



Alpha Presentation

Training Scheduling and Optimization System III

The Capstone Experience

Team United Airlines Training

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

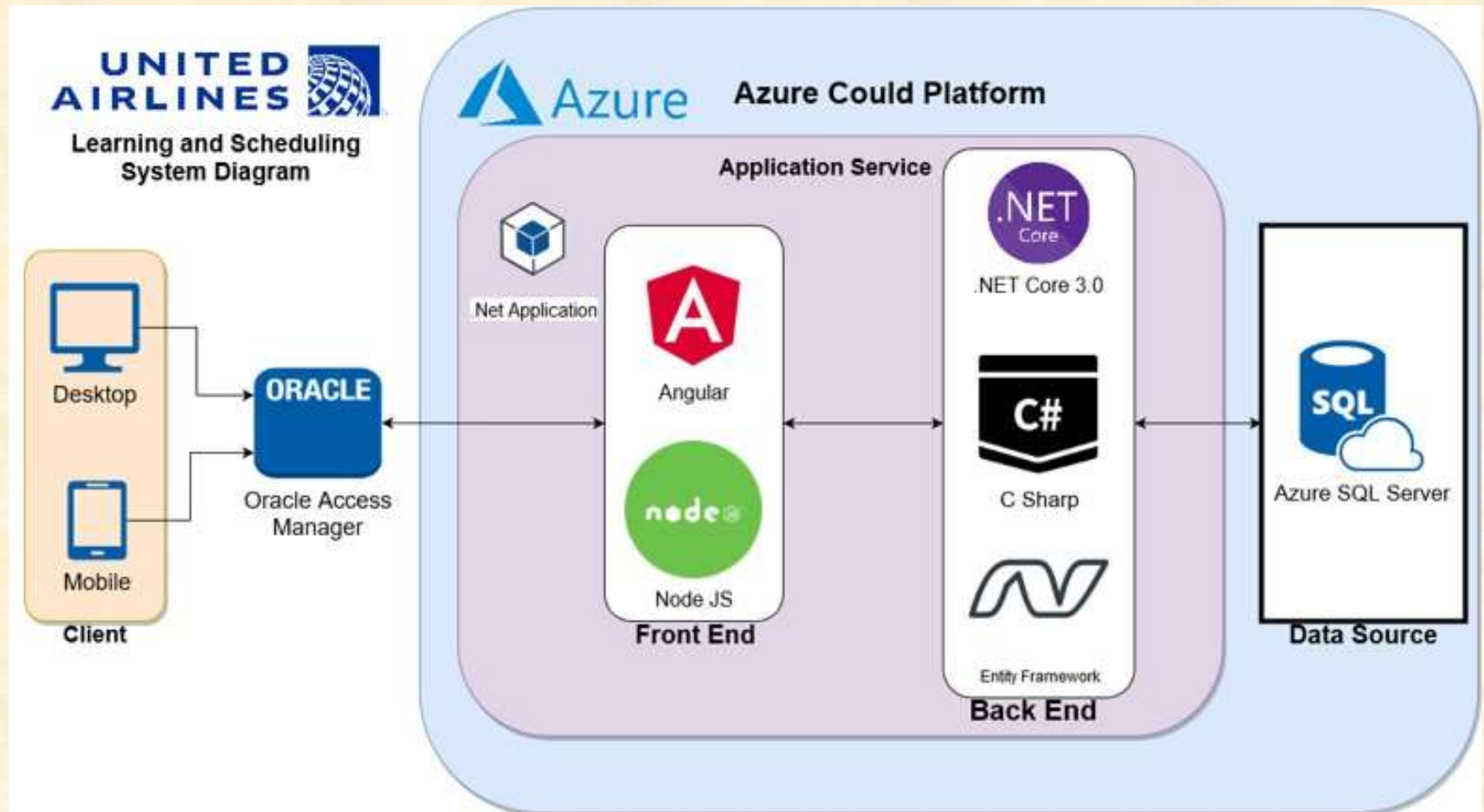
Department of Computer Science and Engineering
Michigan State University
Spring 2020

Project Overview

- Finalize the Learning Scheduling System from the 2 previous capstone teams
- Update back end to reflect United Airlines standards
- Add pages to improve scheduling workflow
- Build in future scalability with administrative pages
- Improve visibility into instructor time usage



