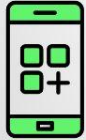


# Tomorrow's Engineers

## Cook Up A Fast-Food Application: Lessons From A Student Competition



# Speakers



**Mara Pillott**

Application  
Engineering Manager  
*Inductive Automation*



**Reese Tyson**

Sales Engineer III  
*Inductive Automation*

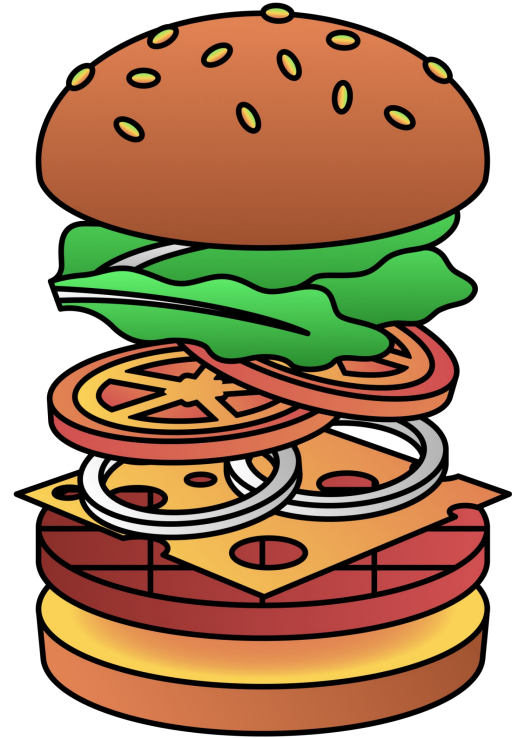


**Annabelle Haley**

Educational  
Engagement Program  
Specialist  
*Inductive Automation*

# Agenda

- Speaker Introductions
- Intro to Inductive Automation
- About the Educational Engagement Program
- The Student Build-a-Thon Project
- Q&A



# About Inductive Automation



Johnson & Johnson



Chobani

65%  
of Fortune 100

4k+  
Registered  
Integrators

140+  
Countries

22+  
Years In The  
Industry

DFW

FUJIFILM



Crate&Barrel



■ BASF





## The Unlimited Platform for SCADA and So Much More

- **Connect, Design, Deploy Without Limits:**
  - One central hub for everything on the plant floor
  - Create any kind of industrial application
  - Web-deploy clients to desktops, industrial displays & mobile devices
- **Unlimited licensing**
- **Industrial-strength security and stability**
- **Trusted by thousands of companies worldwide**



# Educational Engagement Program

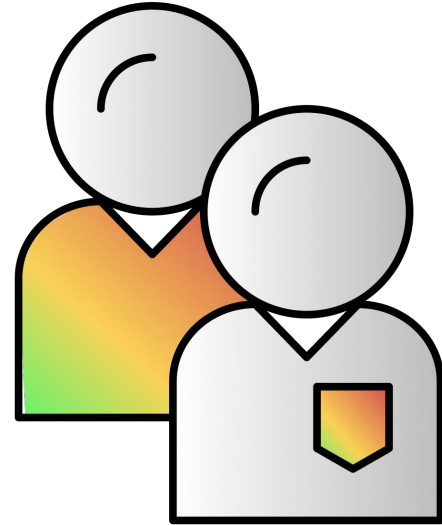
# Program Contacts

**Annabelle Haley**

Educational Engagement Program Specialist

**David Grussenmeyer**

Industry and Education Engagement Manager



General Inquiries - [edengagement@inductiveautomation.com](mailto:edengagement@inductiveautomation.com)

# Program Background

**Launched January 2020**

## Vision Statement

- To foster relationships in our local, national, and global communities by creating a bridge between industry professionals and educational institutions, promoting creativity and innovation through meaningful educational experiences with Ignition.

## Goal

- To get Ignition into the hands of as many students as possible.

