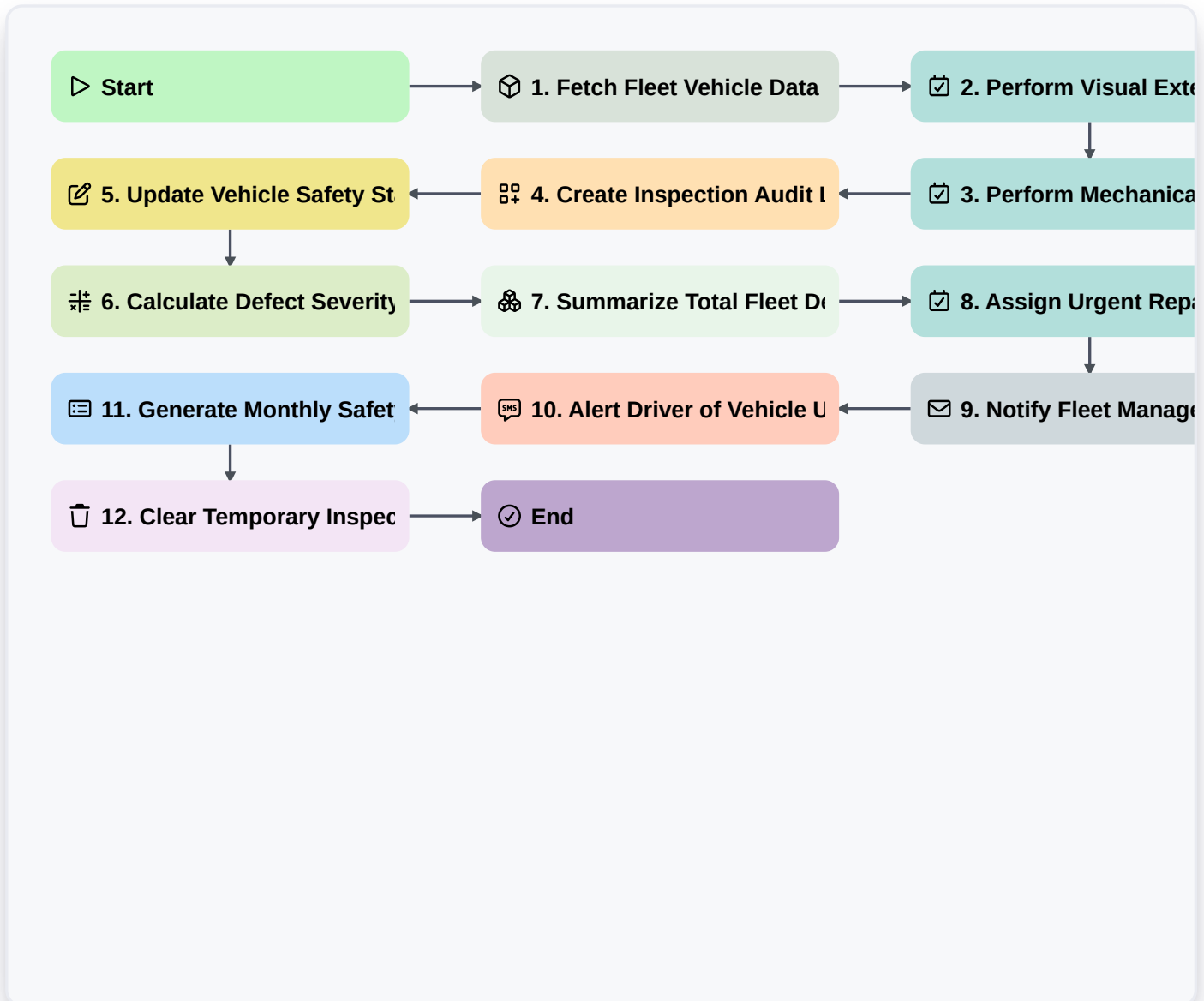


Automated Bus Inspection And Safety Audit Workflow



▶ Start

Start of the Workflow/Process.

📦 1. Fetch Fleet Vehicle Data

Retrieve vehicle details (ID, Model, Last Inspection Date) from the Fleet Data Model based on the scanned Bus ID.

📋 2. Perform Visual Exterior Inspection

Assign a task to the Inspector to check tires, lights, mirrors, and body integrity using the inspection checklist.

📋 3. Perform Mechanical & Engine Check

Assign a task to the Mechanic to verify fluid levels, brake systems, and engine diagnostics.

📋 4. Create Inspection Audit Log

Create a new entry in the Audit Logs data model containing the results, timestamp, and inspector ID.

📋 5. Update Vehicle Safety Status

Update the 'Safety Status' field in the Fleet Data Model to 'Passed' or 'Failed' based on audit results.



6. Calculate Defect Severity Score

Execute a formula to weight different checklist failures (e.g., Critical = 10, Minor = 1) to determine the overall risk score.

7. Summarize Total Fleet Defects

Aggregate all 'Failed' inspection entries from the current month to calculate the total number of vehicles currently out of service.

8. Assign Urgent Repair Task

If a critical defect is found, automatically create a high-priority maintenance task for the Repair Workshop team.

9. Notify Fleet Manager of Failure

Send an automated email to the Fleet Manager containing the summary of failed safety items and the impacted vehicle ID.

10. Alert Driver of Vehicle Unavailability

Send an SMS to the assigned Bus Driver notifying them that the vehicle has failed inspection and is grounded.

11. Generate Monthly Safety Compliance Report

Generate a PDF report summarizing all completed inspections, pass/fail rates, and recurring mechanical issues for the period.

12. Clear Temporary Inspection Drafts

Delete incomplete or abandoned inspection entries from the temporary data model to maintain database cleanliness.

End

End of the Workflow/Process.