

MICHIGAN STATE

UNIVERSITY

Beta Presentation

Next Gen Smart Factory

The Capstone Experience

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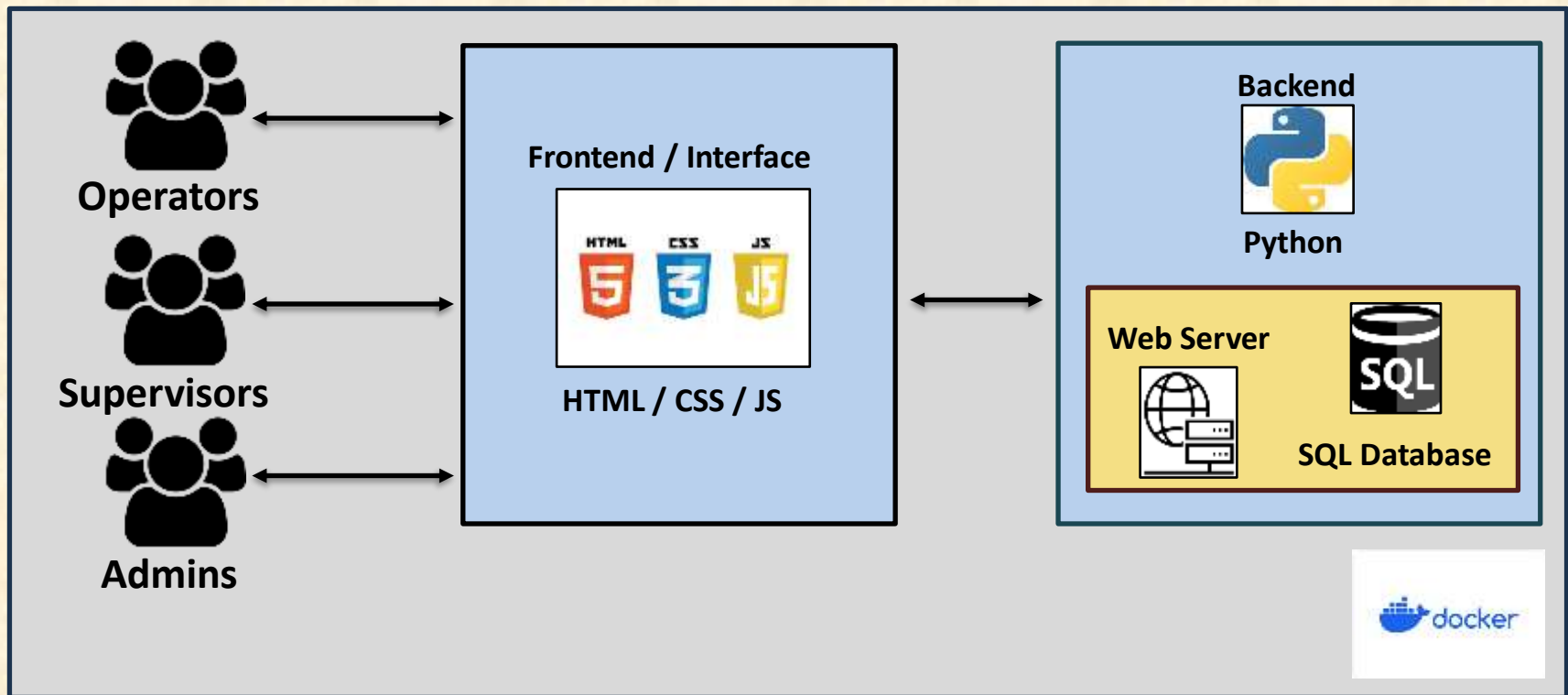
*From Students...
...to Professionals*

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



Check Creation

The screenshot displays the 'Create Checks Page' within the 'Smart Factory V1.0' application. The page header includes the 'SF Smart Factory V1.0' logo and a 'Max' button. Below the header, the 'WK Kellogg Co' logo and a 'Menu' button are visible. The main content area is titled 'Create Checks Page' and features a '+ Create New Check' button on the right. A 'Checklists' dropdown menu is set to 'All'. A table lists three existing checks with columns for Check Name, Check Description, Check Type, Input Type, Status, Due Time, Reference Time, Lower Limit, and Upper Limit.

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



Check Execution

The screenshot displays the 'Smart Factory V1.0' web application interface. At the top, the browser address bar shows 'wkkc.com/checkExecution'. The page header includes the 'SF Smart Factory V1.0' logo and a user profile 'Max'. Below the header, the 'WK Kellogg Co' logo and a 'Menu' button are visible. The main content area features a 'Status: Production' indicator and a '+ Add Manual Check' button. A search bar is present with the text 'Search for a check'. Below the search bar, there are filters for 'All (3)', 'Due (3)', 'Failed (0)', 'Upcoming (3)', 'Manual (3)', 'Closed (0)', and 'Retest (0)'. The main list of checks includes:

- INSPECT X-Ray Belts**: Record transparency value. Type:AM Type:Text. Due: Thu, 28 Mar 2024 18:30:00 GMT. Execute Check
- Bagger - Machine Speed**: Record machine speed; must be in-range. Type:AM Type:Limits. Due: Thu, 28 Mar 2024 20:30:00 GMT. Execute Check
- CLEAN Cartoner**: Has cartoner been cleaned? Type:QA Type:T/F. Due: Thu, 28 Mar 2024 21:00:00 GMT. Execute Check

