Team Attendance

Deliverable 2

Team Members: Anthony Mosley, Michael Burns, Joey Haywood, Hayden Kanek, Aroum Zombra
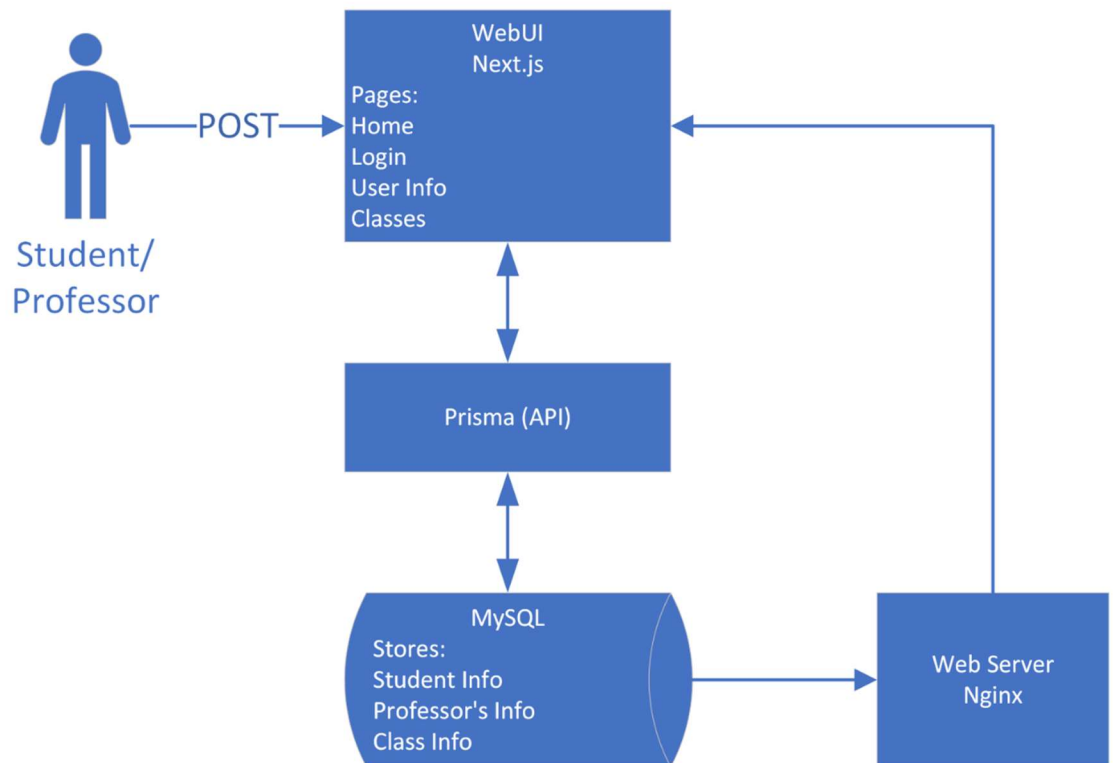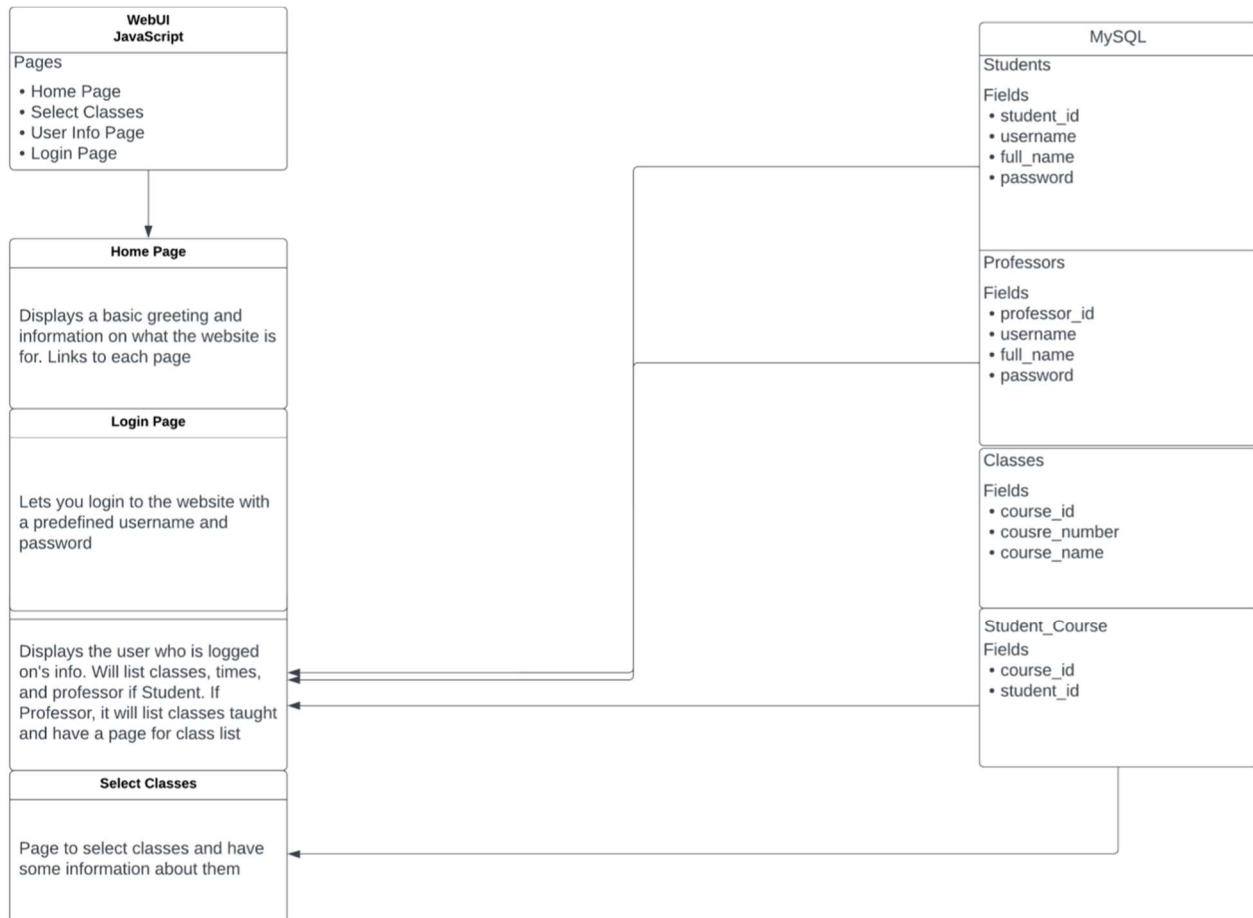
Chapter 1

