

**MICHIGAN STATE**  
**UNIVERSITY**

**Alpha Presentation**  
**Safety Reporting and QC Audit**  
**Center Mobile App**  
**The Capstone Experience**  
**Team United Airlines Airport Operations**

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

Department of Computer Science and Engineering  
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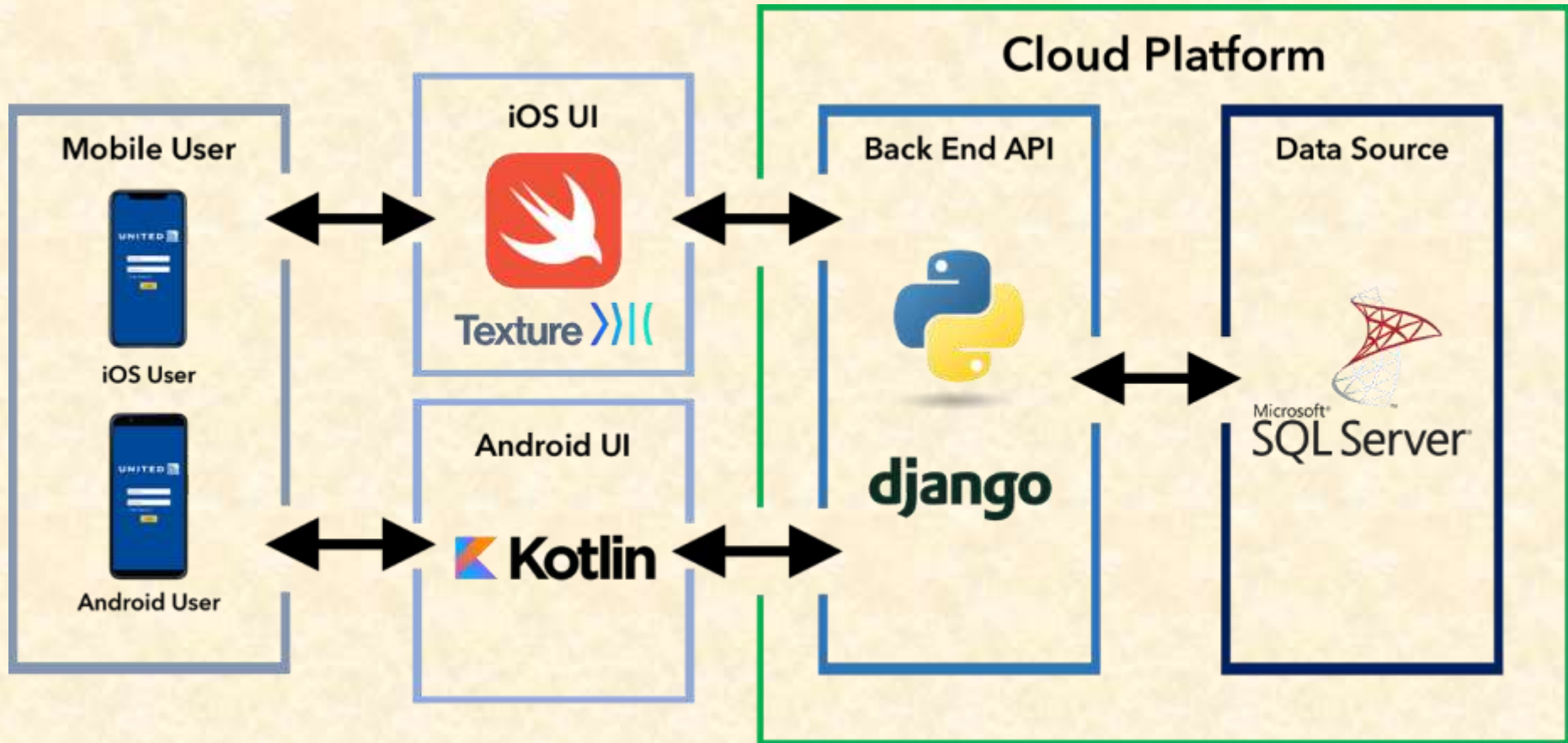
# Project Overview

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- Safety report forms require a computer to complete
- Quality control audits are filled out on paper and later entered in manually on a computer
- Both processes take extra time out of a user's work day
- Our mobile application allows users to track, manage, and submit forms in real time on the ground



# System Architecture



# GSAP Form

2:12 UNITED Logout

GSAP Form

Create New GSAP Form

- CHI 01:12 PM  
Expires in 1 hours
- CHI 01:12 PM  
Expires in 1 hours
- CHI 05:12 AM  
Expires in 6 hours
- CHI 02:12 AM  
Expires in 12 hours
- CHI 01:12 AM  
Expires in 13 hours

2:10 UNITED Logout

GSAP Form

Does this incident involve an aircraft?

