

Curriculum and Instruction Doctoral Tracker DR2

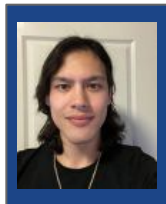
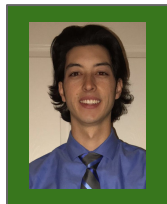
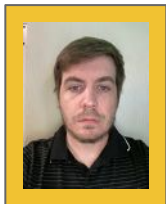
Team What's Up Doc



Introduction

Meet the Team:

- Adam Larson
 - Team Lead, connections and back end developer
- Brandon Shaffer
 - Repo manager, chief editor, front end developer
- Eddie Lipan
 - Front end developer
- Special thanks to mentor Daniel and CS Faculty Member Dr. Michael Leverington



Meet the Client:

- Dr. Gretchen McAllister, Ph.D., Coordinator of the NAU Curriculum and Instruction (C&I) doctoral program
 - Aided by Michele Benedict, Administrative Services Assistant

Problem Statement

As of Fall 2020, **3.1 million graduate students** attended universities across the United States. [1]

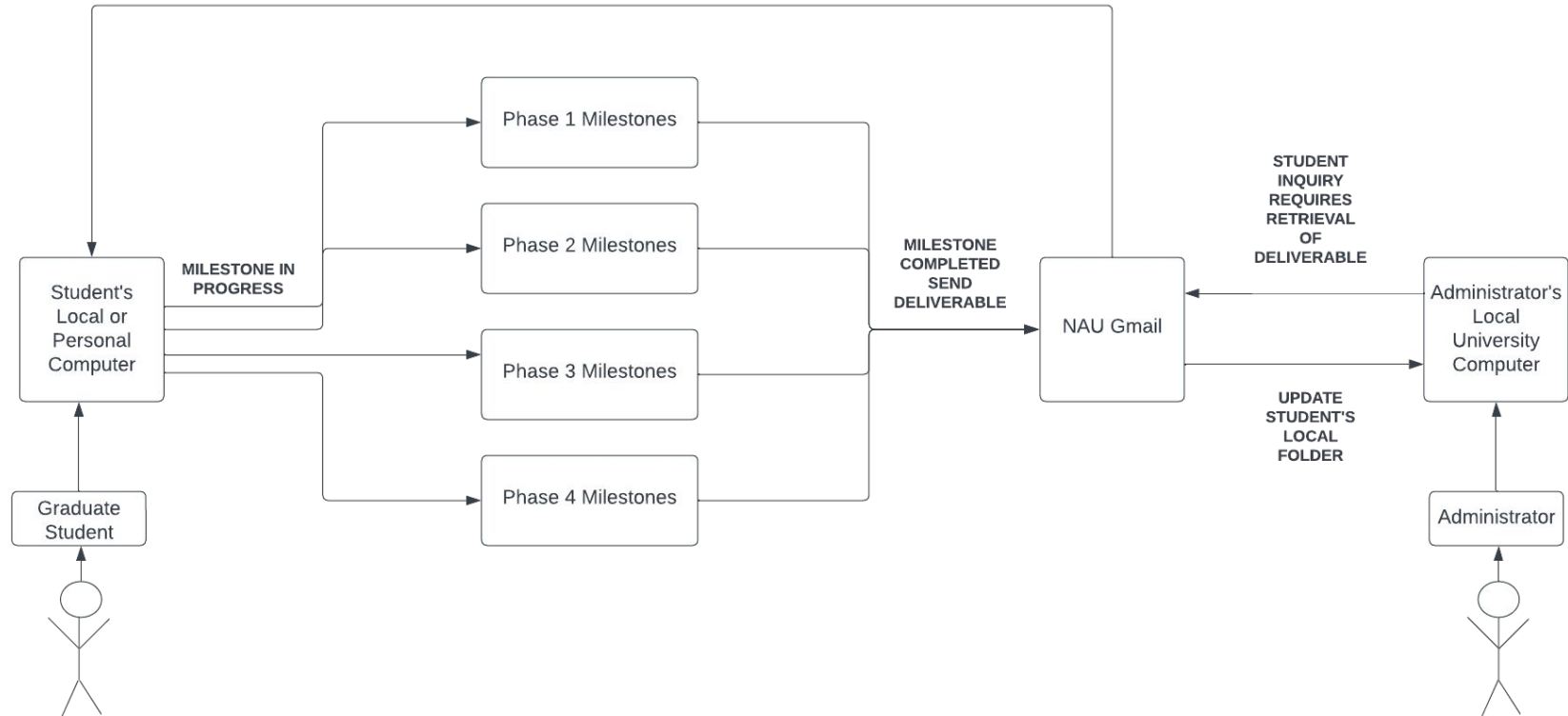
- **Learning Management Systems (LMS)** such as **Blackboard Learn** or **Canvas** are generally used to manage undergraduate classwork and grades.
- As graduate work becomes less quantifiable, managing and tracking the program through a standard LMS becomes less feasible.
- The NAU C&I doctoral program's current workflow is inefficient. Workflow outlined on next slide.

