Mobile Warehouse Management System

User Documentation

Introduction

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- This is the technical documentation of the Warehouse Order Processing App. It will touch on the apps structure, functionality and explain in detail how the QR reader functionality works.

- The current app details at the time of writing are these:
  - App Name: Warehouse Order Processing App
  - Version: 1.1
  - Created By: Alper
  - Last Updated: 14/03/2025

- The initial version of the app has only the Warehouse Receipt Page available. The other pages will be completed in the second iteration of the development.

Home Page

- Purpose: This is the landing page of the app. The user would be able to navigate to the pages represented on the screen by clicking on them.

- Functionalities:
  - On the start up of the app there are several collections and variables are initialized.
  - On each startup the dataset connections are refreshed.
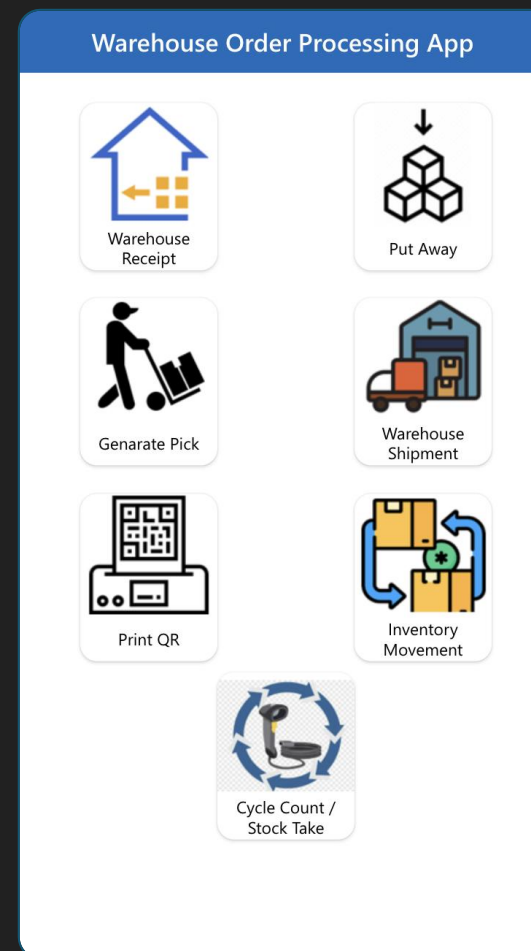
Home Page

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- The app has seven pages:
  - Warehouse Receipt
  - Put Away
  - Generate Pick
  - Warehouse Shipment
  - Print QR
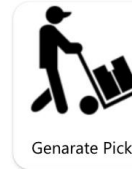 - Inventory Movement
  - Cycle Count / Stock Take

Warehouse Order Processing App

- Warehouse Receipt
- Put Away
- Genarate Pick
- Warehouse Shipment
- Print QR
- Inventory Movement
- Cycle Count / Stock Take

Warehouse Receipt Screen

○ Purpose: This page lists all the purchase orders inside a company.

○ Functionality:

   ○ The list of purchase orders are in a scrollable gallery. Inside a single item, it contains the purchase order (PO) number, vendor name and the created at date.

   ○ On top-left of the gallery there are two controllers. The search box gets a text input from the user and filters the gallery. The user can either use the PO number or the vendor name.

   ○ On top-right of the gallery is a switch to change the ordering of the PO items by created at date. In default the ordering is in ascending order.

   ○ The user can scroll, filter and sort the gallery. After that click on the PO item to navigate inside the PO.

   ○ The user can use a barcode scanner to scan a line item to navigate to the PO associated with that line item number and open the editing modal for the user to enter quantity.

Warehouse Receipt Screen

- 1: The search bar can be used to search a Purchase Order by PO number or the Vendor name.

- 2: Inside a single Purchase Order, the PO number, Vendor name and the PO creation date is present. The user can click into a PO to go into the Purchase Order Page

- 3: The back button takes the user to the home page.

- 4: By default, the list is sorted by the PO creation date in ascending order. The user can press the switch to sort the list in descending order.

