General Sir John Kotelawala Defense University

Faculty of Management, Social Sciences, and Humanities

Department of Language

BSc in Applied Data Science Communication

Advanced SQL and Cloud Databases

Year 2 Semester 2

Group Assignment 03

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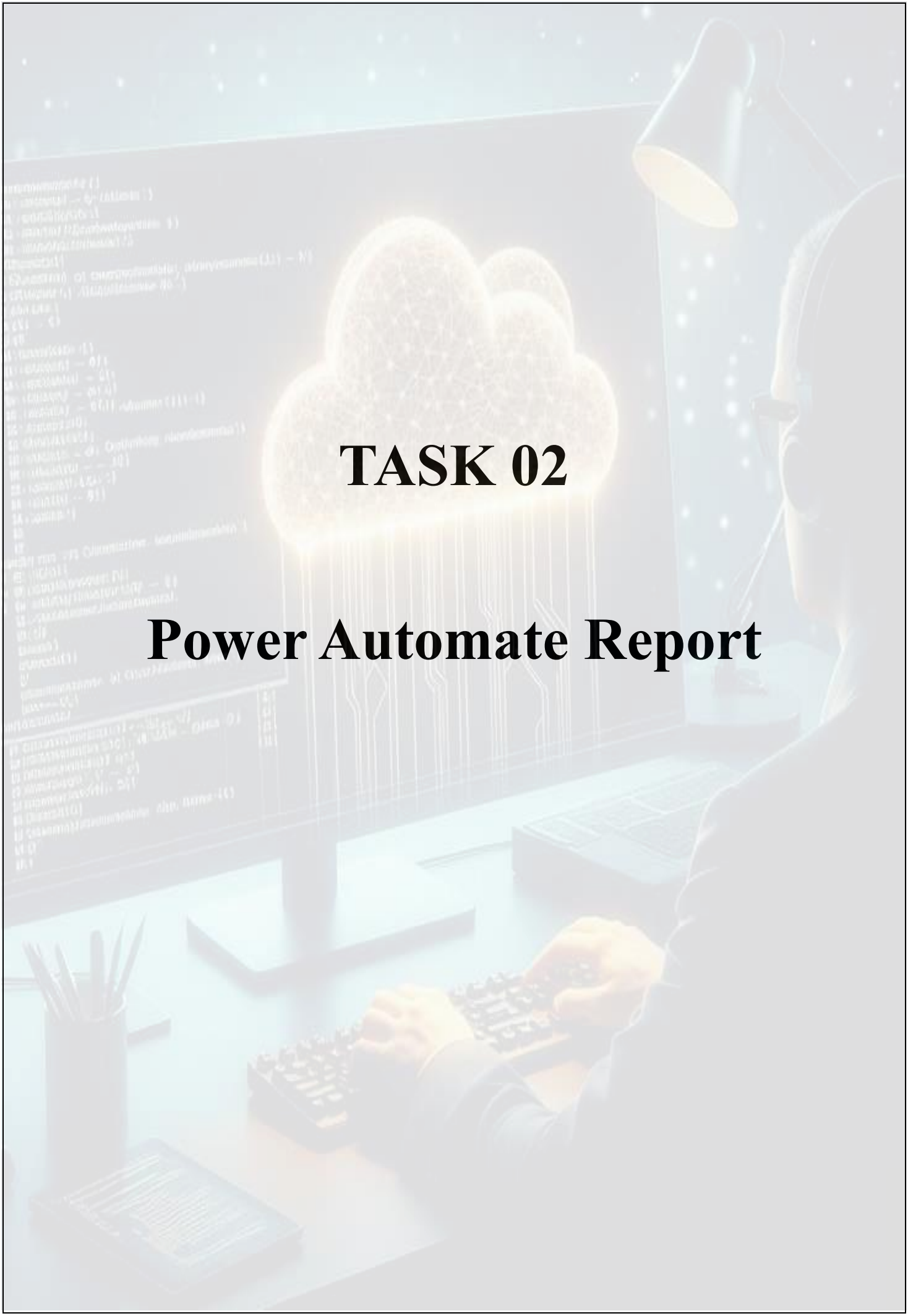
D/ADC/23/0012 - S.A.R. Maleesha

