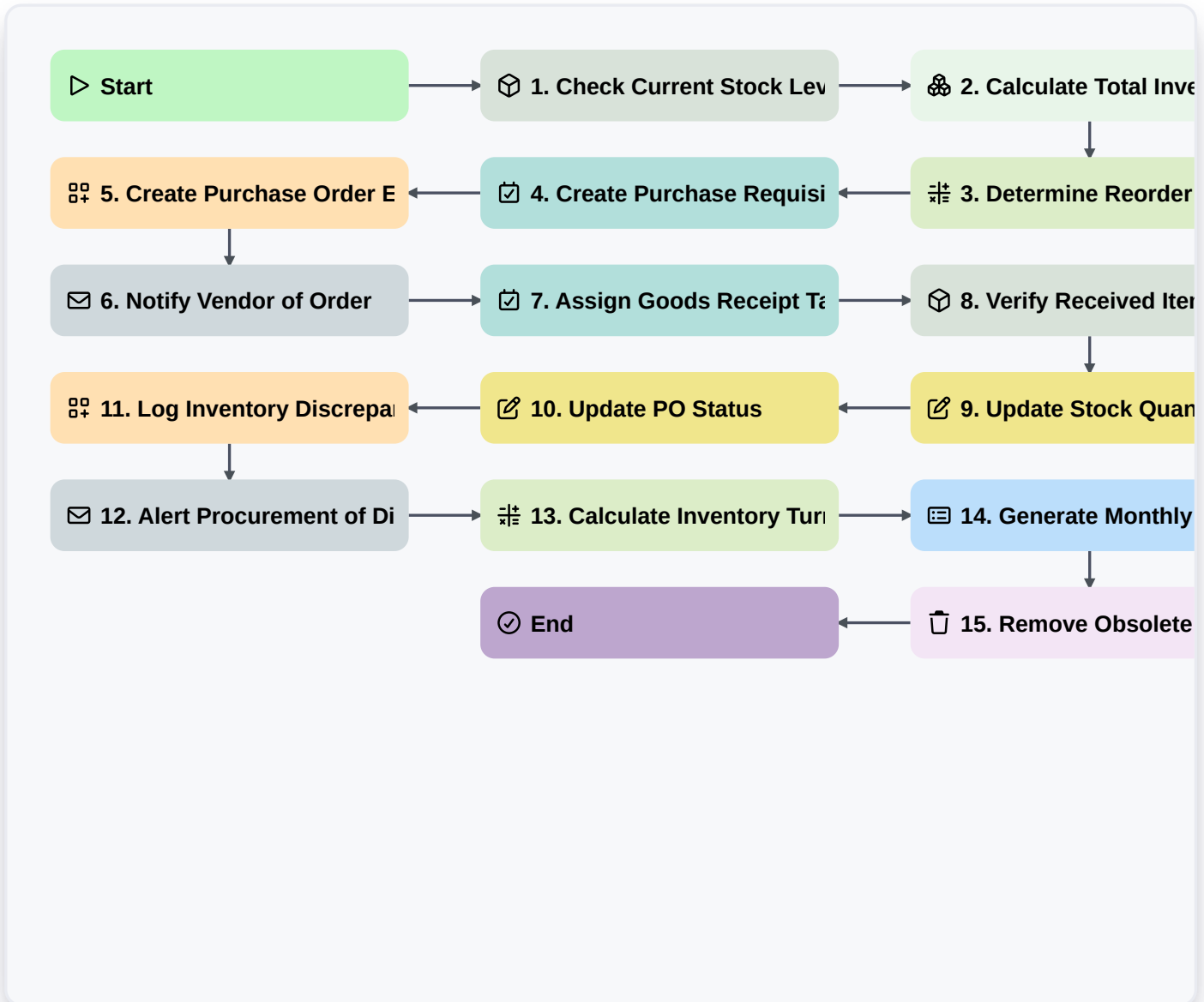


Spare Parts Inventory Management Process



Start

Start of the Workflow/Process.

1. Check Current Stock Levels

Retrieve existing inventory records to check quantity on hand for specific part numbers.

2. Calculate Total Inventory Value

Sum the value ($\text{unit_price} * \text{quantity}$) of all parts in the inventory data model.

3. Determine Reorder Necessity

Compare current stock levels against the defined minimum threshold (reorder_point) to identify shortages.

4. Create Purchase Requisition Task

Assign a task to the Procurement Officer to initiate the buying process for identified low-stock parts.

5. Create Purchase Order Entry

Generate a new entry in the Purchase Orders data model containing part details and requested quantities.

6. Notify Vendor of Order

Send an email to the supplier's contact address with the details of the new Purchase Order.



7. Assign Goods Receipt Task

Create a task for the Warehouse Clerk to inspect and log incoming parts upon delivery.

8. Verify Received Items

Fetch the original Purchase Order entry to compare delivered quantities against ordered quantities.

9. Update Stock Quantities

Update the 'Quantity on Hand' field in the Inventory Data Model after successful goods receipt.

10. Update PO Status

Change the status of the Purchase Order entry from 'Pending' to 'Fulfilled'.

11. Log Inventory Discrepancy

If received quantity does not match ordered quantity, create an entry in the Discrepancy Log model.

12. Alert Procurement of Discrepancy

Send an email to the Procurement Manager if a mismatch is detected during the receiving process.

13. Calculate Inventory Turnover Ratio

Execute formula to calculate turnover based on Cost of Goods Sold and Average Inventory value.

14. Generate Monthly Stock Valuation Report

Create a comprehensive report summarizing total asset value, low stock alerts, and recent movements.

15. Remove Obsolete Part Records

Delete entries from the inventory model for parts that have been officially decommissioned or scrapped.

End

End of the Workflow/Process.