



# Beta Presentation

## Audit Management System

The Capstone Experience

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Fall 2022



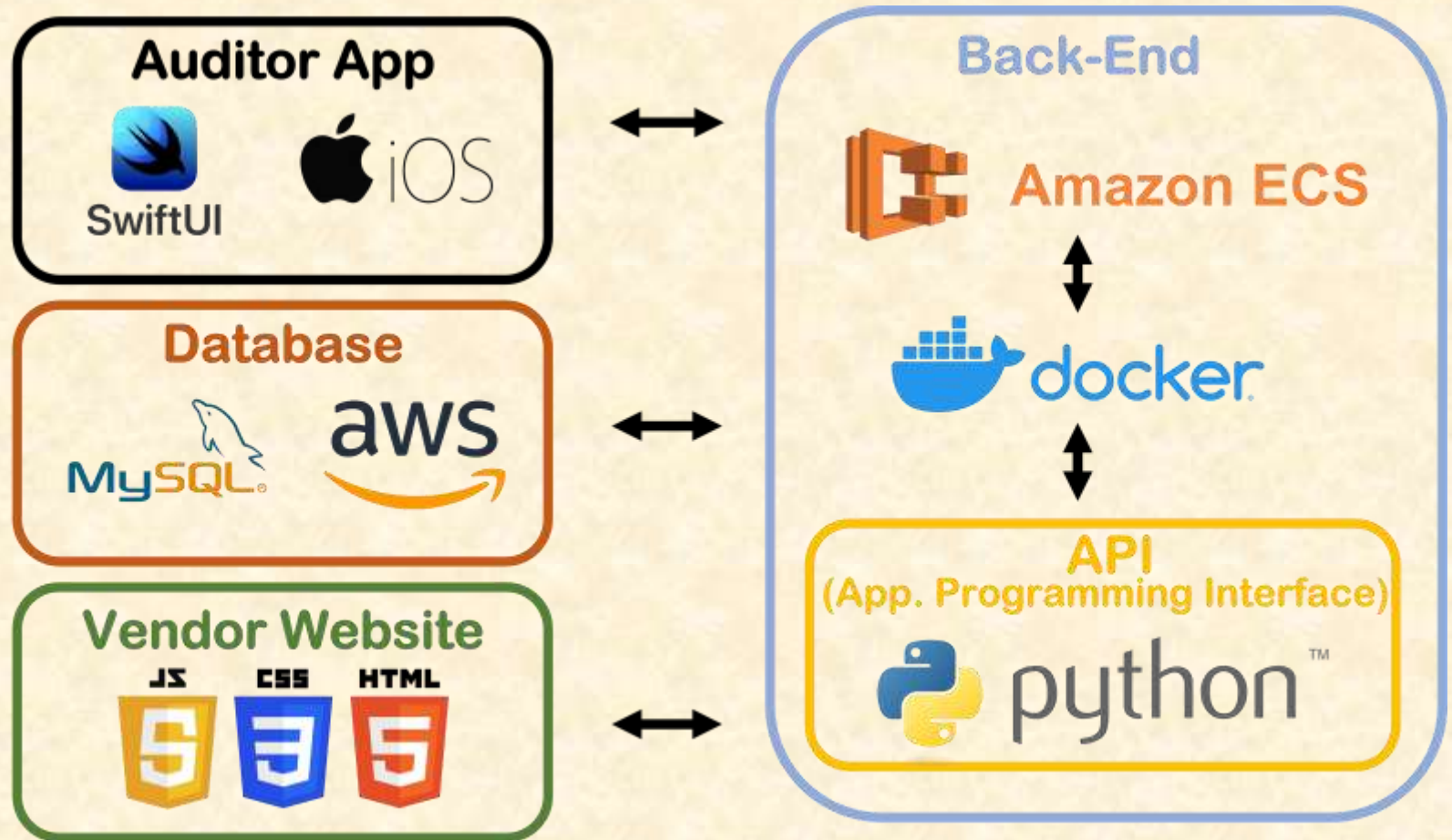
*From Students...  
...to Professionals*

# Project Overview

- Assist United Airlines to audit the companies that maintain and repair its airplanes more efficiently
- iOS App
  - Improvements on last semester's iOS app capabilities
  - Created new roles
- Website
  - Vendors of United Airlines can respond to audits
  - United Airlines admins can monitor / review audits



# System Architecture



# Audit Checklist

12:53 PM Fri Nov 11 100%

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## 019 Materials and Storage Checklist Review LG

### 1: Oxygen Generator Area

1.0 : Storage of Hazardous Material: Where segregation or separation of hazardous materials is required, were Non-compatible items stored apart? [GMM 07-15-05] [SCDOP 03-01-02]

