able to see a screenshot of that corresponding action.

[+ Add activity](#)
[Recording Details](#)
[Delete all activities](#)
[Delete action](#)
[Save and analyze](#)
[Close](#)

[...](#) > [Processes](#) > [Contoso Invoice Processing](#) > [Recordings](#) > **Mona Morales 9/27/2023, 6:58 PM**

Status: Not analyzed

| Timestamp | Application | Name | Description |
|--|--------------------|--------------------------------|---|
| <div>Contoso Invoicing Auto created</div> | | | |
| 07:23:14 PM | LegacyInvoicingApp | Click UI element in window | Click on UI element Text 'Save Changes' |
| 07:23:19 PM | LegacyInvoicingApp | Click UI element in window | Click on UI element Image 'Image' |
| 07:23:25 PM | LegacyInvoicingApp | Populate text field in wind... | Populate text box Edit 'TextBox' with 'WingTip Toys' |
| 07:23:31 PM | LegacyInvoicingApp | Populate text field in wind... | Populate text box Edit 'TextBox' 2 with 'b.friday@wingtip toys.com' |
| 07:23:33 PM | LegacyInvoicingApp | Populate text field in wind... | Populate text box Edit 'TextBox' 3 with '\$500.00' |
| 07:23:33 PM | --- | Send keys | Send the following keystrokes: 'tipto' to the foreground window |

Action details

Name *

Description

Screenshot

[Delete screenshot](#)

You can see all the actions you made and clicks you made. Neat right!? Long business processes may require the need to group related tasks to document or describe the overall business process. We can use a feature called **groups** that allows us to break up a large business process into smaller groups which enables better management. To label your first group. Select **+ Add group** to add a group header.

Since we are adding a recording to an existing process, we have some existing groups that are available for us to use. It is recommended you use existing group name; this creates a more consistent and accurate process map. Activity names will be available in the dropdown list whenever a recording is saved. To remove group names from the dropdown list after it was removed from all recordings that used that group name, you need to analyze the recording.

19. Select **+ Add activity**.

20. Let's label step 1 to 2 as your first group. Move the group header above the first step. Here's where you want your first group to start. Drag the new activity header to beneath the 2nd step by holding the 6 dots on the left and moving the pane down.

21. From the **Name** dropdown select **Create new invoice**.

.. > Processes > Contoso Invoice Processing > Recordings > **Mona Morales 9/27/2023, 6:58 PM**

Status: Not analyzed

| Timestamp | Application | Name | Description |
|---|--------------------|--------------------------------|---|
| ⋮ Contoso Invoicing Auto created | | | |
| 07:23:14 PM | LegacyInvoicingApp | Click UI element in window | Click on UI element Text 'Save Changes' |
| 07:23:19 PM | LegacyInvoicingApp | Click UI element in window | Click on UI element Image 'Image' |
| ⋮ | Create new invoice | | |
| 07:23:25 PM | LegacyInvoicingApp | Populate text field in wind... | Populate text box Edit 'TextBox' with 'WingTip Toys' |
| 07:23:31 PM | LegacyInvoicingApp | Populate text field in wind... | Populate text box Edit 'TextBox' 2 with 'b.friday@wingtiptoy.com' |
| 07:23:33 PM | LegacyInvoicingApp | Populate text field in wind... | Populate text box Edit 'TextBox' 3 with '\$500.00' |
| 07:23:33 PM | — | Send keys | Send the following keystrokes: 'tipto' to the foreground window |