- 5: The user can use the QR scanned to scan a line item to find the PO associated with it. After it scans the app will take the user to the PO Page and open the editing modal for the user to enter.
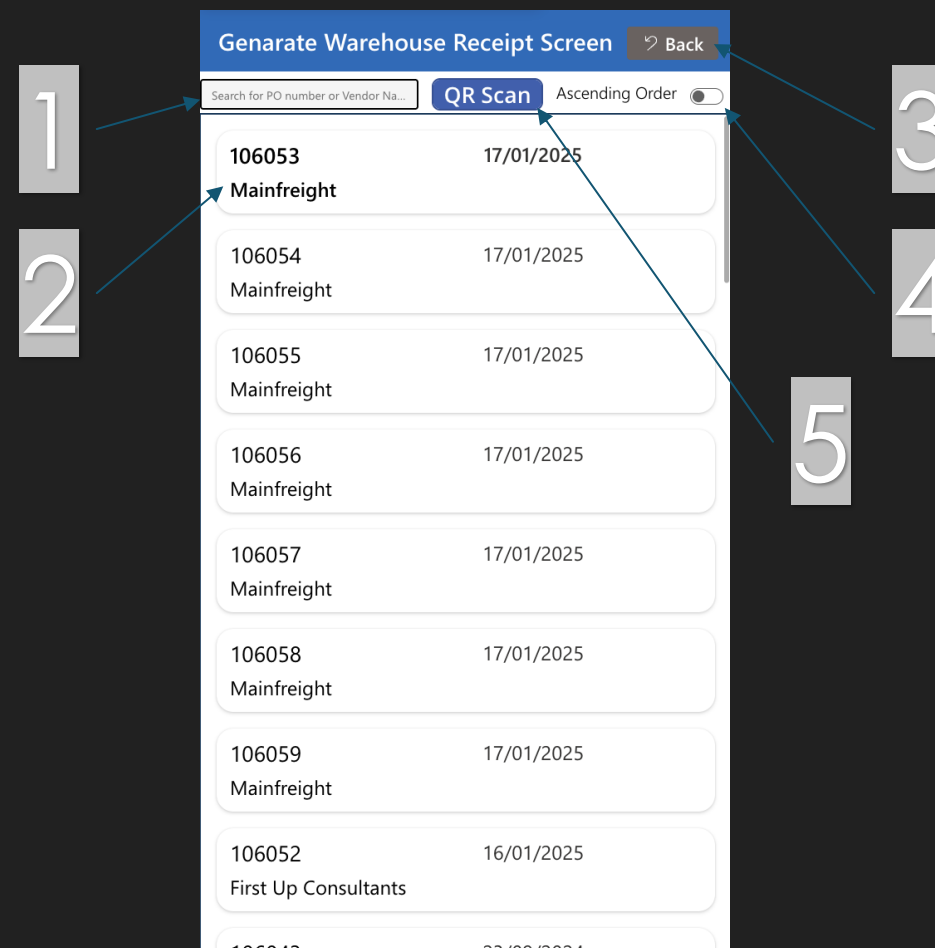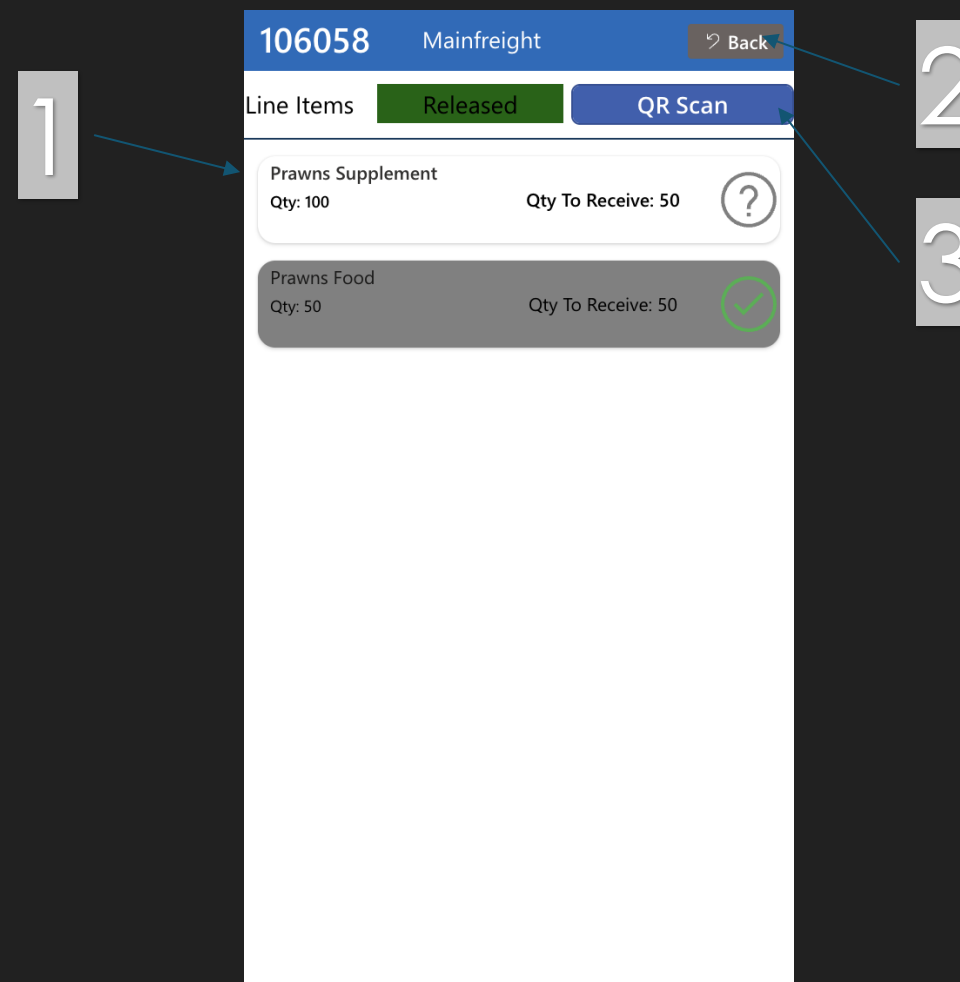
Purchase Order Page

