Beta Presentation
Next Gen Smart Factory

The Capstone Experience

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Project Overview

• Existing critical software is reaching end-of-life
• Organizes factory logistics
  ▪ Allows administrators to create checklists for operators
  ▪ Allows operators to complete checks
  ▪ Stores all checklists and completed check data
  ▪ Allows administrators to visualize the data
System Architecture

Frontend / Interface

Operators
Supervisors
Admins

Backend
Python
Web Server
SQL Database

HTML / CSS / JS

Supervisors
Admins

Operators
# Check Creation

## Create Checks Page

<table>
<thead>
<tr>
<th>Check Name</th>
<th>Check Description</th>
<th>Check Type</th>
<th>Input Type</th>
<th>Status</th>
<th>Due Time</th>
<th>Reference Time</th>
<th>Lower Limit</th>
<th>Upper Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSPECT X-Ray Belts</td>
<td>Record transparency value.</td>
<td>AM</td>
<td>Text</td>
<td>In Progress</td>
<td>Thu, 28 Mar 2024 18:30:00 GMT</td>
<td>Wed, 27 Mar 2024 19:32:19 GMT</td>
<td>null</td>
<td>null</td>
</tr>
<tr>
<td>Bagger - Machine Speed</td>
<td>Record machine speed; must be in-range.</td>
<td>AM</td>
<td>Limits</td>
<td>In Progress</td>
<td>Thu, 28 Mar 2024 20:30:00 GMT</td>
<td>Wed, 27 Mar 2024 19:33:37 GMT</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>CLEAN Cartoner</td>
<td>Has cartoner been cleaned?</td>
<td>QA</td>
<td>T/F</td>
<td>In Progress</td>
<td>Thu, 28 Mar 2024 21:00:00 GMT</td>
<td>Wed, 27 Mar 2024 19:36:26 GMT</td>
<td>null</td>
<td>null</td>
</tr>
</tbody>
</table>
Check Execution
Reporting
Factory Setup

<table>
<thead>
<tr>
<th>Active</th>
<th>Workstation</th>
<th>Product 1</th>
<th>Product 2</th>
<th>Product 3</th>
<th>Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Station A</td>
<td>Corn Flakes</td>
<td>N/A</td>
<td>N/A</td>
<td>AM</td>
</tr>
<tr>
<td></td>
<td>Station B</td>
<td>Frosted Flakes</td>
<td>Froot Loops</td>
<td>N/A</td>
<td>QA</td>
</tr>
</tbody>
</table>

[Image of a factory setup interface with a table showing active workstations, products, and checklists.]
Check History

Check ID: 10, Execution time: Wed, 27 Mar 2024 2, Input value: , Reason code: 0, Operator ID: 1, Status: Failure
Check ID: 8, Execution time: Wed, 27 Mar 2024 2, Input value: , Reason code: 0, Operator ID: 1, Status: Failure
What’s left to do?

• Features
• Stretch Goals
  ▪ Export Checks as CSV
  ▪ Optimize Queries
• Other Tasks
  ▪ UI Overhaul
Questions?