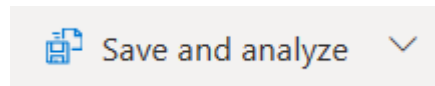
Name this activity ⓘ

Name

Create new invoice

▼

22. Now the recording is read to be analyzed. Select **Save and analyze** from the top right corner.



23. Select **Close** which is beside the **Save and analyze** button.

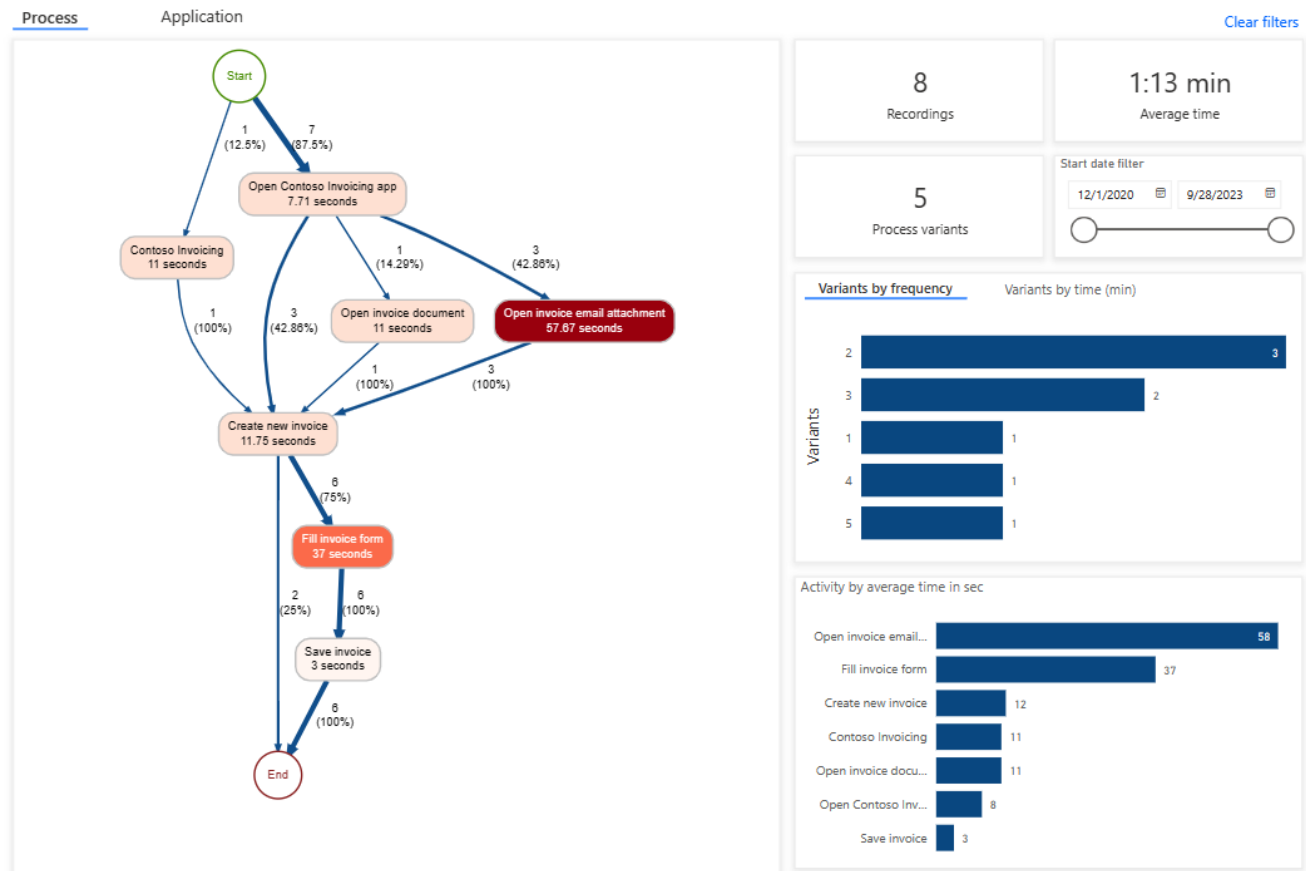
24. Scroll the **Recordings** section and ensure that the status of the most recent recording is **Analyzed**.

| Recordings + New recording | | | | | | |
|--|-------------------------------|------------|------------------|------------|------------------|----------|
| Name | Created by | Created | Modified by | Modified ↓ | Ready to analyze | Status ⓘ |
| Mona Morales 9/27/2023, 6:58 PM | Mona Morales | 42 min ago | Mona Morales | 3 sec ago | Yes | Analyzed |
| Shakti Menon 12/1/2020, 11:06 AM | # Process Mining User user002 | 23 h ago | Mona Morales | 2 h ago | Yes | Analyzed |
| Wasanthi Gamage 12/7/2020, 6:46 PM | # Process Mining User user002 | 23 h ago | Mona Morales | 2 h ago | Yes | Analyzed |
| Egon Nilsson 12/7/2020, 6:48 PM | # Process Mining User user002 | 23 h ago | Mona Morales | 2 h ago | Yes | Analyzed |
| Preston Morales 12/1/2020, 11:01 AM | # Process Mining User user002 | 23 h ago | Mona Morales | 2 h ago | Yes | Analyzed |
| Christopher Reed 12/7/2020, 6:30 PM | # Process Mining User user002 | 23 h ago | Mona Morales | 2 h ago | Yes | Analyzed |
| Preston Morales 12/7/2020, 6:38 PM | # Process Mining User user002 | 23 h ago | Mona Morales | 2 h ago | Yes | Analyzed |
| Process Mining User user002 9/26/2023, 9:09 PM | # Process Mining User user002 | 22 h ago | # Process Mining | 22 h ago | Yes | Analyzed |

[See all](#)

25. Click **Analytics** from the command bar.

Notice that the process map and statistics have been updated with your new recording.



Conclusion

As you can see, we've delved into the realm of task mining within Power Automate. This feature grants a unique perspective, much like 'X-ray vision,' allowing us to closely examine specific activities. In this instance, we directed our focus towards the invoicing process we previously explored in our lab. We recorded and analyzed the precise desktop interactions related to invoicing. Although we used a simplified example, it demonstrates the formidable potential of task mining to uncover deeper insights within any end-to-end process.

Congratulations!

You have completed this lab.

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