Vision: A MyWCU type web app.

Features:

- For Students:
  - Able to see a details page that includes what classes they have, what time they are and what professors are teaching them. They are able to select classes on their first login with a given username and password. Plans to implement a meeting feature, where a professor makes a meeting that the students join and then give their id (username or actual id) to track attendance.
- For Professors:
  - Able to see a details page of classes they teach and what students are in them. Able to make a meeting, and then also plans to confirm

that a student attended the meeting.

WebUI
JavaScript

Pages

- Home Page
- Select Classes
- User Info Page
- Login Page

MySQL

Students

Fields
- student_id
- username
- full_name
- password

Professors

Fields
- professor_id
- username
- full_name
- password

Classes

Fields
- course_id
- cousre_number
- course_name

Student_Course

Fields
- course_id
- student_id

Home Page

Displays a basic greeting and information on what the website is for. Links to each page

Login Page

Lets you login to the website with a predefined username and password

Displays the user who is logged on's info. Will list classes, times, and professor if Student. If Professor, it will list classes taught and have a page for class list

Select Classes

Page to select classes and have some information about them

Chapter 2

Implementation: Utilizes Next.js (JavaScript), Prisma, Nginx, and MySQL

Main Purpose:

- Next.js: Uses for the frontend portion of the project. Broken into multiple pages that use Next.js' powerful page routing to allow us to have a multitude of pages. Used to have an individual page of each professor and student, a class list, add class page, etc.
- Prisma: Used as an API to connect to the MySQL database easily. Takes care of the queries for you, so less time is spent writing manual queries. Very powerful in making sure we can get the appropriate data from all the tables.
- Nginx: Webserver that is used as a reverse proxy to server content more easily
- MySQL: Used for the database. Hosts 5 tables as of now, and is being used for it's ease of making relational tables, which there will be a lot of for our project.

Chapter 3

Progress/Accomplishments:

Database: We have completed the tables needed for mySQL database including students, courses, and professors. Student/professor tables utilize id that auto generates a record when created, and a similar username to WCUPA with firstInitialLastInitialRandomNumbers. For the courses table, we have an id that auto generates a record when created, a name input which gets the name of the course, and professor name of who is teaching that course.

