Automated Action Tracker Reminder System Using Power Automate

# Project Overview

This project demonstrates the design and implementation of an automated reminder system for an Excel-based Action Tracker. Using Microsoft Power Automate and Outlook, the system ensures that task owners receive timely email reminders two days before due date, on the due date and once a week after the due date unless action is closed. The automation enhances accountability, minimizes overdue actions, and improves follow-through on assigned responsibilities.

# Tools & Technologies

- Microsoft Excel (Action Tracker Template)

- Microsoft Power Automate (Flow Automation)

- Outlook (for sending emails)

# Flow Design and Structure

The automation flow operates in a loop over each row (action item) in the Excel tracker. For each action, it performs the following steps:

1. Convert the Excel serial Due Date into ISO format using `addDays('1899-12-30', int(Due Date))`.

2. Get the current date using `utcNow()`.

3. Calculate the number of days until the due date using the difference in ticks divided by 864000000000.

4. Check if the task status is not 'Done'.

5. Based on the days difference:

- If 2 days left → Send a 'Due Soon' email reminder.

- If 0 days left → Send a 'Due Today' email reminder.

- If overdue → Every 3 days, send a recurring reminder until the status is updated to 'Done'.

# Key Expressions and Logic

• Convert Excel serial date to ISO date:

`formatDateTime(addDays('1899-12-30', int(items('Apply\_to\_each')?['Due Date'])), 'yyyy-MM-dd')`

• Current date:

`utcNow()`

• Calculate day difference:

`div(sub(ticks(outputs('Compose\_1')), ticks(outputs('Compose\_2'))), 864000000000)`

• Reminder condition:

`or(equals(outputs('Compose\_3'), 2), equals(outputs('Compose\_3'), 0), less(outputs('Compose\_3'), 0))`

• Recurring overdue reminder every 3 days:

`mod(outputs('Compose\_3'), 3) == 0`

# Challenges Encountered & Solutions

• \*\*Serial Date Error:\*\* Initially, Excel dates in serial format caused parsing errors in `formatDateTime`.

\*\*Solution:\*\* Used `addDays('1899-12-30', int(date))` to convert serial to ISO format.

• \*\*Outlook Connector Issue:\*\* Flow failed to send emails due to using the wrong email connector.

\*\*Solution:\*\* Switched to 'Send an email (V2)' from Office 365 Outlook.

• \*\*Condition Fails Due to Type Mismatch:\*\* Expression expected integer, but received string.

\*\*Solution:\*\* Ensured outputs from Compose actions return numbers by parsing dates correctly.

# Outcome

The automated system successfully sends email reminders to action owners based on the proximity to their due dates. Overdue actions trigger follow-up reminders every 72 hours until closure, significantly improving task compliance and follow-through.