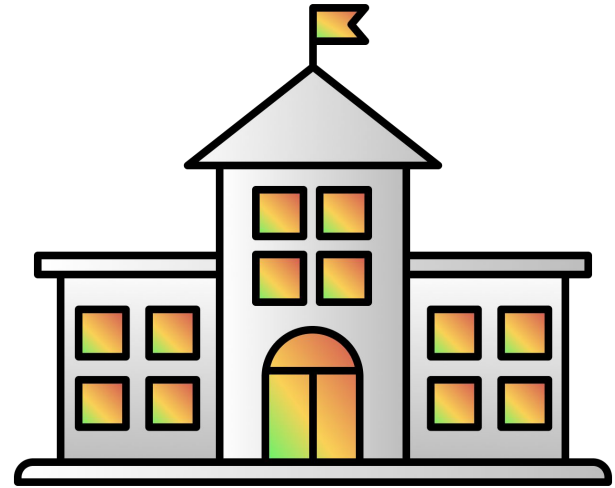




# Participating Institutions

**We have added over 50 new educational organizations just this year!**

- Nearly 300 educational organizations using Ignition
- 30+ countries with Ignition in academics
- Over 15 different academic programs
- 20 different educational research projects ongoing



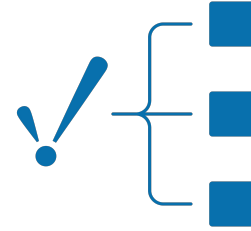
# Program Benefits



Educational Licensing



Curriculum Material



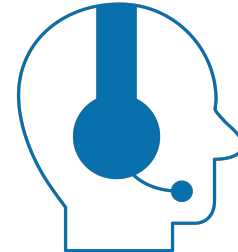
Free Certification Tests



Sales Engineering Support



Industry Connections



Active Communication & Guidance

BUILD A THON

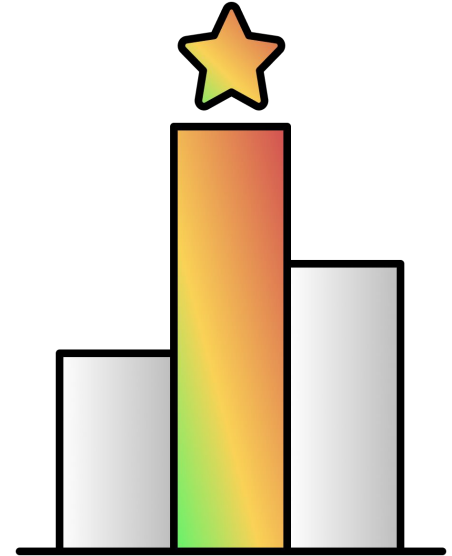


# Student Build-a-Thon Competition

# Competition Background

We couldn't let integrators have all the fun!

- Competition held remotely from Friday, April 25th to Monday, April 28th. Only 72 hours to build!
- Teams made up of 1-4 students actively enrolled in an academic institution
- One team member credentialed in Inductive University
- Project documents were sent out on Friday, with a twist specification sent out Sunday morning
- Tasked with building an interface for an automated fast food restaurant



# Competition Results

## Winning Team

- Clovis Crush from Clovis Community College in Fresno, California
- Team: Benjamin Shigeto Hallaway, Gurkaran Singh Sandhu, and Robert Voss,
- Faculty Sponsor: Matthew Graff

## Runner-Up

- Ignite from University of Kentucky in Lexington, Kentucky
- Team: Daniel Rodriguez
- Faculty sponsor: Jens Hannemann.