☒ Yes ☐ No ☐ N/A

Comment:

2.0 : Storage of Oxygen Generators: Are oxygen generator bins painted red and have the prescribed warning labels and placards affixed? [GMM 07-15-05] [SCDOP 03-01-02]

☐ Yes ☒ No ☐ N/A

Risk Category: Observation

Comment:

**Vendor Response**  
Immediate Corrective Action  
"Fix emergency exit door"  
Root Cause Analysis  
"Emergency exit door cannot be opened"  
Preventative Action  
"Check new emergency exit door every day"  
Determine Other Areas Affected Action  
\*\*

3.0 : Shipments cleared through hot line. If shipment is forwarded directly to an aircraft, are shipments cleared with United Airlines Dangerous Goods Hotline? [GMM 7-15-05]

☒ Yes ☐ No ☐ N/A

Comment:

4.0 : Documentation Retention: Does Dangerous Goods shipment file include the required copies of the Dangerous Goods Checklist, Shipper's Declaration, Air Waybill, Pilot Notification and acceptance message from Hotline? [GMM 07-15-05] [SCDOP 03-01-02] [DGPM 05-05-01]

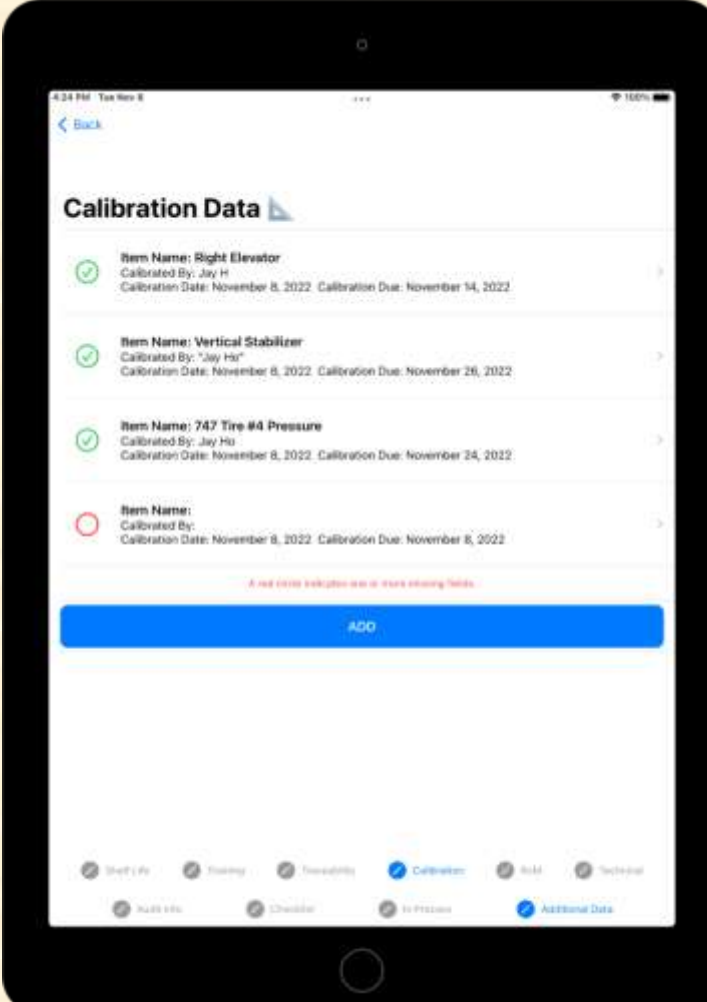
☐ Yes ☒ No ☐ N/A

Risk Category: Observation

Auto Save Checked In Progress Additional Data



# Audit's Calibration Data Table



4:24 PM Tue Nov 8 100%

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## Calibration Data

|   |   |   |
|---|---|---|
| ✓ | Item Name: Right Elevator<br>Calibrated By: Jay H<br>Calibration Date: November 8, 2022 Calibration Due: November 14, 2022        | ➤ |
| ✓ | Item Name: Vertical Stabilizer<br>Calibrated By: "Jay H"<br>Calibration Date: November 8, 2022 Calibration Due: November 26, 2022 | ➤ |
| ✓ | Item Name: 747 Tire #4 Pressure<br>Calibrated By: Jay H<br>Calibration Date: November 8, 2022 Calibration Due: November 24, 2022  | ➤ |
| ○ | Item Name:<br>Calibrated By:<br>Calibration Date: November 8, 2022 Calibration Due: November 8, 2022                              | ➤ |

A red circle indicates an item is missing or needs attention.