System Architecture



OAM Login

The screenshot displays the OAM Login interface. The browser address bar shows 'localhost:5001/admin/courses'. The left sidebar contains a navigation menu with the following items: HOME, CALENDARS, COURSE SCHEDULE, SCHEDULE PLANNER, ADD A CLASS, SCHEDULE OPTIMIZER, CONFLICT OVERVIEW, TRAINING REQUESTS, COURSE CATALOG, EXCEPTIONS, INSTRUCTOR QUALIFICATIONS, ATTENDANCE, and ADMIN. The main content area shows a 'Course Search' bar and a table of courses. A modal window titled '1.Scheduler' is open, displaying a list of request headers.

Course Search

Export

Action	Course Code	Course Title
	37MD	737MAX Systems /
	37PNEU	B737NG Pneumatic
	37SA2	B737 Next Generation Systems (3 Week)
	37SA3	B737 Next Generation Systems (2 Week)
	44AES	B747-422 ACCESS Adv Ent Sys (was A08T1420)
	44APU	B747-400 APU Trouble Shooting (was A08T1490)
	44ENG	B747-400 Engine Systems and Trouble Shooting (was A00T1010)

1.Scheduler UNLOCK

Tab lock is active. CLICK TO UNLOCK TAB

Name	Value
Request Headers	
<input checked="" type="checkbox"/> Authorization	Basic [REDACTED]
<input checked="" type="checkbox"/> x-givenName	Lynda
<input checked="" type="checkbox"/> x-L	NHC
<input checked="" type="checkbox"/> x-manager	[REDACTED]
<input checked="" type="checkbox"/> x-middleName	A
<input checked="" type="checkbox"/> x-sn	McDaniel
<input checked="" type="checkbox"/> x-uid	[REDACTED]



Admin Page

The screenshot displays the 'Learning Scheduling System' admin interface. The browser address bar shows 'localhost:5001/admin/locations'. The page features a dark blue sidebar on the left with a 'UNITED' logo and a list of navigation links: HOME, CALENDARS, COURSE SCHEDULE, SCHEDULE PLANNER, ADD A CLASS, SCHEDULE OPTIMIZER, CONFLICT OVERVIEW, TRAINING REQUESTS, COURSE CATALOG, EXCEPTIONS, INSTRUCTOR QUALIFICATIONS, ATTENDANCE, and ADMIN. The 'ADMIN' link is highlighted, and the role 'Scheduler' is indicated at the bottom of the sidebar. The main content area has a top navigation bar with 'Users', 'Locations' (active), 'Rooms', 'Course', 'Booking', 'Cancellation Codes', 'Qualifications', and 'Status'. Below this is a 'Location Search' input field. The central section is titled 'Manage Locations' and includes an 'Export' button and an 'Add Location' button. A table lists existing locations with columns for Actions, Code, Point, Latitude, and Longitude. Each row includes edit and delete icons.

Actions	Code	Point	Latitude	Longitude
	AKL	false	-37.006491	174.78053
	BCN	false	41.297461	2.082758
	BDL	false	41.938482	-72.687886
	BOM	false	19.090736	72.862052
	BOS	false	42.367206	-71.011888
	CDG	false	49.009564	2.542839
	CHS	false	32.894862	-80.040101



Book a Room

Learning Scheduling System

localhost:5001/classroom-request

UNITED Learning Scheduling System Mcdaniel, Lynda

ClassRoom Request

Name: Fake User

Location: SFO

Number of People: 20 • 34

Reason/Comments: Any comment?

Phone: 5170000000

Feb 2020

From: 2/17/2020, 8:34 PM

To: 2/20/2020, 8:34 PM

Cancel Set



Book a Room

Learning Scheduling System x +

localhost:5001/classroom-request

Classroom Request

UNITED

HOME

CALENDARS

COURSE SCHEDULE

SCHEDULE PLANNER

ADD A CLASS

SCHEDULE OPTIMIZER

CONFLICT OVERVIEW

TRAINING REQUESTS

BOOK CLASSROOM

COURSE CATALOG

EXCEPTIONS

INSTRUCTOR QUALIFICATIONS

ATTENDANCE

ADMIN

REPORTS

Scheduler

Name: Fake User

Email: fakemail@address.com

Location: SFO

Date: 2/17/2020, 8:34 PM ~ 2/20/2020

Number of People: 5

Reason/Comments: Any comment?

