



2023

## SOFTWARE ENGINEERING PROJECT

# MILESTONE 3



**PRESENTED BY TEAM : SE-SEPT-04**

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# 1. PROJECT SCHEDULE

Majorly, JIRA has been used for scheduling, making sprint and Gantt chart timeline.

## 1.1 TASK DISTRIBUTION

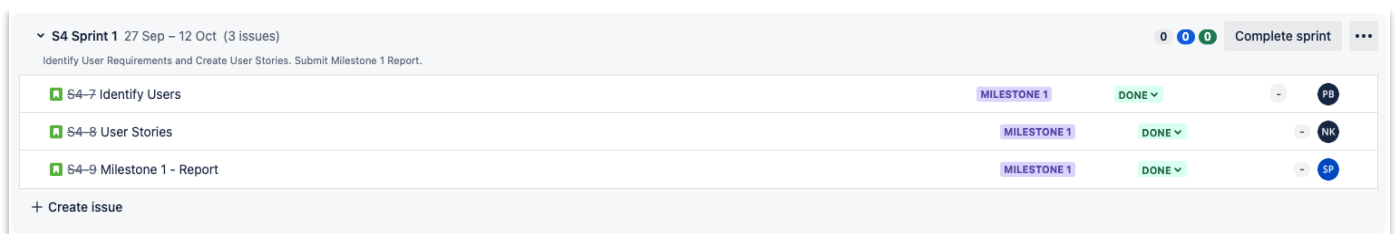
As of November 2, 2023, we have successfully completed several sprints in our project, with each sprint contributing to the development of our recommendation system. These sprints represent distinct phases of our project, focusing on different aspects of its development. Below, we provide a summary of the key activities and accomplishments within each sprint.

### ➤ Sprint 1 (27/09/2023 - 12/10/2023) - Milestone 1 Preparation (Completed)

In this sprint, the team prepared for Milestone 1 by identifying users, understanding the problem statement, and assigning roles.

The key tasks included:

- "Identify users" assigned to Pratham.
- "User stories" assigned to Nidhish.
- "Milestone 1 Report" assigned to Shri Krishna.



### ➤ Sprint 2 (13/10/2023 - 19/10/2023) - Low-Fidelity Prototype and Storyboard (Completed)

Sprint 2 focused on creating low-fidelity prototypes and storyboards for the project, allowing us to visualize the project's design.

- "Low fidelity prototype" assigned to Niwesh
- "Paper prototype" assigned to Nidhish
- "Storyboard - write story" assigned to Shri Krishna

- Sprint 3 (20/10/2023 - 27/10/2023) - Digital Prototype and Milestone 2 Report (Completed)  
Sprint 3 involved creating a digital prototype and further developing the project's design. Additionally, we worked on the Milestone 2 Report to document our progress.

- "Digital prototype" assigned to Niwesh
- "Storyboard - create storyboard" assigned to Shreyosi
- "Milestone 2 - Report" assigned to Pratham

Sprint	Issue ID	Issue Name	Assignee	Status
S4 Sprint 2 (13 Oct - 19 Oct)	64-10	Low-fidelity Prototype	MILESTONE 2	DONE
	64-11	Paper Prototype	MILESTONE 2	DONE
	64-12	Storyboard - Write story	MILESTONE 2	DONE
S4 Sprint 3 (20 Oct - 27 Oct)	64-13	Digital Prototype	MILESTONE 2	DONE
	64-14	Storyboard - Create storyboard	MILESTONE 2	DONE
	64-15	Milestone 2 - Report	MILESTONE 2	DONE

- Sprint 4 (30/10/2023 - 03/11/2023) - Project Schedule and Component Design (Ongoing)  
In the current sprint, we are developing the project schedule to establish a structured timeline.

We are also delving into component design and creating class diagrams. The key tasks include:

- "Project schedule" assigned to Shri Krishna
- "Component design" assigned to Nidhish
- "Class diagram" assigned to Niwesh
- "Milestone 3 Report" assigned to Shri Krishna

- Sprint 5 (04/11/2023 - 10/11/2023) - API Design and Machine Learning Modeling (Upcoming)  
In Sprint 5, we will focus on API design and machine learning modeling to establish the technical infrastructure of the project. The team will also work on data creation.

- "API Design" assigned to Pratham
- "Machine Learning Modeling" assigned to Nidhish
- "Data Generation" assigned to Niwesh

- Sprint 6 (11/11/2023 - 17/11/2023) - API Implementation and Documentation (Upcoming)
- In Sprint 6, the team will concentrate on implementing the API, creating machine learning models, and documenting the project through YAML documentation.