ADD

Shift's PC Training Troubleshooting **Calibration** Roll Technical  
Audit Info Checklist To Problem Additional Data



# Vendor Response to Issued Question

The screenshot shows a web browser window with the URL `UnitedAirlines/checklists/issuesonly`. The page header features the United Airlines logo and the text "Logged in as General Electric". A navigation bar includes links for "Home", "SelectAudit", "Checklists", and "Logout", along with a "Show whole checklist" button. The main content area displays "Audit ID: 2" and "Checklist ID: 2". The title of the checklist is "019 Materials and Storage Checklist Review LG". The specific question being addressed is "Question 2: Storage of Oxygen Generators: Are oxygen generator bins painted red and have the prescribed warning labels and placards affixed? [GMM 07-15-05] [SCDOP 03-01-02]". Below the question, there are several input fields for the vendor's response: "Auditor Comments:", "Immediate Corrective Action:" (containing the text "Fix emergency exit door"), "Root Cause Analysis:" (containing the text "Emergency exit door cannot be opened"), "Action to Determine If Other Areas Were Affected:", "Root Cause Classification (Select up to 4):" (with checkboxes for Lack of Communication, Stress, Pressure, Fatigue, Distractions, Complacency, Awareness, Lack of Assertiveness, Lack of Resources, Lack of Teamwork, Lack of Knowledge, and Norms), "Action Taken to Prevent Recurrence:" (containing the text "Check new emergency exit door every day"), and a "Save Response:" button.

Vendors - United Airlines Audits x +

UnitedAirlines/checklists/issuesonly

UNITED

Logged in as General Electric

Home SelectAudit Checklists Logout

Show whole checklist

Audit ID: 2  
Checklist ID: 2

## 019 Materials and Storage Checklist Review LG

**Question 2: Storage of Oxygen Generators: Are oxygen generator bins painted red and have the prescribed warning labels and placards affixed? [GMM 07-15-05] [SCDOP 03-01-02]**

1

Auditor Comments:

Immediate Corrective Action:  
Fix emergency exit door

Root Cause Analysis:  
Emergency exit door cannot be opened

Action to Determine If Other Areas Were Affected:

Root Cause Classification (Select up to 4):

- ☒ Lack of Communication
- ☒ Stress
- ☐ Pressure
- ☐ Fatigue
- ☐ Distractions
- ☐ Complacency
- ☐ Awareness
- ☒ Lack of Assertiveness
- ☐ Lack of Resources
- ☐ Lack of Teamwork
- ☐ Lack of Knowledge
- ☐ Norms

Action Taken to Prevent Recurrence:  
Check new emergency exit door every day

Save Response:  
Save



# United Airlines side on the website

The screenshot shows a web browser window with the address bar displaying "United Airlines Audits" and the URL "UnitedAirlines/UAuditInfo/2/3". The page features the United Airlines logo and a dark blue header. Below the header, a black bar indicates the user is logged in as "United Admin: hussamue". A navigation menu includes links for "Audit List", "Logout", "Audit Info", "Checklist", "In Process", "Shelf-Life Data", "Calibration Data", "Technical Data", "Traceability Data", "Training Data", and "Records of Maintenance". The main content area is titled "Airframe Major Maintenance Checklist 018 Rev 57". Under the "Audit Information" section, there are input fields for "Name" (Jaly), "Location" (DSF), "Audit Title" (Testing), "Audit Number" (1), "Vendor Name" (AMETEK), and "Vendor Number" (0110793001). A "Description:" label is followed by a large white text area. Below this, the "Audit Status:" section has radio buttons for "Open" (selected) and "Closed". A "Save" button is located at the bottom left, and the footer shows "© United Airlines 2022".

United Airlines Audits

UnitedAirlines/UAuditInfo/2/3

UNITED

Logged in as United Admin: hussamue

Audit List Logout

Audit Info Checklist In Process Shelf-Life Data Calibration Data Technical Data Traceability Data Training Data Records of Maintenance

## Airframe Major Maintenance Checklist 018 Rev 57

### Audit Information

Name: Jaly

Location: DSF

Audit Title: Testing

Audit Number: 1

Vendor Name: AMETEK

Vendor Number: 0110793001

Description:

Audit Status:

☒ Open

☐ Closed

Save

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# What's left to do?

- Stretch Goals
  - Additional Data (Website United Airlines side)
  - Sign Up User Interface improvement on iOS app
- Other Tasks
  - Improve showing the whole checklist (Website Vendor Side)
  - Update after saving so you do not need to select audit again (Website United Airlines side)





# Questions?

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