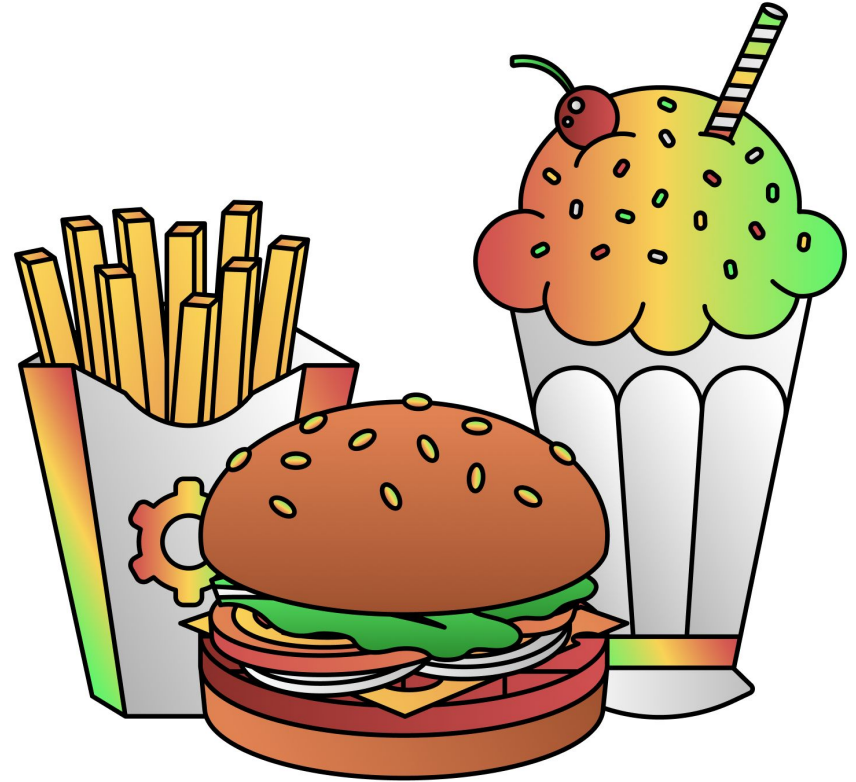


**Time for a technical deep dive on the winning project!**



# Project Details

- Fast Food Startup Theme
- 1 Project
- 5 pages
  - Order Interface
    - Burgers
    - Fries
    - Shakes
  - Inventory Management
  - Alarming
  - Trending
  - Navigation
- UDTs were provided



# A Twist

- Revenue Tracking
  - Sum revenue across all orders
  - Display and reset on Inventory Management



# Project Demo



# Judging

- 20% - Order Interface
- 15% - Inventory Management
- 10% - Trending
- 10% - Alarming
- 10% - Design and Color Scheme
- 5% - Mobile Responsiveness
- 10% - Security and User Role Configuration
- 10% - HMI Operability and Maneuverability(UI)
- 10% - The Twist



**Clovis Crush team scored a 24.5 points out of a possible 27!**

# Judging: Order Interface

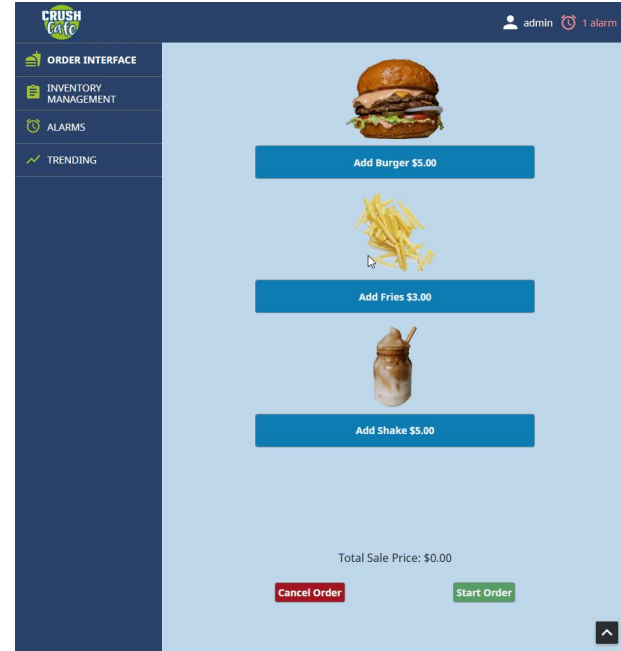
Points: 10/10

## Core Functionality

- Process for ordering
- Visualizing process for making the food
- “Let’s Eat!” button to reset the order screen
- Cost appropriately changes based on selection

## Additional Features

- Images for the food
- Inventory checks
- Easy to use UI





# Judging: Inventory Management

Points: 10/10

## Core Functionality

- Ability to edit inventory of items
- The Twist - Added all revenue items successfully

## Additional Features

- Icons used for inventory items
- Excellent use of grouping with border
- Easy to use UI

The screenshot shows the 'CRUSH Cafe' Inventory Management interface. The top navigation bar includes the logo, user 'admin', and '1 alarm'. The left sidebar has menu items: ORDER INTERFACE, INVENTORY MANAGEMENT (selected), ALARMS, and TRENDING. The main content area is divided into two sections: 'Inventory' and 'Revenue'.

**Inventory Table:**

Item Name	Quantity
Containers	10
Cups	10
Lids	0
Packaging	9

**Revenue Table:**

Item Name	Total Sold
Burgers	48
Fries	47
Shakes	55

**Total Revenue: \$630.00**

Buttons: Reset Revenue (red), Reset Inventory (green).