- Purpose: This page displays the line items within the PO. The users can edit the line items by clicking on one of the line items and editing them. In the header there will be information regarding the PO number, vendor name and buttons to proceed or go back. Below the header, the user can see the status of the PO and can select the 'QR Scan' button to scan QR codes.

- Functionality:
  - The line items are displayed in a gallery. After the user clicks a line item, a modal will appear with more details about the line item.
  - The user can scan a QR code using the 'QR Scan' button. After the user scans a QR code, the editing modal will appear, and the user can enter the quantity.
  - The user can scan and enter the quantity of a line-item multiple times and it collects the quantities.
  - After clicking save button, the collected information will be stored in a collection.
  - After making changes to the line items and saving them, the line item quantity will be updated but not submitted to the BC.
  - After all the changes, the user can press the submit button that appears after a change in the line item happens.
  - If the user tries to go back to the Warehouse Receipt page while having unsaved changes, another modal will appear confirming the decision of the user.

Purchase Order Page

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1: Inside a single purchase order line the line name, the quantity to be received and the quantity received fields are present. The user can click into a line to see more information regarding the line. If the Quantity to Receive and Quantity matches the line item will be not modifiable.

2: The back button will navigate the user to the Warehouse Receipt Screen and will check if there are any present unsaved changes. If so, the app will notify the user to confirm decision.

3: The user can press the QR scan button to scan a barcode or QR code. After the scan the editing modal for the line item will open and the user can enter a quantity.

1

2

3

106058 Mainfreight ↺ Back

Line Items Released QR Scan

Prawns Supplement
Qty: 100 Qty To Receive: 50 ?

Prawns Food
Qty: 50 Qty To Receive: 50 ✓

Purchase Order Page

- 1: the button closes the modal, and the user can see the PO page again.

- 2: The edit button will make the Qty to Receive field editable.

- 3: The user can see the current Quantity to receive.

Purchase Order Page

○ 1: The button closes the modal, and the user can see the PO page again.

○ 2: The Save button will take the input from the user and save the value in a collection.

○ 3: The user can input the value amount inside the field.

Purchase Order Page

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- 1: After saving the input the app will show the user the input was successful.

- 2: The submit button will take the user to the Collection gallery page with the recent changes.

Purchase Order Page

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- 1: The user will be navigated to the Warehouse Receipt Screen and the collection will be reset.

- 2: The modal will be closed, and the user can continue the process.
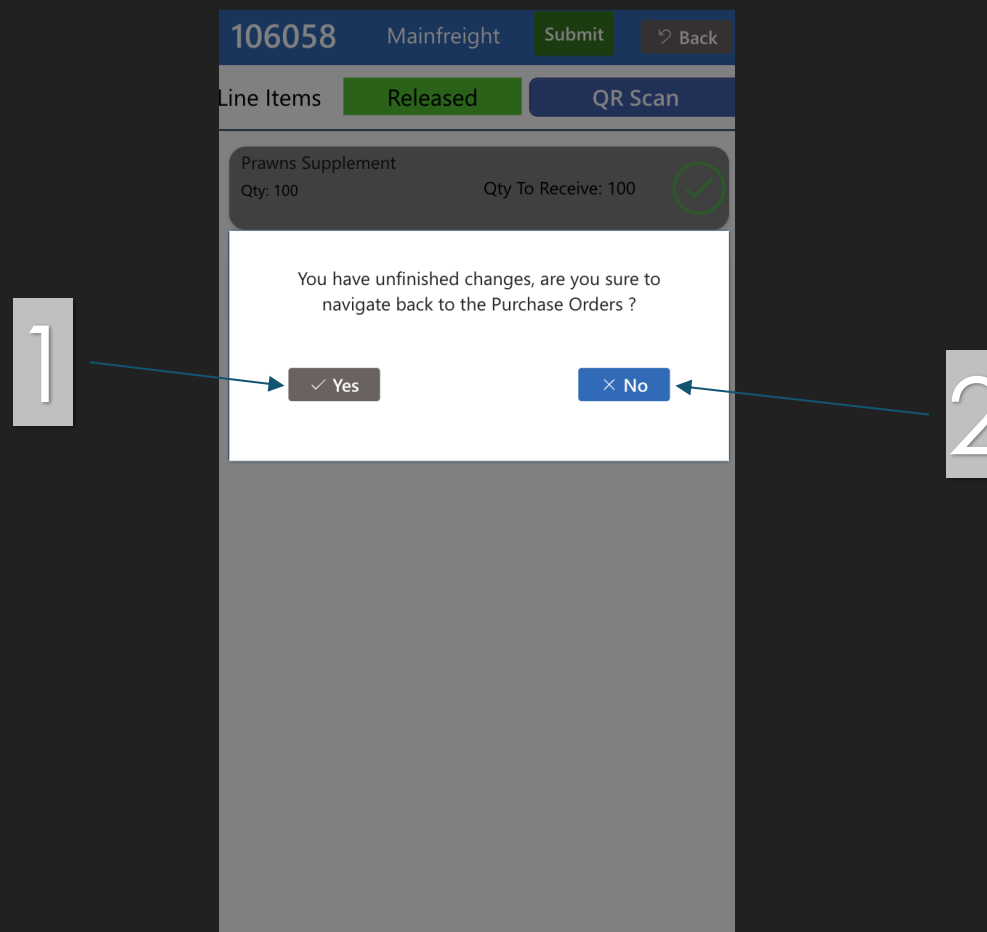
Collection Gallery