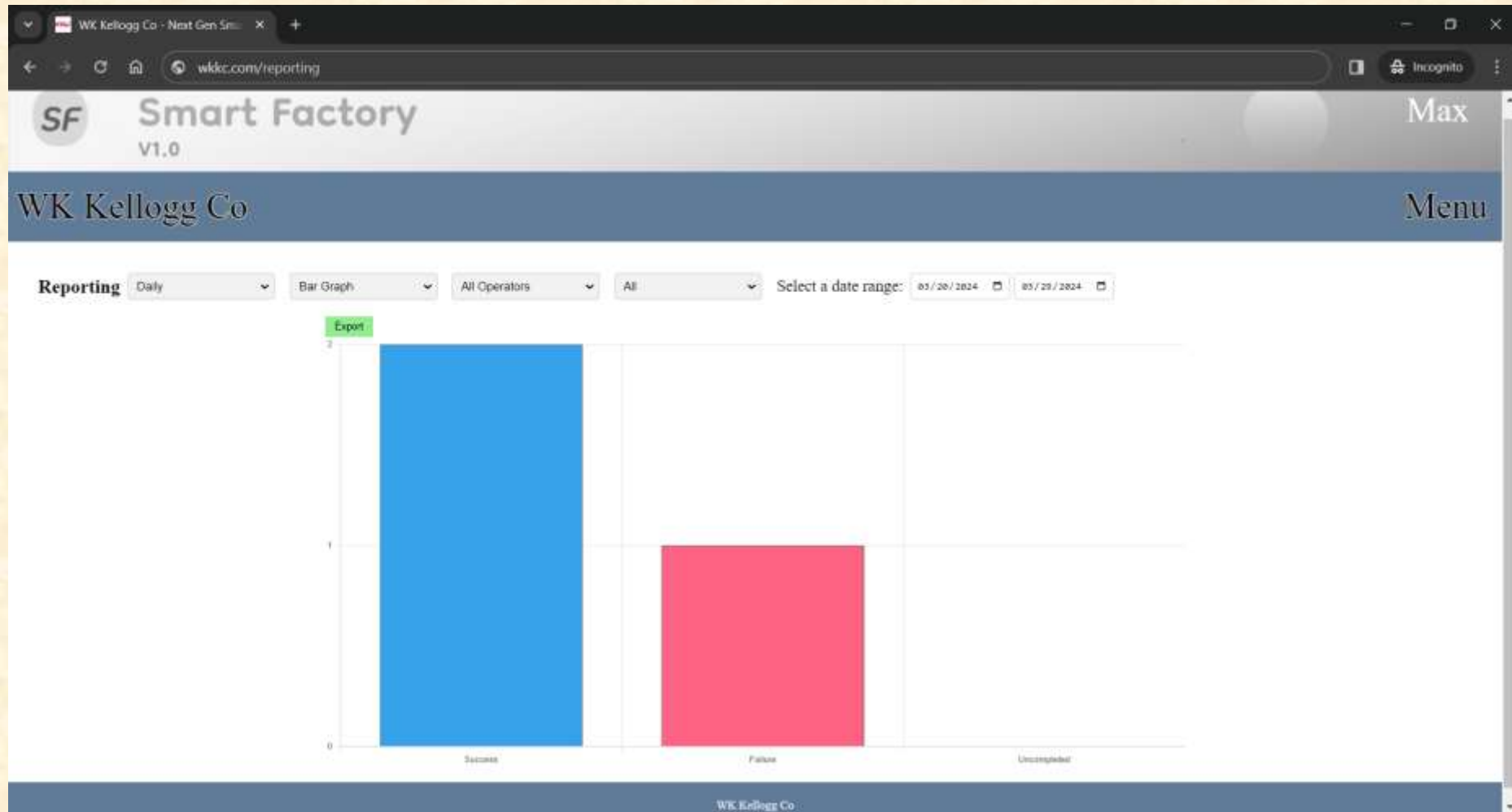
Summary statistics on the right side of the page:

- Open Checks**: 3. Sub-categories: Controlled (1), Standard (2).
- Closed Checks**: 0. Sub-categories: On Time (0), Completed Late (0).
- Compliance**: 100%. Sub-categories: Passed (1), Passed Retest (1), Failed (0).

The footer of the page contains the text 'WK Kellogg Co'.



Reporting



Factory Setup

The screenshot shows a web browser window with the URL `wkcc.com/setupFactory`. The page header includes the 'Smart Factory V1.0' logo and the name 'Max'. Below the header is a dark blue navigation bar with 'WK Kellogg Co' on the left and 'Menu' on the right. The main content area is titled 'Factory Setup' and contains two buttons: 'Configure Workstations' and '+ Add Workstation'. Below these buttons is a table with the following data:

Active	Workstation	Product 1	Product 2	Product 3	Checklist
<input checked="" type="checkbox"/>	Station A See Workstation Details	Corn Flakes	N/A	N/A	AM
<input checked="" type="checkbox"/>	Station B See Workstation Details	Frosted Flakes	Froot Loops	N/A	QA

At the bottom of the page, there is a dark blue footer with the text 'WK Kellogg Co'.

Check History

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wkkc.com/checkHistory

SF Smart Factory V1.0 Max

WK Kellogg Co Menu

Search by Check ID Start Date: 03/26/2024 End Date: 03/28/2024 Search by Operator ID Failure

Apply Filters

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

Check ID: 7, Execution time: Wed, 27 Mar 2024 2, Input value: 71, Reason code: 74, Operator ID: 1, Status: Failure

Check ID: 7, Execution time: Wed, 27 Mar 2024 2, Input value: 72, Reason code: 74, Operator ID: 1, Status: Failure

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What's left to do?

- Features
- Stretch Goals
 - Export Checks as CSV
 - Optimize Queries
- Other Tasks
 - UI Overhaul



Questions?

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