# Judging: Alarming

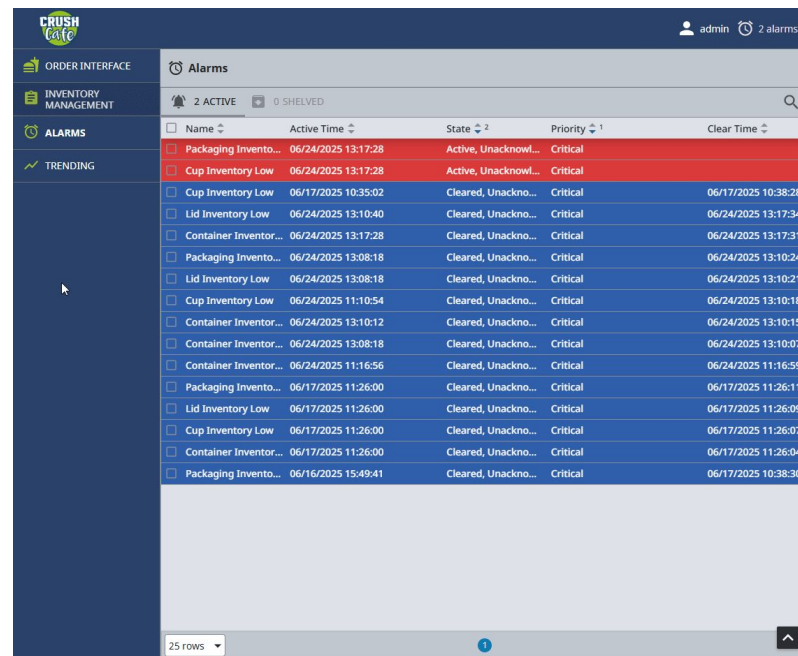
Points: 10/10

## Core Functionality

- Alarms set and visualized on each inventory tag
- Ability to interact with alarms
- Alarm Status Table takes up whole page

## Additional Features

- “Clear Time” added to columns on table



The screenshot shows the 'Alarms' section of the CRUSH Cafe system. The interface includes a sidebar with navigation options: ORDER INTERFACE, INVENTORY MANAGEMENT, ALARMS (selected), and TRENDING. The main area displays a table of alarms with columns for Name, Active Time, State, Priority, and Clear Time. There are 2 active alarms and 0 shelved alarms. The table lists various inventory items like Packaging Inventory, Cup Inventory Low, Lid Inventory Low, and Container Inventory, each with a specific active time, state (Active, Unacknowledged, or Cleared), and priority (Critical). A 'Clear Time' column is present for each row, indicating when the alarm was last cleared.

Name	Active Time	State	Priority	Clear Time
Packaging Inventory...	06/24/2025 13:17:28	Active, Unacknow...	Critical	
Cup Inventory Low	06/24/2025 13:17:28	Active, Unacknow...	Critical	
Cup Inventory Low	06/17/2025 10:35:02	Cleared, Unackno...	Critical	06/17/2025 10:38:28
Lid Inventory Low	06/24/2025 13:10:40	Cleared, Unackno...	Critical	06/24/2025 13:17:34
Container Inventor...	06/24/2025 13:17:28	Cleared, Unackno...	Critical	06/24/2025 13:17:31
Packaging Invento...	06/24/2025 13:08:18	Cleared, Unackno...	Critical	06/24/2025 13:10:24
Lid Inventory Low	06/24/2025 13:08:18	Cleared, Unackno...	Critical	06/24/2025 13:10:21
Cup Inventory Low	06/24/2025 11:10:54	Cleared, Unackno...	Critical	06/24/2025 13:10:18
Container Inventor...	06/24/2025 13:10:12	Cleared, Unackno...	Critical	06/24/2025 13:10:15
Container Inventor...	06/24/2025 13:08:18	Cleared, Unackno...	Critical	06/24/2025 13:10:07
Container Inventor...	06/24/2025 11:16:56	Cleared, Unackno...	Critical	06/24/2025 11:16:59
Packaging Invento...	06/17/2025 11:26:00	Cleared, Unackno...	Critical	06/17/2025 11:26:11
Lid Inventory Low	06/17/2025 11:26:00	Cleared, Unackno...	Critical	06/17/2025 11:26:09
Cup Inventory Low	06/17/2025 11:26:00	Cleared, Unackno...	Critical	06/17/2025 11:26:07
Container Inventor...	06/17/2025 11:26:00	Cleared, Unackno...	Critical	06/17/2025 11:26:04
Packaging Invento...	06/16/2025 15:49:41	Cleared, Unackno...	Critical	06/17/2025 10:38:30