Frontend: We are utilizing Node.js for the WebUI. We are utilizing the Express framework for handling the backend, and React.js with Next.js for our frontend. The node modules contain all modules from the package.json. We have completed connecting the mySQL database Db.js to Node.js. We are also using App.js as a basic web application to show that it is running.

Webserver: We are still in progress with the webserver but have been successful so far with using nginx with the docker images. For design and interactions with the webserver, we will utilize Material UI or CSS.

Technical Difficulties / Challenges:

Our current goal from when we started the project has changed. Originally, we were going make a cloud based bus pass service around West Chester. We reached out to Transloc (the company who designed the WCU Shuttle app) to try to get access to their API's. If this would have worked out, we would've had current-time GPS data from the buses. Transloc threw us the cold shoulder, and didn't reach back out to us even with a no.

We then tried to expand the scope of our project, with a recommendation from Dr. Ngo. Our next idea was to make a larger scale buss bass idea for the Delco area using the SEPTA transit system API. We planned on making individual user accounts with different levels of access, such as student, commuting worker or government. We were able to find the SEPTA API on GitHub. The problem was that the API was outdated, and to get the data we would have to manually input all the routes. That would've taken a while, and we felt this was out of the scope of our capability.

We still wanted to create an application with the university in mind. Hence, we decided on a cloud-based class attendance system. We wanted to use a lot of the same technologies and programming languages, however most of our vision has changed. All of us had proficiency in different languages, and we are trying to implement the languages most compatible with each other. Our first idea for a database was to use MongoDB, but MySQL ended up working better with our front and backend.

Feasibility of Completion

We fully expect to complete the project by the due date. As of right now we have created a Python web scraper using Beautiful Soup to pull data from West Chester's website for course information, a MySQL database filled with student and professor information, , and WebUI utilizing Node.js. With all of these steps completed so far, the project should be done by the due date.

Data Creation

- Most of the data is created in the init.sql script.
  - Students/Professors: Creates some basic information

```sql
INSERT INTO
    `students` (`username`, `pass`, `fullName`)
VALUES
    ("AM01", MD5("J98xWOEEo"), "Anthony Mosley"),
    ("AZ02", MD5("oAm1yI8SQ"), "Aroum Zombra"),
    ("MB03", MD5("4aPJACpup"), "Michael Burns"),
    ("JH04", MD5("bVYFdjWB3"), "Joey Haywood"),
    ("HK05", MD5("4W6l9q9w3"), "Hayden Kanak");

INSERT INTO
    `professors` (`username`, `pass`, `fullName`)
VALUES
    ("TProfessor", MD5("Z14VdAlyK"), "Test Professor"),
    ("TProfessor2", MD5("9fbzmBWeL"), "Test Professor2"),
    ("TProfessor3", MD5("XS98PtClR"), "Test Professor3"),
    ("TProfessor4", MD5("XqetLj4bO"), "Test Professor4");
```

  - Courses: Inserts a list of classes that were scraped from the WCU course page

```sql
INSERT INTO
    `courses` (`course_number`, `course_name`)
VALUES
    ('CSC 112','Programming & Data Science'), --  1
    ('CSC 115','Introduction to Computer Programming'), -- 2
    ('CSC 141','Computer Science I'), -- 3
    ('CSC 142','Computer Science II'), -- 4
    ('CSC 220','Foundations of Computer Science'), -- 5
    ('CSC 231','Computer Systems'), -- 6
    ('CSC 240','Computer Science III'),-- 7
    ('CSC 241','Data Structures and Algorithms'),-- 8
    ('CSC 242','Computer Organization'),-- 9
    ('CSC 301','Computer Security & Ethics'),-- 10
    ('CSC 302','Computer Security'),-- 11
    ('CSC 317','Introduction to Digital Image Processing'),-- 12
    ('CSC 321','Database Management Systems'),-- 13
    ('CSC 331','Operating Systems'),-- 14
    ('CSC 335','Data Communications and Networking I'),-- 15
    ('CSC 336','Data Communications and Networking II'),-- 16
    ('CSC 345','Programming Language Concepts and Paradigms'),-- 17
```