-- select classroom --

- Bldg 47 , Room: 01
- Bldg 47 , Room: 02
- Bldg 47 , Room: 03
- Bldg 47 , Room: 04
- Bldg 47 , Room: 05
- Bldg 47 , Room: 06
- Bldg 47 , Room: 07
- Bldg 47 , Room: 08
- Bldg 47 , Room: 09
- Bldg 47 , Room: 10a
- Bldg 47 , Room: 10b
- Bldg 47 , Room: 11
- Bldg 47 , Room: 12
- Bldg 47 , Room: 14
- Bldg 47 , Room: 15
- Bldg 47 , Room: Mez
- Bldg 10 , Room: CRF01
- Bldg 47 , Room: 10R

-- select classroom --

Book a Room

Learning Scheduling System

localhost:5001/classroom-requests

UNITED Learning Scheduling System Mcdaniel, Lynda

HOME
CALENDARS
COURSE SCHEDULE
SCHEDULE PLANNER
ADD A CLASS
SCHEDULE OPTIMIZER
CONFLICT OVERVIEW
TRAINING REQUESTS
BOOK CLASSROOM
COURSE CATALOG
EXCEPTIONS
INSTRUCTOR QUALIFICATIONS
ATTENDANCE
ADMIN
REPORTS
Scheduler

Location

Classroom Schedule

View Request Request Classroom

Classroom Requests

#	Name	LocationCode	NumPeople	Phone	Email	StartDate	EndDate	Comment
1	FakeUser1	SFO	5	5170000000	fakeEmail@email.com	2020-02-25T12:05:00	2020-02-27T12:05:00	
2	NewUser2	HNL	6	5171111111	useremail@email.com	2020-02-18T14:25:00	2020-02-22T14:25:00	Testing...
3	testUser3	SFO	0	3333333	3333	2020-02-26T20:57:00	2020-02-27T20:57:00	nope