# Judging: Trending

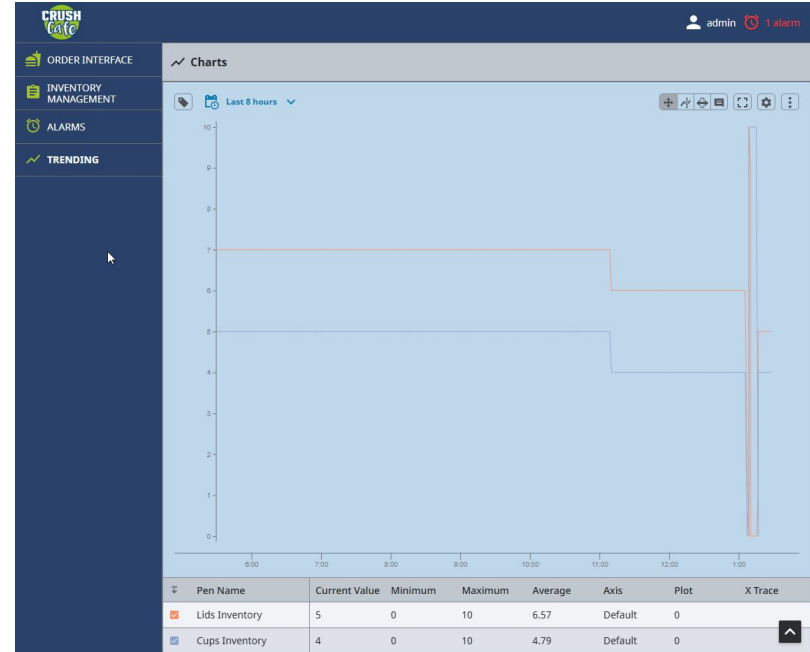
Points: 10/10

## Core Functionality

- Initializes with Cup and Lid Inventory levels
- Power Chart takes up whole page
- Have ability to add and remove other trends

## Additional Features

- Updated Pen name from the default tag path



# Judging: Design and Color Scheme

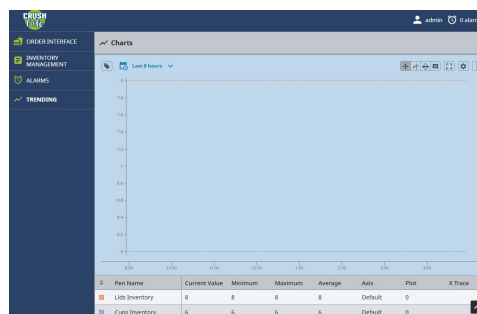
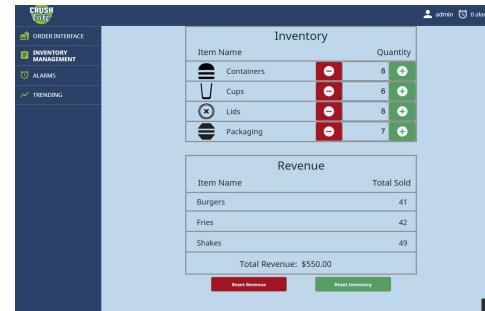
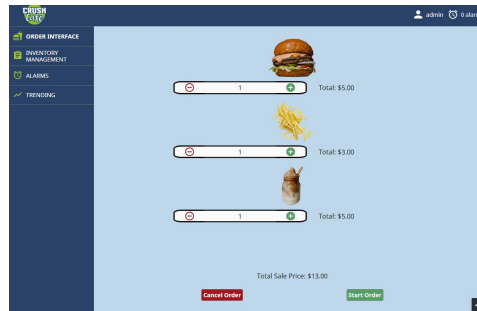
Points: 9/10