Chapter 4

- Most of my attempts to connect the containers together were successful. I decided instead of defining static ip's I would define a hostname, then use that hostname within any files that needed it to reduce the number of hardcoded components.
- This is what the docker-compose.yml file ended up looking like:

```yaml
version: '3.8'

services:
  db:
    hostname: db
    build:
      context: ./database
      dockerfile: db.Dockerfile
    image: db
    container_name: db
    restart: always
    environment:
      $MYSQL_DATABASE: project
      $MYSQL_USER: user
      $MYSQL_PASSWORD: test123
      $MYSQL_ROOT_PASSWORD: test1234
    expose:
      - "3306"
    ports:
      - "3306:3306"

  webui:
    hostname: webui
    build:
      context: ./webui
      dockerfile: webui.Dockerfile
    image: webui
    container_name: webui
    depends_on:
      - db
    stdin_open: true
    tty: true
    ports:
      - "3001:3000"
    environment:
      $DATABASE_URL: mysql://remote:test1234@db:3306/project?schema=public
```

Anthony Mosley

Oxford, Pennsylvania

Contact Information

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Linkedin: linkedin.com/in/anthony-mosley-8b7a21168

Experience

Stoner Inc.

Junior Network Administrator/IT Support

May 2022 - Aug 2022/Dec 2022-Jan 2023

- Executed smaller tasks to aid the team with their projects
- Helped set up their new phone system (RingCentral)
- Assisted multiple departments with technology setup and issues
- Setup 30+ machines to be deployed across the company
- Worked with their servers to convert an old camera server into a virtual machine

Education

West Chester University of Pennsylvania

Bachelor of Science - BS, Computer Science

Aug 2020 - May 2024

Skills

- Systems Administration
  - Server Administration/Maintenance
  - Computer Networking
- Backend Development

- MySQL
- Nginx
- Software Engineering
  - Python
  - JavaScript

Michael Burns

Bath, PA 18014

Email: mburns0163@gmail.com

Phone: 484 892 0163

Work Experience

IT Technician

IT Edge - West Chester, PA

September 2022 to Present

- Configure all incoming client orders to IT Edge technology standards.

- Install devices with all required software and troubleshoot for any issues before getting ready for delivery.

- Troubleshoot and repair hardware and software for client equipment.

- Assist with on-site setup and configuration, as well as troubleshooting client issues.

- Contact clients with updates on repairs, and work towards the most effective solution.

- Document and enter all work done each shift.

Multiple Positions

Beck's Land and Sea House - Nazareth, PA

May 2017 to July 2022

Server:

- Take guests' orders with a positive and friendly attitude.

- Answer questions guests have about our menu and make recommendations.

- Have extensive knowledge of the menu and ingredients in the dishes.

• Prepare the dining room by polishing tables, silverware, vacuuming, and maintaining the general cleanliness of the restaurant.

Bartender

• Cut and juice fruit only needed for that shift to ensure the freshness and quality of the product.

• Prepare the bar for service by thoroughly cleaning, as well as ensuring there are enough liquor, beer, wine, and soft drinks stocked.

• Extensive knowledge of all drinks on and off our drink menu.

• Knowledge to be able to pair food and wine together.

• Create weekly drink specials with other bartenders and management.

Education

West Chester University of Pennsylvania - West Chester, PA

Bachelor of Science – BS, Computer Science

January 2022 to Present

Northampton Area Community College - Bethlehem, PA

Applied Associate of Science – AAS, Information Technology

September 2019 to December 2021

Northampton Area High School - Northampton, PA

High School Diploma

September 2015 to June 2019

Skills

• Computer Operation

• Microsoft Office

• C++ (1 year)

• Computer networking (2 years)

- Java

- Computer Science

- HTML5

- C/C++

- Technical support

- Software troubleshooting

Joseph Haywood

Quakertown, PA 18951

Email: joey.haywood49@outlook.com

Phone: 267-347-0880

Experience:

August 2020-Present

Intelligence Sergeant (35F10), Pennsylvania Army National Guard

S2 Staff Section, 56th Stryker Brigade Combat Team

- Accountable of all section equipment and vehicles
- Assists with physical security protocols and handling of classified materials
- Supports junior enlisted soldiers in military and civilian careers

October 2016-August 2020

Intelligence Analyst (35F), Pennsylvania Army National Guard

Deployed to Poland in S2 Staff Section, 278th Armored Cavalry Regiment March 2019-March 2020

- Handled classified material on daily basis
- Performed maintenance checks on vehicles and equipment
- Created and briefed mission sensitive reports to Squadron Commander and NATO Allies
- Reviewed and updated SCAR (security clearance access roster)