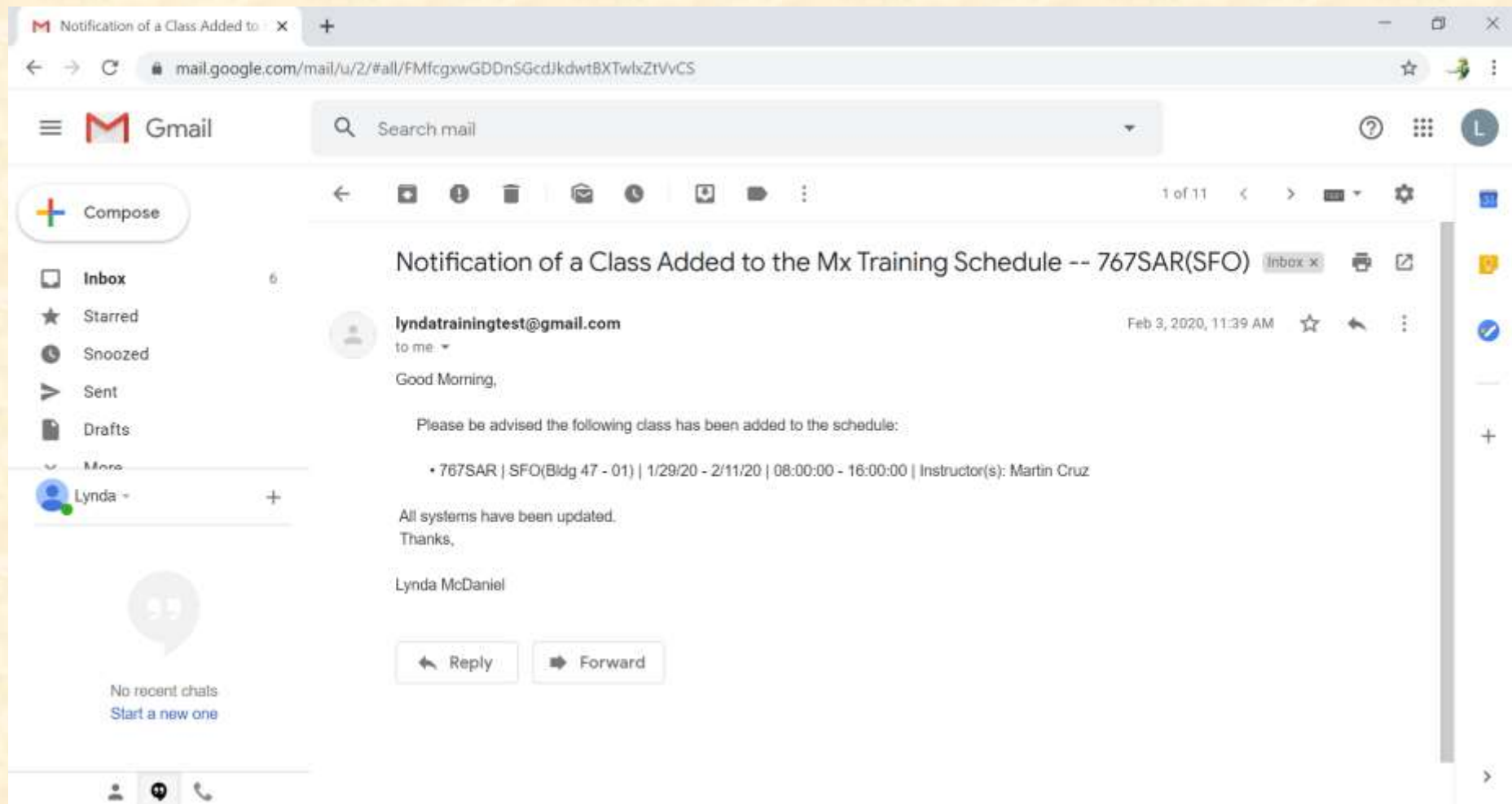
Qualification Report

The screenshot shows a web application titled "Learning Scheduling System" with a user profile "Modaniel, Lynda". The interface includes a sidebar menu with options like HOME, CALENDARS, COURSE SCHEDULE, SCHEDULE PLANNER, ADD A CLASS, SCHEDULE OPTIMIZER, CONFLICT OVERVIEW, TRAINING REQUESTS, COURSE CATALOG, EXCEPTIONS, INSTRUCTOR QUALIFICATIONS, ATTENDANCE, ADMIN, and REPORTS. The main content area displays the "Qualifications Report" with a table of instructor qualifications.

Instructor	Course Code	Course Title	Qualification	Date Last Taught
Adkins, Robert	TS20	Taxi/Engine Run Student A319/A320	Teach All	12/02/2019
Adkins, Robert	TS20	Taxi/Engine Run Student A319/A320	Teach All	10/15/2019
Adkins, Robert	ABENH	Airbus A319 A320 Enhancements	Teach All	12/02/2019
Adkins, Robert	ABENH	Airbus A319 A320 Enhancements	Teach All	10/15/2019
Adkins, Robert	WIFI	WIFI / GCS Equipped, Multi Fleet	Teach All	12/02/2019
Adkins, Robert	WIFI	WIFI / GCS Equipped, Multi Fleet	Teach All	10/15/2019
Adkins, Robert	AHMAB	Health Monitoring Airbus Company	Teach All	12/02/2019
Adkins, Robert	AHMAB	Health Monitoring Airbus Company	Teach All	10/15/2019
Adkins, Robert	A320LGC	LGC/IJ Crane Proximity Sensing Technology Testing/Troubleshooting	Teach All	12/02/2019
Adkins, Robert	A320LGC	LGC/IJ Crane Proximity Sensing Technology Testing/Troubleshooting	Teach All	10/15/2019
Adkins, Robert	A320TS	A319/A320 Troubleshooting Philosophy	Teach All	12/02/2019
Adkins, Robert	A320TS	A319/A320 Troubleshooting Philosophy	Teach All	10/15/2019



Email Notification



What's left to do?

- Full OAM integration
- Finish utilization reports and time tracking
- Track changes made to database (user records, previous schedules, etc.)
- Email template and integration into United Airlines networks
- Resolving optimizer issues
- Add page to import historical data



Questions?

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