Yes No

2:14 UNITED Logout

GSAP Form

Review and Submit

- Conditions ✓
- Incident Information ✓
- Narrative ✓

Submit

Save and Exit



# GSAP Fields

8:56 UNITED Logout

< GSAP Form

Conditions

Hours Awake Prior to Event  
8 hours

Hours on Duty Prior to Event  
5 hours

Phase of Operation  
Push-back

Incident Date (MM/DD/YYYY)

Month	Day	Year
January	16	2019
February	17	2020
March	18	2021

Local Incident Time (ex: 13:00)

Hour	Minute	AM/PM
7	54	AM
8	55	PM
9	56	

Shift  
Day

8:57 UNITED Logout

< GSAP Form

Narrative

Subject (Keywords)  
Brakes not removed before pushback

Narrative  
The runway personnel did not remove brakes from the wheels before the aircraft attempted pushback.

Do you have a suggested resolution to the event?  
No

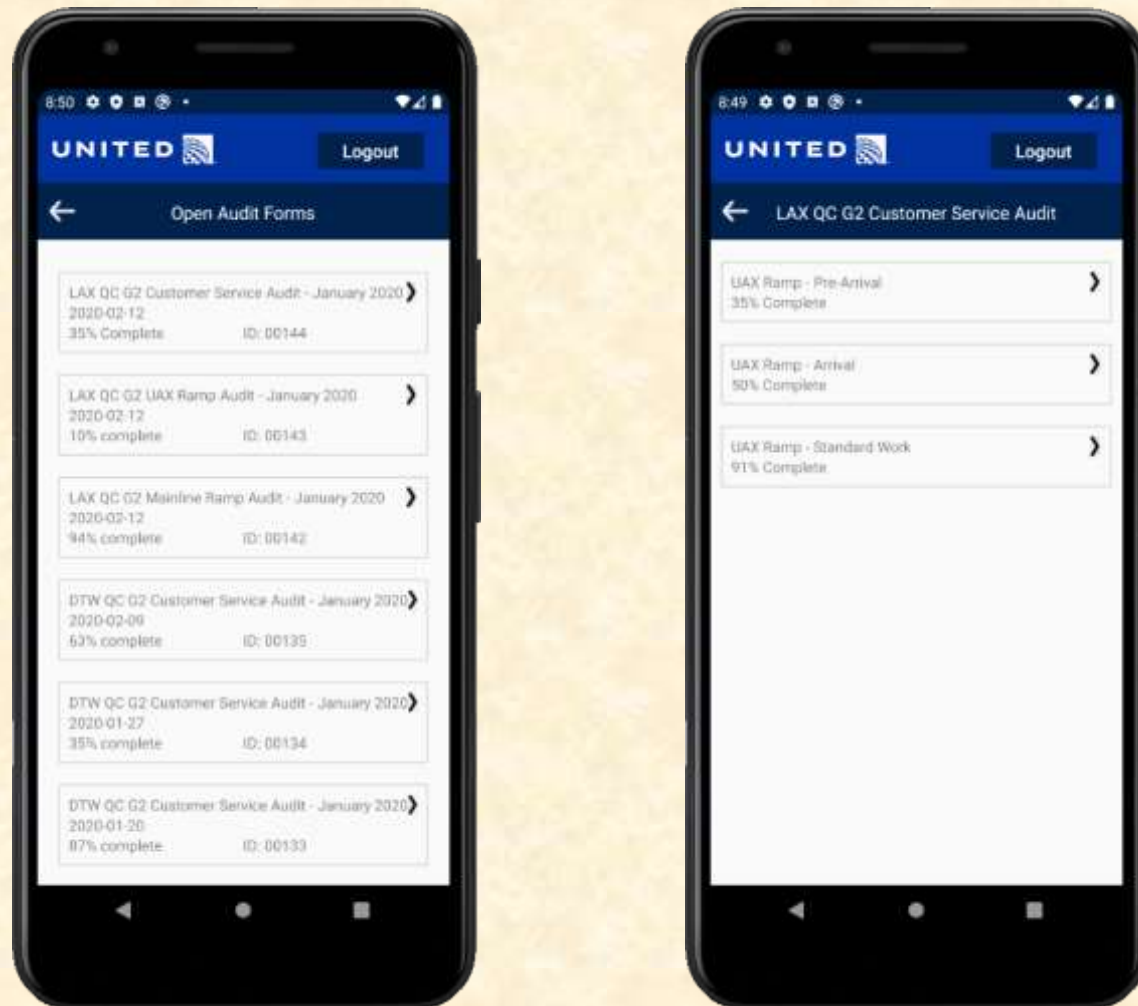
Attachment  
Delete Image  
Add Photo

Save and Continue  
Save and Exit

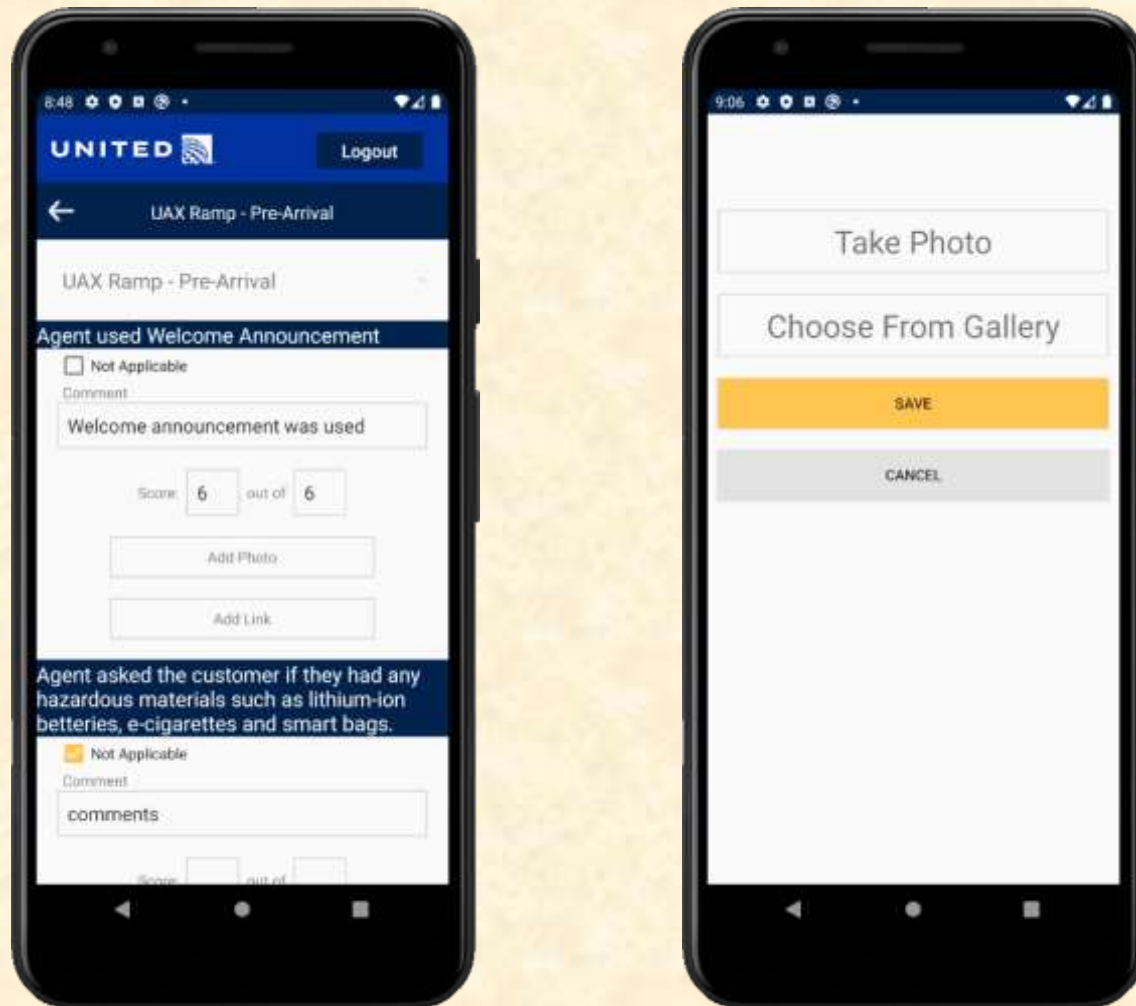




# QC Audit Form And Checklist Selection



# QC Audit Fields and Photo Upload



# What's left to do?

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- API Connection for QC Audit forms
- Saving and loading all forms
- Deleting expired GSAP forms
- Submitting GSAP forms
- Form instructional walkthrough





# Questions?

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