D/ADC/23/0032 - W.A.K.N Wedagedara

D/ADC/23/0033 - K.G.K Chani

D/ADC/23/0039 - KH Wickramathunga



TASK 02

Power Automate Report

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1. Introduction

1.1 Problem Statement

The manual process of notifying customers when their orders are ready leads to delays, inefficiencies, and inconsistent customer experiences. It often requires staff to manually track and communicate order statuses, resulting in missed notifications and dissatisfied customers. Additionally, there is no standardized way to include important order details, such as Order ID, Price, or an image of the order.

1.2 How Automation Addresses the Issue

Automation using Power Automate streamlines the notification process by:

- Automatically triggering a workflow when an order is updated to "Ready" status.
- Ensuring customers receive timely and accurate email notifications with dynamic details like Order ID, Price, and a preview image.
- Reducing staff workload and minimizing the risk of human error.
- Standardizing communication for improved customer satisfaction and operational efficiency.

1.3 Objectives

- Automate order status notifications via email.
- Include dynamic content such as Order ID, Price, and an embedded order image in notifications.
- Ensure robust error handling and validation.

2. Workflow Overview

2.1 Workflow Description

The workflow starts with a trigger when an order's status is updated to "Ready." It retrieves the necessary order details, formats an HTML email, and sends it to the customer's email address.

2.1.1 Overview of the Workflow

The Power Automate workflow follows these steps:

1. **Trigger**: Initiates the flow when a row in the Orders table is added or modified.
2. **Condition**: Checks if the order status is "Ready."
3. **Retrieve Order Details**: Fetches the full record of the order using "Get a row by ID."
4. **Compose Email Content**: Dynamically generates the email body using HTML.
5. **Send Email Notification**: Sends the email to the customer.

2.2 Workflow Design

2.2.1 Workflow Steps

1. **Trigger**:
   - Action: "When a row is added, modified, or deleted" in the Dataverse table Orders.
   - Scope: Organization.

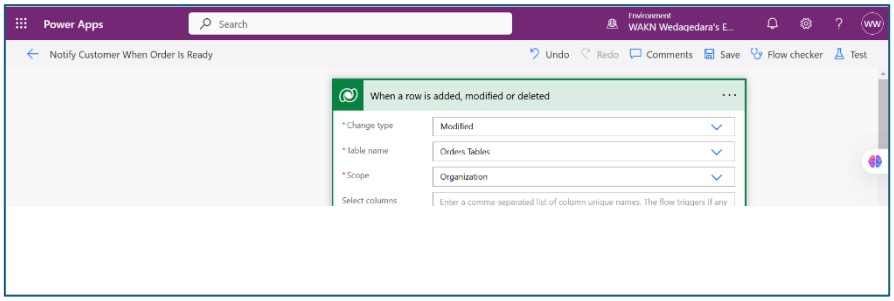


Figure 1: Image of Trigger

2. **Condition**:
   - Expression: Order status is equal to ready
   - Description: Ensures the workflow proceeds only when the order status is updated to "Ready."

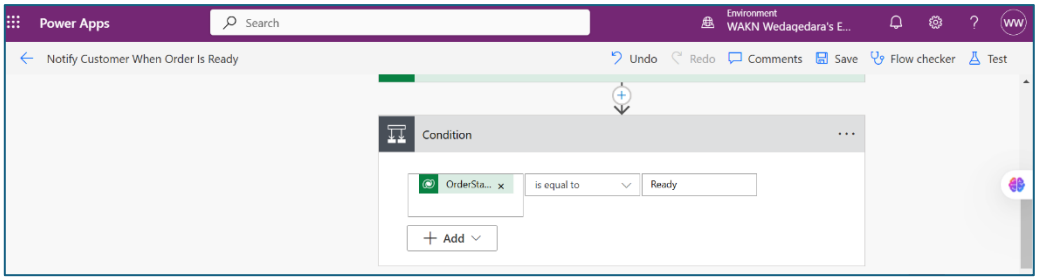


Figure 2: condition photo

3. **Actions**:
    - **Get Order Details**:
        - Action: "Get a row by ID."
        - Input: Order ID from the trigger event.