- Purpose: This screen will show the user the changes that they have done. The line item will have specific badged depending on the status of the quantity amount. On the header the user can press three buttons to submit, clear all of the changes or going back.

- Functionality:

  - The collection is shown in a gallery.

  - Depending on the quantity amount the badge of the line item will be either on hold, continuing, finished or user error.

  - The user error will have an information button to notify the user about the error.

  - If there are any non validated items present, the user would not be able to submit the collection.

  - The user can press the clear all button to go back to the PO page and clear the collection starting over.

  - The user can press the back button to go back to the PO page.

  - The user can press on the line item the have a similar pop up modal as the PO page and be able to edit the quantity to receive and save it.

  - The user can press the submit button to submit the collection to the Dynamics Business Central. This patch action is done using a Power Automate Flow. (See QR Reader Power Automate Flow section for details)

  - After submission, the user navigates back to the Warehouse Receipt page.

Collection Gallery

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○ 1: This is the line item inside the collection that was saves before. It has the reset, number, name and the Qty to receive.

○ 2: The submit button takes the collection and invokes a cloud flow. (See flow details) After that the user navigates back to the Warehouse Receipt Screen and the collection is reset.

○ 3: The user navigates back to the Purchase Order Page.

○ 4: After clicking the button, the collection is reset, and the user navigates back to the Purchase Order Page.

1

2

3

4

Review your Changes | Submit | 🗑 Clear All | Back

| Line No: 1010 | Prawns Supplement | Qty To Recieve: 100 | ✓ |
| Line No: 1011 | Prawns Food | Qty To Recieve: 30 | ⊖ |

Collection Gallery

○ 1: The user closes the modal to continue the process.

○ 2: The user updates the collection item after clicking the button.

Collection Gallery

○ 1: The app will notify the user if they enter an invalid value.

Flow Diagram

- Purpose: This flow gets triggered by the canvas app with the collection as a parameter. The flow gets the collection, parses it into a JSON object and patches each line in Dynamics Business Central

- Functionality:
  - The trigger is the power app call, with a parameter for JSON formatted text.
  - After the trigger the output is parsed into a JSON object.
  - Using apply to each controller, the line items are patched using update record controller.

When Power Apps calls a flow (V2)

Parse JSON

Apply to each

Update record (V3)

Parse JSON

Parameters   Settings   Code view   About

Content *

PurchaseOrderLin... ×

Schema *

```
{
    "type": "array",
    "items": {
        "type": "object",
        "properties": {
            "QuantityToRecieve": {
                "type": "number"
            },
            "lineObjectNumber": {
                "type": "string"
            },
            "id": {
                "type": "string"
            }
        },
        "required": [
            "QuantityToRecieve",
            "lineObjectNumber",
            "id"
```

Use sample payload to generate schema

Update record (V3)

Parameters   Settings   Code view   Testing   About

Environment *

SANDBOXRS

Company *

Demo

API category *

v2.0

Table name *

purchaseOrderLines

Row id *

Body id ×

Advanced parameters

Showing 1 of 31   Show all   Clear all

Ship Quantity

Body QuantityToR... ×

Connected to Dynamics 365 Business Central WarehouseSolution-a269d.   Change connection reference

When Power Apps calls a flow (V2)

Parameters   Settings   Code view   About

PurchaseOrd   Please enter your input

+ Add an input