Blackboard
learn⁺

LAST ACTIVITY	GRADE
Jan 21, 2022 2:48 PM GRADED	765862
Feb 2, 2022 9:30 PM GRADED	13.00 /16
Feb 9, 2022 11:27 AM GRADED	12.00 /19
Feb 11, 2022 11:48 AM GRADED	20.00 /23
Jan 19, 2022 4:29 PM GRADED	20.00 /20
Feb 11, 2022 3:22 PM GRADED	 117.00 /125

[1] [National Center for Education Statistics - Postbaccalaureate Enrollment](#)

ADMIN REPLIES TO STUDENT INQUIRY

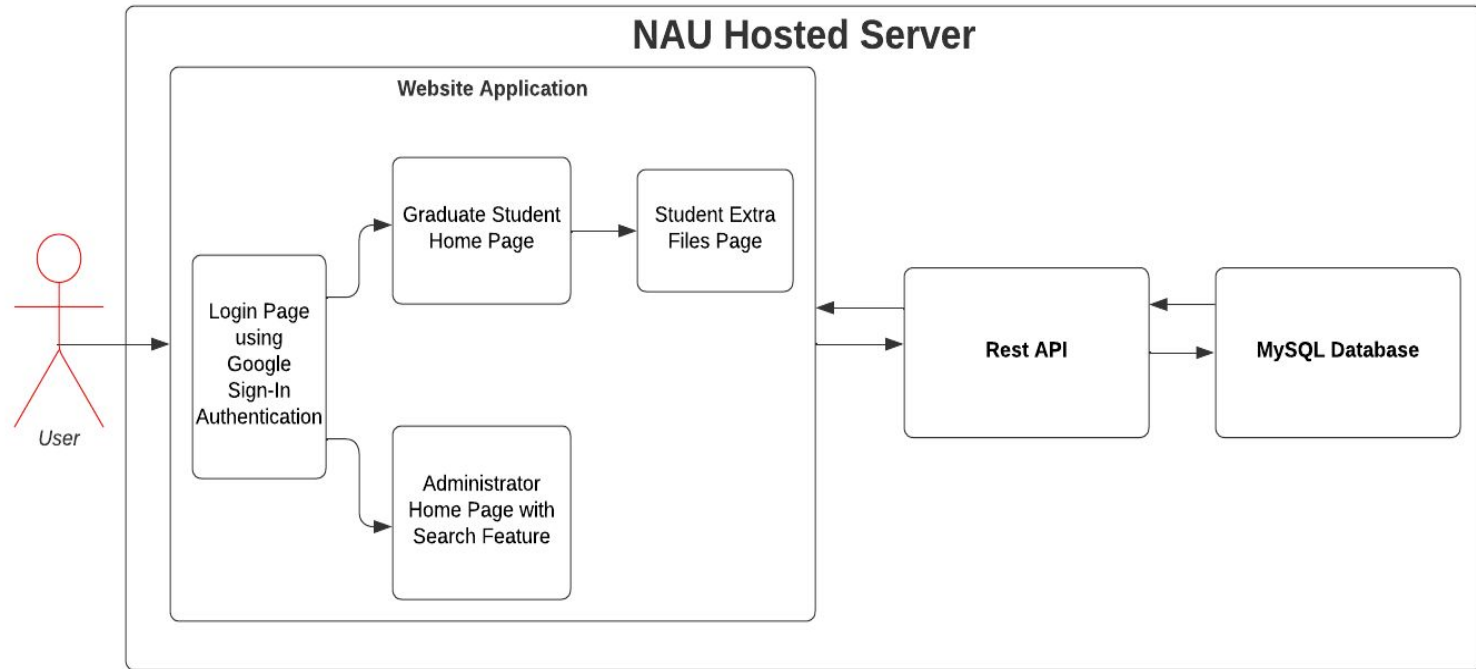


Solution Overview

- Organization
 - Student
 - Categories
- Searchable
 - Administration tool
- Student Access
 - Progress Tracker
- Redundancy
 - Backups

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Implementation Overview



Implementation Details

Web App

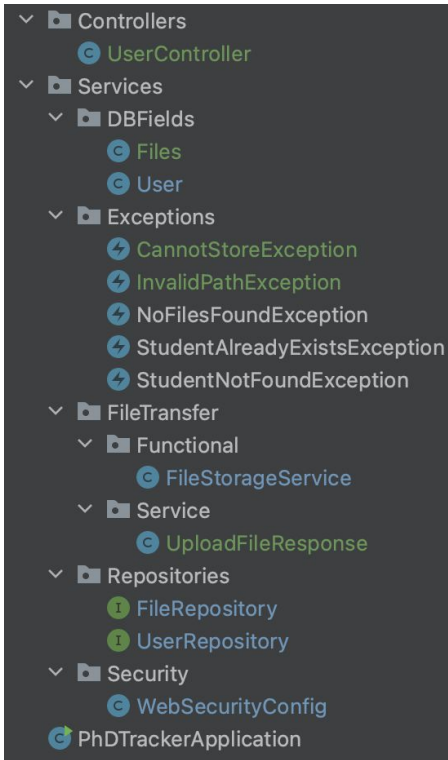
- HTML/CSS/JS
- Updates Dynamically
- Menu on left changes as files are uploaded
- Doctoral phases on top change as menu completes
- Large area is a preview placeholder

