

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]

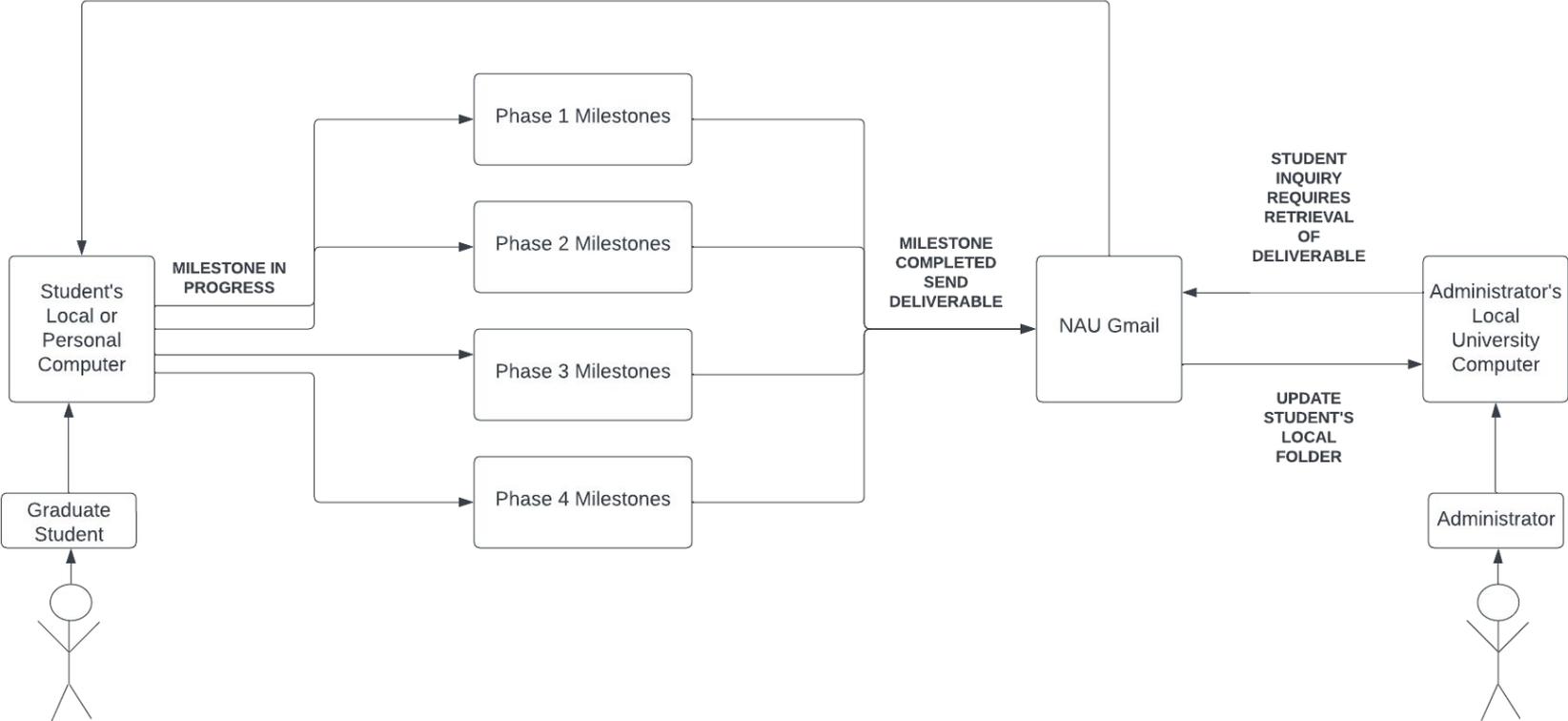
- **Learning Management Systems (LMS)** such as **Blackboard Learn** or **Canvas** are generally used to manage undergraduate classwork and grades.
- As graduate work becomes less quantifiable, managing and tracking the program through a standard LMS becomes less feasible.
- The NAU C&I doctoral program's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