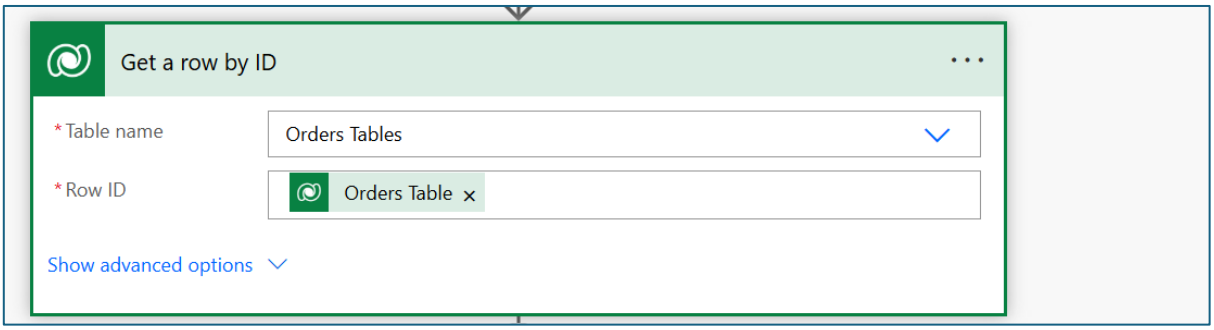


Figure 3: Action

- **Handle Image URL**:

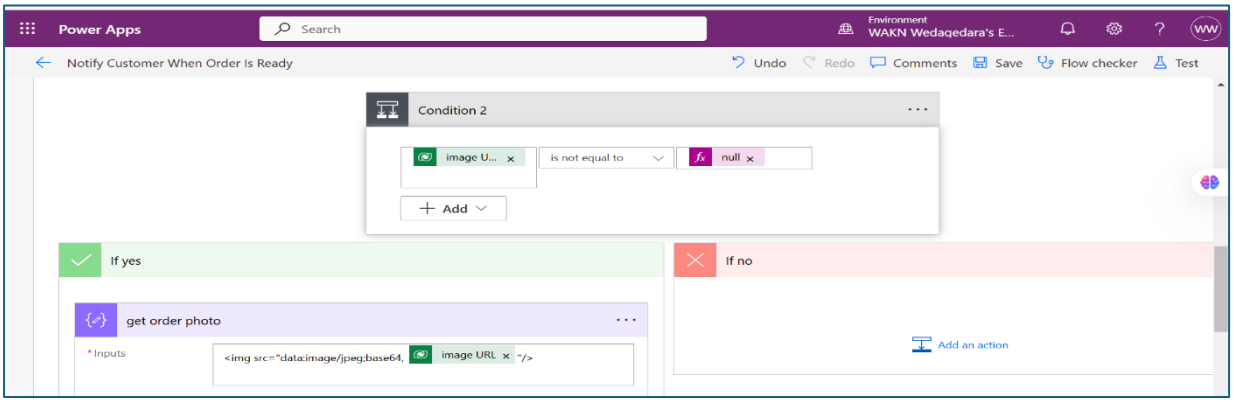


Figure 4:Handle image url

- **Compose Email Content**:
    - Action: Compose HTML for the email body:
- **Send Email**:
    - Action: Delivers the email notification to the customer.("Send an email (V2).")