Phase 1: Coursework	Phase 2: Qualitative Research Project/ Comprehensive Exams	Phase 3: Proposal and Prospectus	Phase 4: Research and Dissertation
Qualifying Research Completion form: Completed 2/6/2020!	Qualifying Research Completion Form		
Comprehensive Exam Scheduling Form:			
Comprehensive Exam Results Form:			
Recommendation of Dissertation Committee Form (completed with chair):			
Graduate college letter confirming dissertation committee:			
Student Self-Evaluation 2 :			

Implementation Details

Rest API

- Spring Boot Java Framework
- Creates endpoints for web requests to send and receive data
- Data connectivity
 - Spring JPA (Java Persistence API) module
 - Automated SQL requests through a CRUD (create, read, update, delete) or JPA repository interface
- Security
 - Spring Security Module
 - Industry standard OAuth2 connections
 - Easily configured policy for endpoint data retrieval



Implementation Details

Database

- MySQL
- Two tables
 - User table holds general student/admin information and status
 - File table stores file data and user connections

```
[mysql> describe capstone.user;
```

Field	Type	Null	Key	Default	Extra
userNo	int	NO	PRI	NULL	auto_increment
userID	varchar(255)	NO		NULL	
first_name	varchar(255)	NO		NULL	
last_name	varchar(255)	NO		NULL	
admin	tinyint(1)	YES		0	

```
5 rows in set (0.00 sec)
```

```
[mysql> describe capstone.files;
```

Field	Type	Null	Key	Default	Extra
uploadID	varchar(36)	NO	PRI	NULL	
filename	varchar(256)	YES		NULL	
filetype	varchar(256)	YES		NULL	
data	longblob	YES		NULL	
upload_time	varchar(100)	YES		NULL	
userID	varchar(50)	YES	MUL	NULL	
uploaded_as	varchar(100)	YES		NULL	

```
7 rows in set (0.00 sec)
```

Challenges and Resolutions

Primary

- ITS Assistance
 - Resolution: None yet
 - Waiting for direction and sourcing options outside of school
- Technology
 - Resolution: Lots of research
 - Numerous tutorials, videos, and trial and error
 - Some commercial assistance

Secondary Challenges

- Maintaining requirements
 - Resolution: Limits on what we can do in remaining time
 - Many changing requests and additional desired functions or student feedback
- Client scheduling
 - Resolution: Accommodate as much as possible
 - Two effective clients working together makes scheduling more challenging
 - Meet when possible, even if one person isn't available

Schedule

C&I Doctoral Tracker

What's Up Doc

Team Members:

Adam Larson, Brandon Shaffer, Eddie Lipan

Project Start:

Sun, 8/28/2022

Display Week:

1

Adam Larson, Brandon Shatter, Eddie Lipan

Project Start:

1

Display Week:

1

						Aug 29, 2022				Sep 5, 2022				Sep 12, 2022				Sep 19, 2022				Sep 26, 2022				Oct 3, 2022				Oct 10, 2022				Oct 17, 2022																											
						29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
TASK	ASSIGNED TO	PROGRESS	START	END	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S								
Create Databases	Adam	100%	8/28/22	9/4/22																																																									
Initialize REST API	Adam	100%	8/28/22	9/7/22																																																									
API End Points	Adam	100%	8/28/22	9/12/22																																																									
API Security Policies	Adam	100%	9/5/22	9/19/22																																																									
API/DB File Storage	Adam	100%	9/19/22	10/5/22																																																									
Front End Operations																																																													
Initialize Website	Eddie	100%	8/29/22	9/18/22																																																									
Set Up Login System	Brandon/Adam	70%	9/19/22	10/2/22																																																									
Add Menu and Format	Eddie	75%	9/19/22	10/9/22																																																									
Migrate to ITS Server	Eddie	0%	9/26/22	10/30/22																																																									
Email Response	Brandon	15%	9/26/22	10/23/22																																																									
API Connection	Eddie	20%	10/3/22	10/23/22																																																									
Data Display Pages	Brandon/Eddie	30%	10/3/22	10/23/22																																																									
Account																																																													
Google Security Policy	Adam	100%	9/7/22	9/14/22																																																									
Google API connections	Adam/Brandon	70%	10/3/22	10/16/22																																																									
Data Filtering	Adam	10%	10/17/22	10/30/22																																																									
Finalization																																																													
API/DB Testing	Adam	40%	10/31/22	11/6/22																																																									
Web App Testing	Brandon/Eddie	0%	10/31/22	11/6/22																																																									
Full Deployment	Adam/Brandon/Eddie	0%	11/20/22	11/27/22																																																									

Conclusion

Team What's Up Doc is delivering an intuitive tracker, as a website application, to the NAU C&I doctoral program that will:

- Adhere to proper COE authentication and authorization
- Relieve administrators from data entry and acquisition duties
- Allow graduate students to track their progress through the graduate program



Thanks for watching!