March 2018-March 2019

Checkout Coach, Giant Food Stores

Customer service representative and front-end team leader

- Handled thousands of dollars in cash office deposits and withdrawals
- Utilized POS (point of sale) system to support associate and customer needs

Education

August 2020 – May 2024

B.S. Computer Science & Minor in Applied Statistics

West Chester University   **GPA: 3.54**

October 2017 – February 2018

Intelligence Operation Studies

Cochise College   **GPA: 3.48**

Skills

- Programming: Java, R, C, and Haskell
- Database management systems: mySQL
- Information security, physical security, and communication security
- Handling of classified materials
- Proficient in Microsoft Office
- Computer Security and networking

Aroum Zombra

Contact Information:

Phone: 267 530 8083

Email: zombraahmed12@gmail.com

LinkedIn: https://www.linkedin.com/in/zombraahmed

Education:

West Chester University =>	**West Chester, PA**
Bachelor of Sciences in Computer Sciences	September 2021
Expected Graduation:	May 2023
Blackwood Community college:	New Jersey, NJ
Associate in Computer Science	May 2021

Relevant Courses Worked:

Foundation in C++, Java Programming, Data Structures & Algorithms, Programming Language Concepts and Paradigms, Computer Security & Ethics, Calculus I&II, Physics I&II, User Interface, Software Testing

Skills:

- **Programming Languages:** Java, Python, C++
- **User Interface:** JavaScript, HTML5, CSS, Node.js, React
- **Software Engineering:** Object Oriented Programming, Software Design, UML diagram

Work Experience:

Uber Technology/ Delivery & Passengers Driver

- Driving passengers safely to their destination

- Managing frequently issues related to the trips
- Good leadership and communication skills

Technical Project:

- Achieved some projects Front-End web application
- Achieved some projects Back-End web application
- Tackled Data Structure with Binary Search Tree

Hayden Kanak

Computer Science

Contact

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West Chester, PA, 19382

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215-301-9681

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haydenk1708@gmail.com

Skills

Java (iGRASP, Eclipse)

Very Good

Python (Spyder)

Average

C

Good

IOS App Development (Swift)

Good

Software Security

Very Good

Data Structures & Algorithms

Very Good

Intuitive honors computer science student, with a 3.8 GPA, who excels at programming in Java and C. Seeking an intern experience that will leverage my software engineering and cybersecurity background but eager to work in a variety of other fields. Coming with excellent communication skills and knowledge of statistical concepts and principles.

Education

2020-08 - Current

Bachelor of Science: Computer Science

West Chester University - West Chester, PA
- Minor in Applied Statistics
- Minor in Communication Studies
- Computer Security Certificate

Honors/Awards

- Dean's List - Honors College (Spring 2021 - current)
- Ann's Choice Scholars Program Scholarship (Fall 2020 - current)
- West Chester University Academic Excellence Scholarship (Fall 2020 - current)

Work History

2021-02 - Current

Team Member

Tropical Smoothie Cafe, West Chester, PA
- Operate the register/automated order system including entering customer orders, accurately handling cash, and being responsible for the drawer.
- Train new team members to Tropical Smoothie standards.
- Work efficiently with team to prepare food/smoothies and ensure the customer is completely satisfied.

2022-06 - 2022-08

Front End Clerk

Lowes Home Improvement, Willow Grove, PA
- Performed clerical duties to process returns, manage

procedures related to Centralized Return to Vendor and appropriately dispose of returned items.
- Utilized Lowe's web-based inventory database to research customer inquiries, helping to find the correct product replacement.
- Worked quickly to handle customer orders, returns, & other requests efficiently and in a friendly manner during difficult situations.

2018-02 - 2021-08

Wait Staff Member

Ann's Choice Retirement Community, Warminster, PA
- Practiced safe, sanitary food handling for preparation and service to maximize pleasant dining experience for residents
- Utilized ordering management database to input and track resident food orders against their accounts for billing purposes.
- Trained new team members on all Banner's Cafe procedures.

Volunteering & Fundraising

Honors Student Association Member
- Volunteer for various community & honors events such as Adopt-a-Block, Aid to South Africa, Barclay Friends, & Brandywine Valley ASPCA

Applications

- Microsoft Word
- Microsoft Excel
- Microsoft PowerPoint
- Microsoft Access
- Microsoft Project
- Google email (Gmail)
- Google Apps (Docs, Sheets, Slides etc.)
- Dropbox
- Collaboration: MS Teams, Slack,
- Zoom, WebEx
- Asana