## Core Functionality

- Aesthetics
- Logo and Branding
- Intentional Design Features

## Additional Features

- Functional Colors
- Icons
- Tool Tips
- Style Classes



CRUSH CAFE

admin 0 alarms

ORDER INTERFACE

INVENTORY MANAGEMENT

ALARMS

TRENDING

Alarms

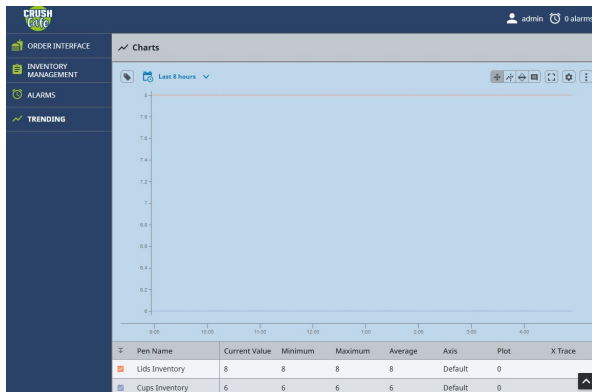
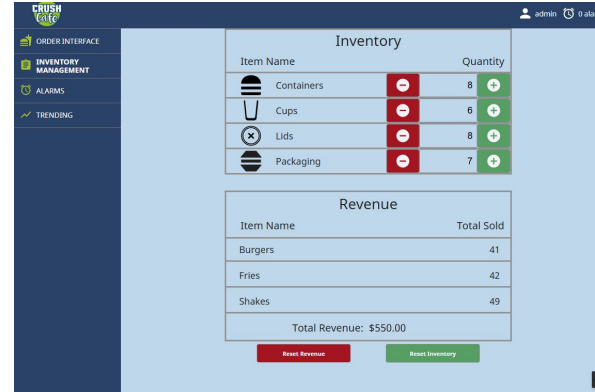
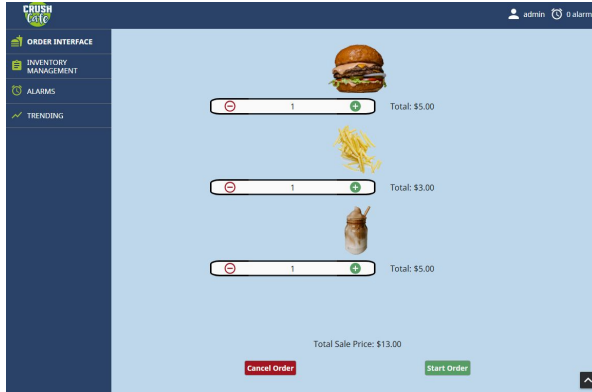
0 ACTIVE 0 SILENCED

Name	Active Time	State	Priority	Clear Time
Cup Inventory Low	06/17/2025 10:26:02	Cleared, Unacknowledged	Critical	06/17/2025 10:26:28
Packaging Inventory Low	06/17/2025 11:26:08	Cleared, Unacknowledged	Critical	06/17/2025 11:26:11
Lid Inventory Low	06/17/2025 11:26:08	Cleared, Unacknowledged	Critical	06/17/2025 11:26:09
Cup Inventory Low	06/17/2025 11:26:08	Cleared, Unacknowledged	Critical	06/17/2025 11:26:07
Container Inventory Low	06/17/2025 11:26:08	Cleared, Unacknowledged	Critical	06/17/2025 11:26:04
Packaging Inventory Low	06/16/2025 15:40:41	Cleared, Unacknowledged	Critical	06/17/2025 10:26:30

15 rows

# Judging: Design and Color Scheme

## Overall Aesthetics



The screenshot shows the 'ALARMS' section of the CRUSH Cafe system. It displays a table of active and shelved alarms. The table has columns: Name, Active Time, State, Priority, and Clear Time.

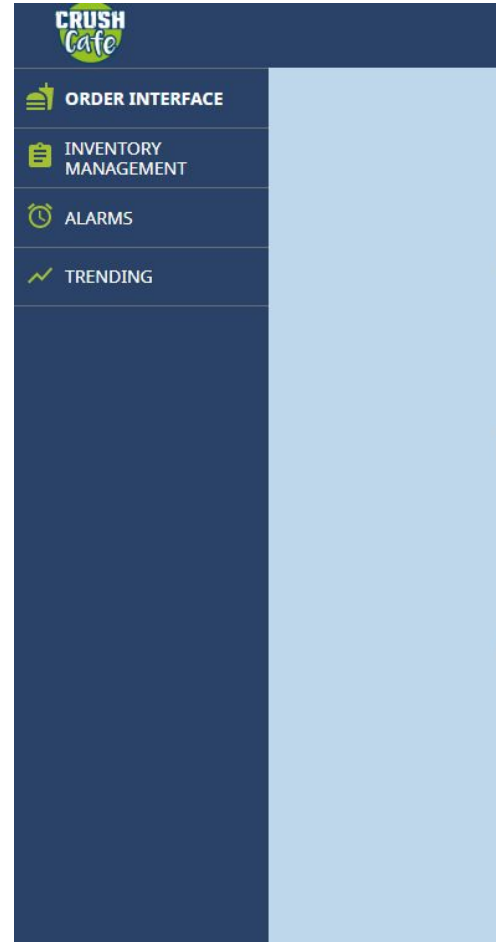
Name	Active Time	State	Priority	Clear Time
Cup Inventory Low	06/17/2025 10:35:02	Cleared, Unacknowl...	Critical	06/17/2025 10:38:28
Packaging Inventor...	06/17/2025 11:26:00	Cleared, Unacknowl...	Critical	06/17/2025 11:26:11
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Container Inventor...	06/17/2025 11:26:00	Cleared, Unacknowl...	Critical	06/17/2025 11:26:04
Packaging Inventor...	06/16/2025 15:49:41	Cleared, Unacknowl...	Critical	06/17/2025 10:38:30