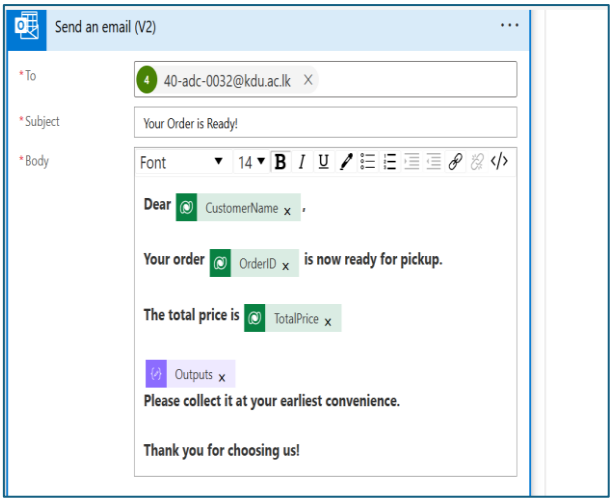
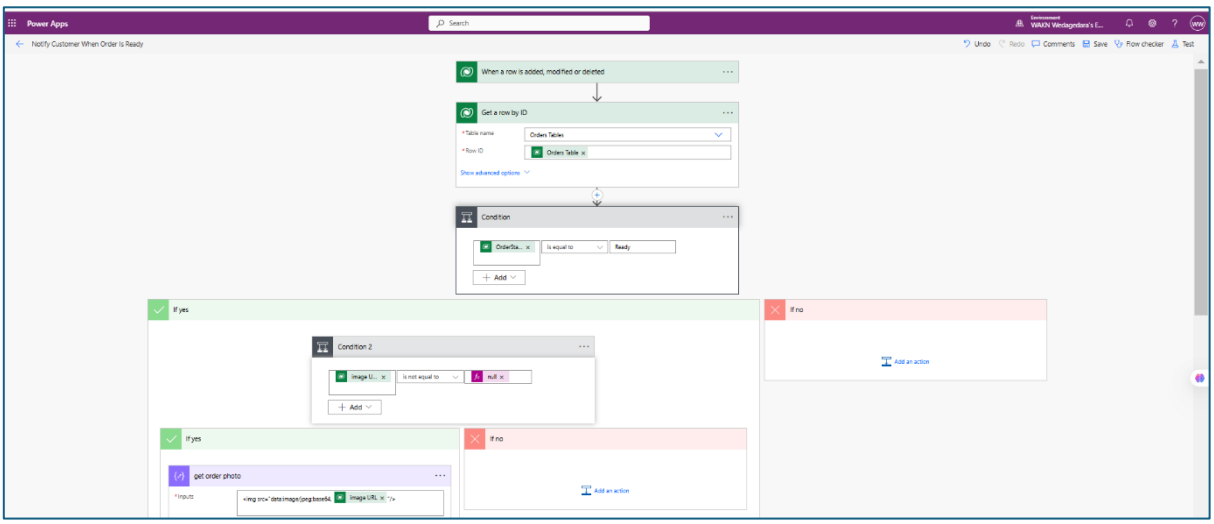
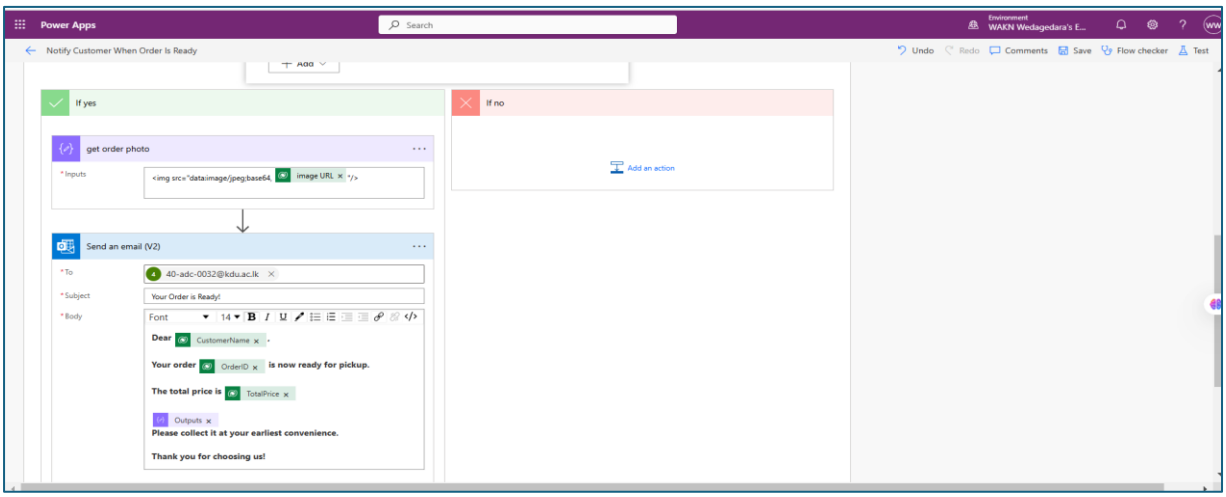