- "Create API" assigned to Pratham
- "Create ML model" assigned to Nidhish
- "YAML documentation" assigned to Shri Krishna
- "Milestone 4 Report" assigned to Shreyosi

<b>S4 Sprint 4</b> 30 Oct - 3 Nov (4 issues) Project Scheduling Component Design Class Diagram Milestone 3 Report Submission.		0 0 0	Complete sprint	...
S4-16 Project Schedule	MILESTONE 3	IN PROGRESS	...	...
S4-17 Component Design	MILESTONE 3	IN PROGRESS	...	...
S4-18 Class Diagram	MILESTONE 3	IN PROGRESS	...	...
S4-19 Milestone 3 - Report	MILESTONE 3	TO DO	...	...
+ Create issue				
<b>S4 Sprint 5</b> 4 Nov - 10 Nov (3 issues) API designing, ML modeling, Data creation.		0 0 0	Start sprint	...
S4-27 Design API	MILESTONE 4	TO DO	...	...
S4-28 ML - Modeling	MILESTONE 4	TO DO	...	...
S4-29 Data Creation	MILESTONE 4	TO DO	...	...
+ Create issue				
<b>S4 Sprint 6</b> 11 Nov - 17 Nov (4 issues) ML Model Created, API created, YAML documentation, Milestone 4 report submission.		0 0 0	Start sprint	...
S4-30 Create API	MILESTONE 4	TO DO	...	...
S4-31 ML - Create model	MILESTONE 4	TO DO	...	...
S4-32 YAML documentation	MILESTONE 4	TO DO	...	...
S4-33 Milestone 4 - Report	MILESTONE 4	TO DO	...	...
+ Create issue				

- Sprint 7 (18/11/2023 - 24/11/2023) - Test Case Design (Upcoming)

Sprint 7 will be dedicated to designing test cases to ensure the project's functionality and reliability.

- Sprint 8 (25/11/2023 - 01/12/2023) - Unit Testing and Milestone 5 Report (Upcoming)

In Sprint 8, we will perform unit testing to validate the components of the project. We will also work on the Milestone 5 Report.

➤ Sprint 9 (04/12/2023 - 08/12/2023) - Frontend Integration and Code Review (Upcoming)

In Sprint 9, our group will focus on integrating the front-end components of the project. This will involve combining the user interface elements and ensuring a cohesive user experience. Additionally, we will conduct a code review to assess the quality and consistency of our codebase.

➤ Sprint 10 (09/12/2023 - 15/12/2023) - Final Project Report and Project Showcase (Upcoming)

In the final sprint of our project, we will compile the final project report, summarizing the entire development process, design decisions, and outcomes. This report will serve as a comprehensive documentation of our project. We will also prepare for the Project Showcase, where we will present our project to the instructors and peers, demonstrating the key features and functionality of our recommendation system.

The screenshot displays a Jira board with four sprints, each containing a list of issues. The issues are categorized by sprint and include details such as their status, assignee, and priority.

Sprint	Issues	Status	Assignee
Sprint 7 (18 Nov - 24 Nov)	S4-34 Test Case Design	TO DO	AS
Sprint 8 (25 Nov - 1 Dec)	S4-35 Unit Testing	TO DO	AS
Sprint 8 (25 Nov - 1 Dec)	S4-36 Milestone 5 - Report	TO DO	JP
Sprint 9 (4 Dec - 8 Dec)	S4-37 Frontend Integration	TO DO	AS
Sprint 9 (4 Dec - 8 Dec)	S4-38 Code Review	TO DO	JP
Sprint 10 (9 Dec - 15 Dec)	S4-39 Final Project Report	TO DO	JP
Sprint 10 (9 Dec - 15 Dec)	S4-40 Project Showcase	TO DO	AS

### 1.1.a. Dividing Sub-Tasks

Here we have also sub divided a few child issues among ourselves.

The screenshot displays the Jira interface for Milestone 3. On the left, a sidebar lists various milestones and sprints. The main area shows a list of issues under Milestone 3, including 'S4-16 Project Schedule', 'S4-17 Component Design', 'S4-18 Class Diagram', and 'S4-19 Milestone 3 - Report'. The right sidebar provides details for the selected issue, 'S4-19 Milestone 3 - Report', including its description, assignee (SHRI KRISHNA PANDEY), and a list of child issues.

**Milestone 3 - Report**

**Description**

Add a description...