# Judging: Design and Color Scheme

## Branding and Logo

- Consistent Brand Color
- Logo



# Judging: Design and Color Scheme

## Intentional Design













- Grid layout

## Additional Features

- Functional Colors
- Icons

## Missing

- Tool Tips
- Style Classes

Inventory				
Item Name				Quantity
 Containers			5	
 Cups			8	
 Lids			15	
 Packaging			10	

Revenue	
Item Name	Total Sold
Burgers	52
Fries	50
Shakes	57
Total Revenue: \$669.00	

Reset Revenue

Reset Inventory

# Judging: Mobile Responsiveness

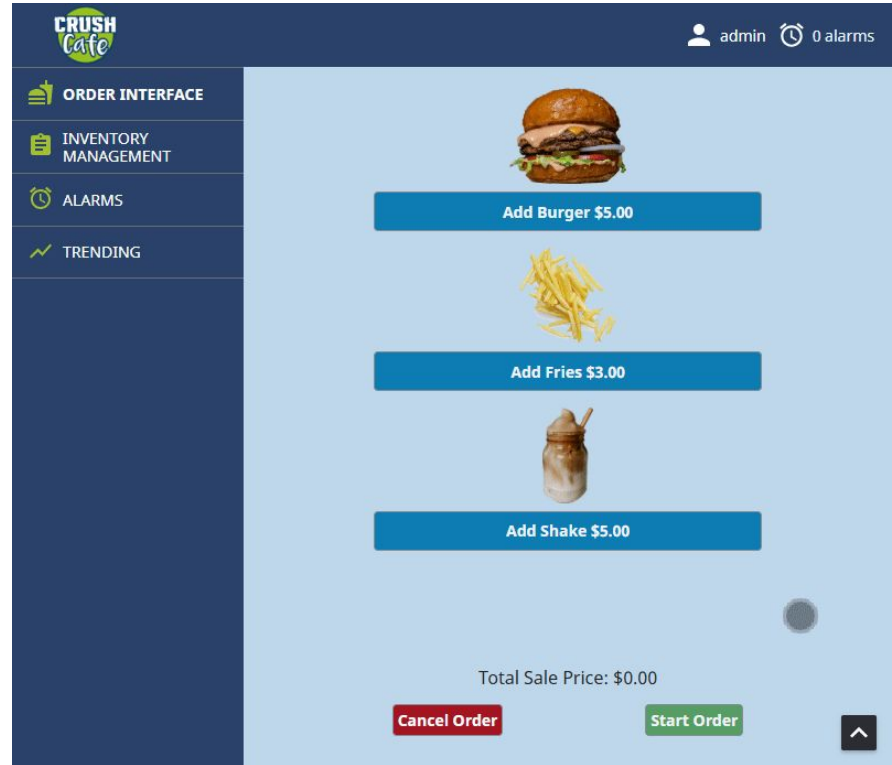
Points: 10/10

## Core Functionality

- Views are responsive

## Additional Features

- Views remain user friendly
- Wrapping used where needed
- Hidden Menu

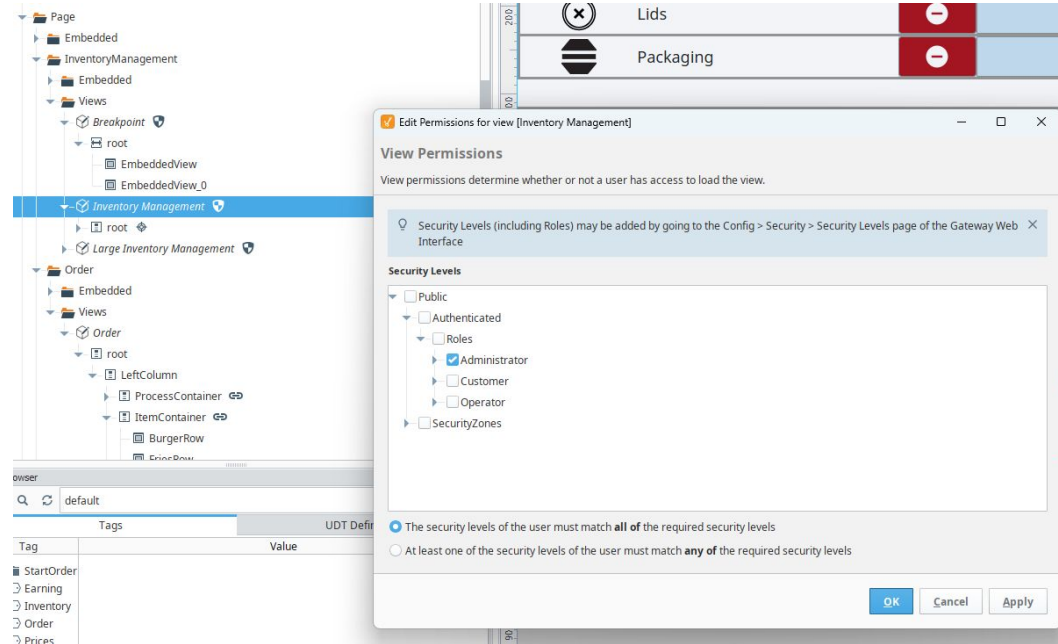


# Judging: Security and Roles

Points: 5/10

## Core Functionality

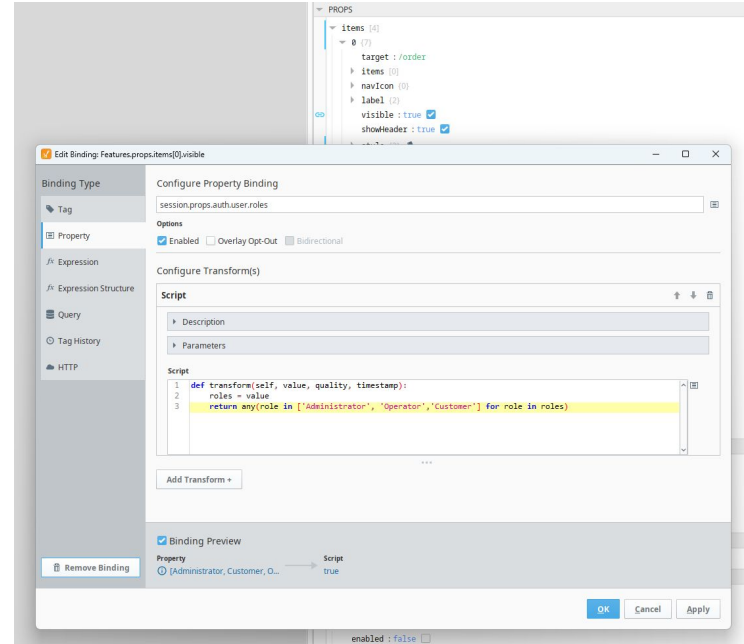
- Roles Configured
- Access is restricted according to role



# Judging: Security and Roles

## Role Based Security

- Hide or disable
- View Permissions





# Judging: The Twist

Points: 10/10

## Core Functionality

- Revenue Tracked Accurately

## Additional Features

- Separated by item

Revenue	
Item Name	Total Sold
Burgers	42
Fries	43
Shakes	50
Total Revenue: \$563.00	

Reset Revenue

Reset Inventory



**STUDENT**

**BUILD**

**A**

**THON**

Curious about the project specification? Check it out on the Ignition Exchange!



**Ready to Try Ignition for Yourself?**

Download the full version for free at:  
**[inductiveautomation.com](http://inductiveautomation.com)**



**[inductiveuniversity.com](https://inductiveuniversity.com)**

*Ignition User Manual also available at:  
**[docs.inductiveautomation.com](https://docs.inductiveautomation.com)***

# Ignition! Community Conference 2025

# LEVEL UP

A stylized bar chart graphic consisting of three vertical bars of increasing height. The first bar is blue, the second is green, and the third is yellow. They are positioned between the words 'LEVEL' and 'UP' in the 'LEVEL UP' text.

A New Era For Ignition, Its Community, and Its Conference!

September 16–18, 2025 in Sacramento, CA

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Contact International Distribution Manager Yegor Karnaukhov at: [ykarnaukhov@inductiveautomation.com](mailto:ykarnaukhov@inductiveautomation.com)



# Questions & Answers



Call us at: **800-266-7798** Email us at: [accountservices@inductiveautomation.com](mailto:accountservices@inductiveautomation.com)



For Inductive Automation Australia, call: **1300 10 8088**



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