Figure 5:Body of email

2.3 Workflow Diagram





3.Results and Analysis

3.1 Test Cases and Results

Test Case	Input	Expected Output	Result
1	Order status = "Ready"	Email sent with correct details	Passed
2	Order status = "Pending"	Workflow terminated without email	Passed
3	Missing Image URL	Email sent with placeholder image	Passed

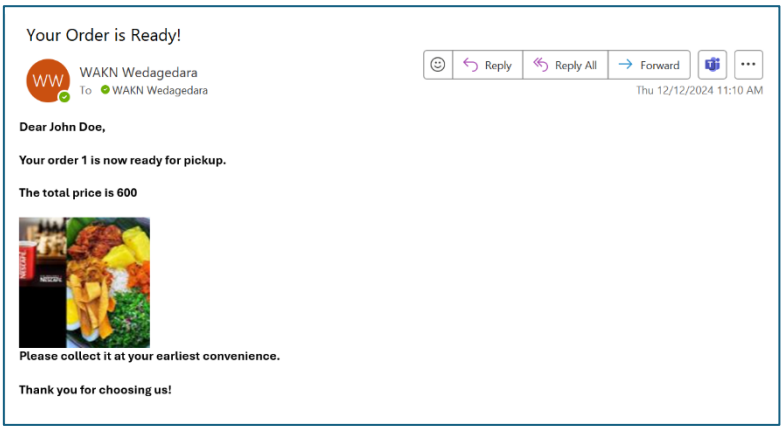


Figure 6:Email output in the recipient's inbox

4.Challenges and Solutions

Challenge 1: Missing or Invalid Image URL

- **Issue**: Emails failed to load images when URLs were null or inaccessible.
- **Solution**: Hosted the image on a public platform and used fallback logic for missing URLs.

Challenge 2: Errors in "Get a row by ID"

- **Issue**: Workflow failed when OrderID was missing or invalid.
- **Solution**: Added validation to ensure OrderID exists before proceeding.

Challenge 3: Email Formatting in Some Clients

- **Issue**: Emails appeared unformatted in some email clients.
- **Solution**: Standardized the HTML structure for better compatibility.

5. Conclusion

This project successfully automates customer notifications for order readiness, addressing inefficiencies in manual communication processes. The Power Automate workflow enhances operational efficiency, reduces errors, and improves customer satisfaction by providing timely and consistent notifications.

6. References

- **Microsoft Power Automate Documentation**
  - Microsoft. "Power Automate Documentation." https://learn.microsoft.com/en-us/power-automate/

    Comprehensive guide to setting up workflows, triggers, and connectors.

- **Microsoft Dataverse Table Setup Guide**
  - Microsoft. "Create and Edit Dataverse Tables." https://learn.microsoft.com/en-us/power-apps/maker/data-platform/create-edit-tables

    Resource for understanding Dataverse table design and integration.