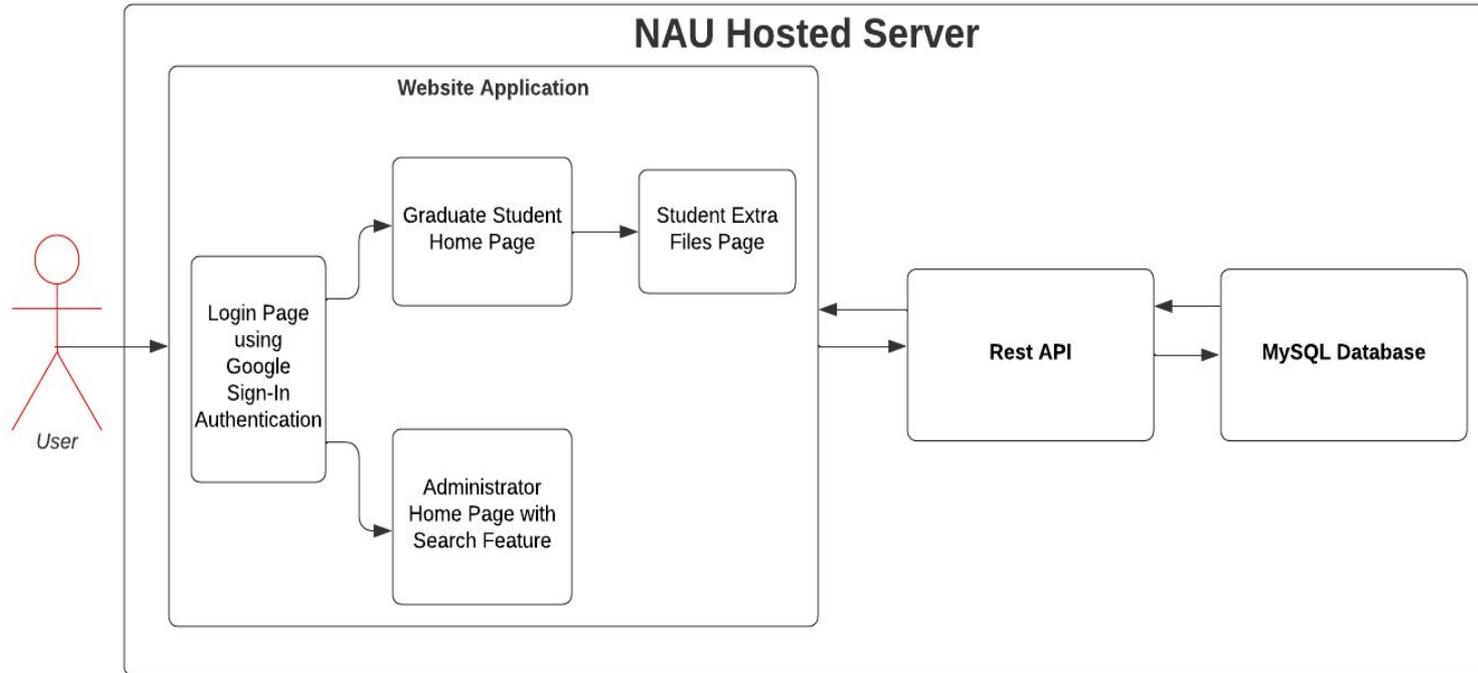


Solution Overview

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

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Implementation Overview



Implementation Details

Web App

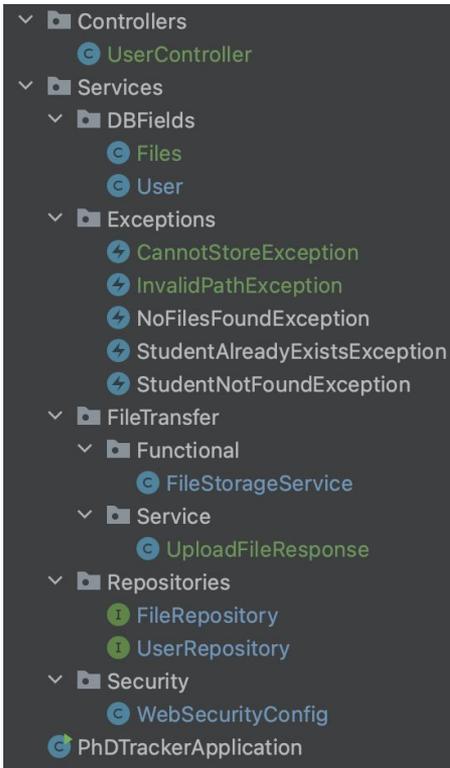
- HTML/CSS/JS
- Updates Dynamically
- Menu on left changes as files are uploaded
- Doctoral phases on top change as menu completes
- Large area is a preview placeholder

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

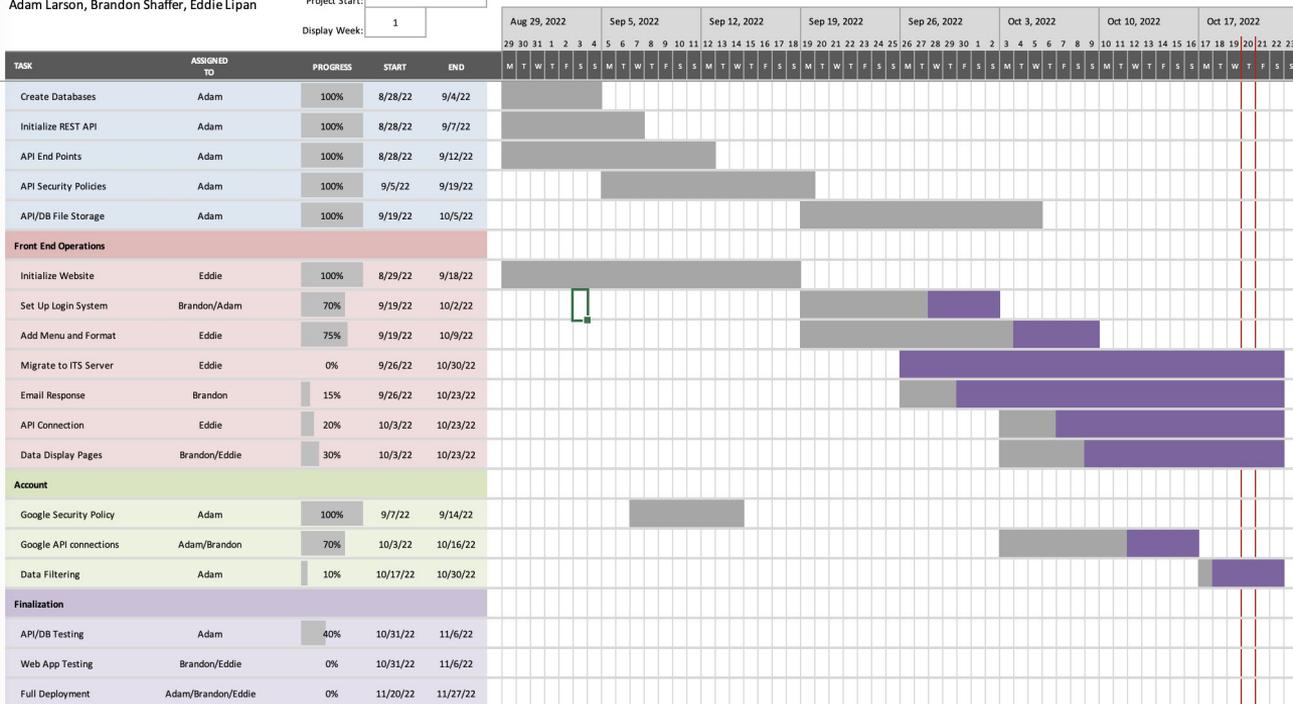
What's Up Doc

Team Members:

Adam Larson, Brandon Shaffer, Eddie Lipan

Project Start: Sun, 8/28/2022

Display Week: 1



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



Welcome to the Curriculum & Instruction Doctoral Tracker!

Sign In with your NAU gmail account:



Thanks for watching!