**Child issues**

Order by: ... +

0% Done

- S4-22 Component design rep... IN PROGRESS
- S4-23 UML diagram and ER d... IN PROGRESS
- S4-24 Sprint Report IN PROGRESS
- S4-25 Scrum Meeting Report IN PROGRESS
- S4-26 Final Report TO DO

**Activity**

Show: All Comments History Newest first

Add a comment...

Pro tip: press **M** to comment

**Details**

Assignee: SHRI KRISHNA PANDEY

Labels: None

Sprint: S4 Sprint 4

Story point estimate: None

Reporter: Shreyosi Sarkar

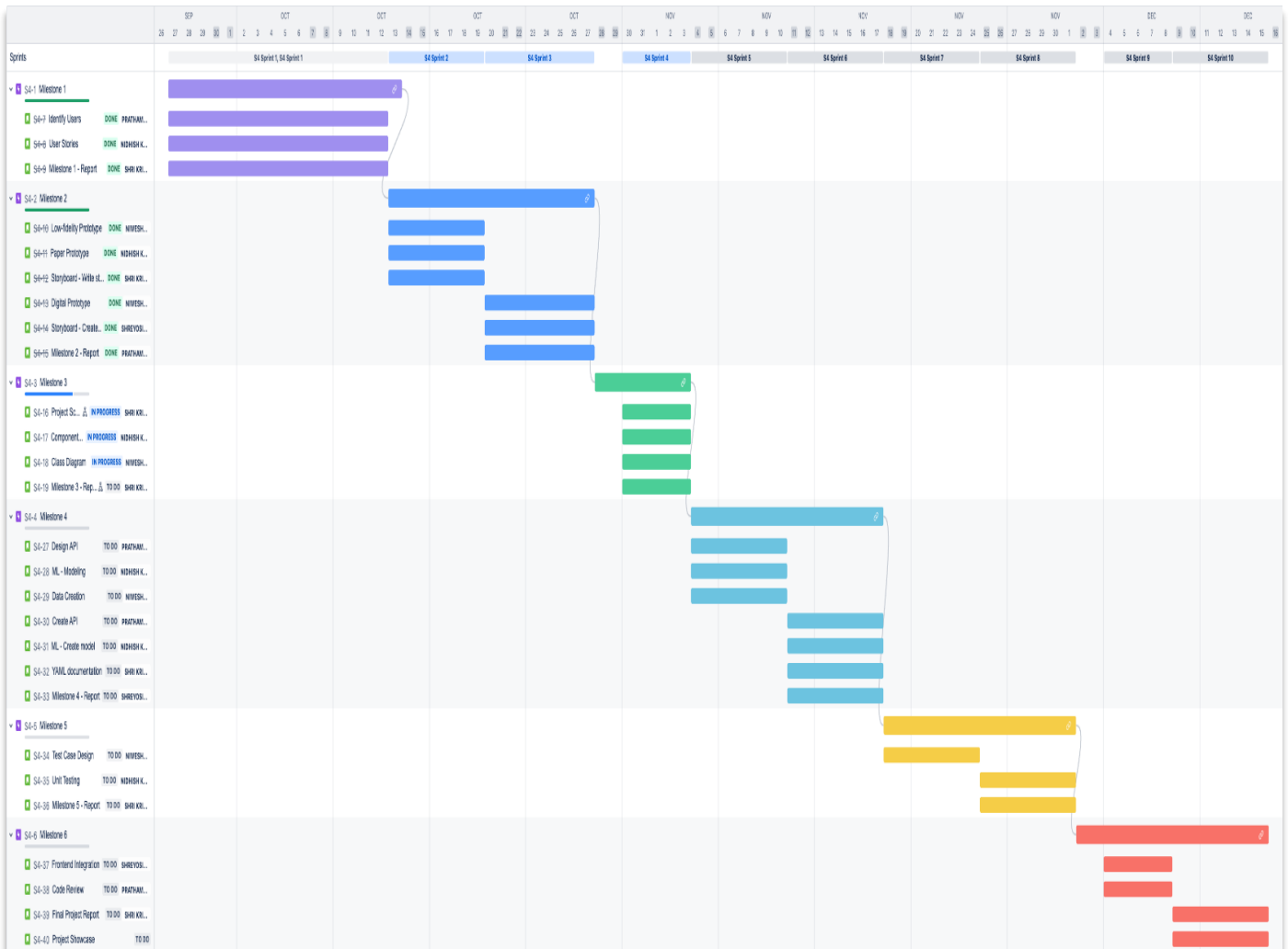
Created 2 hours ago

Updated 2 hours ago

Configure

## 1.2 GANTT CHART

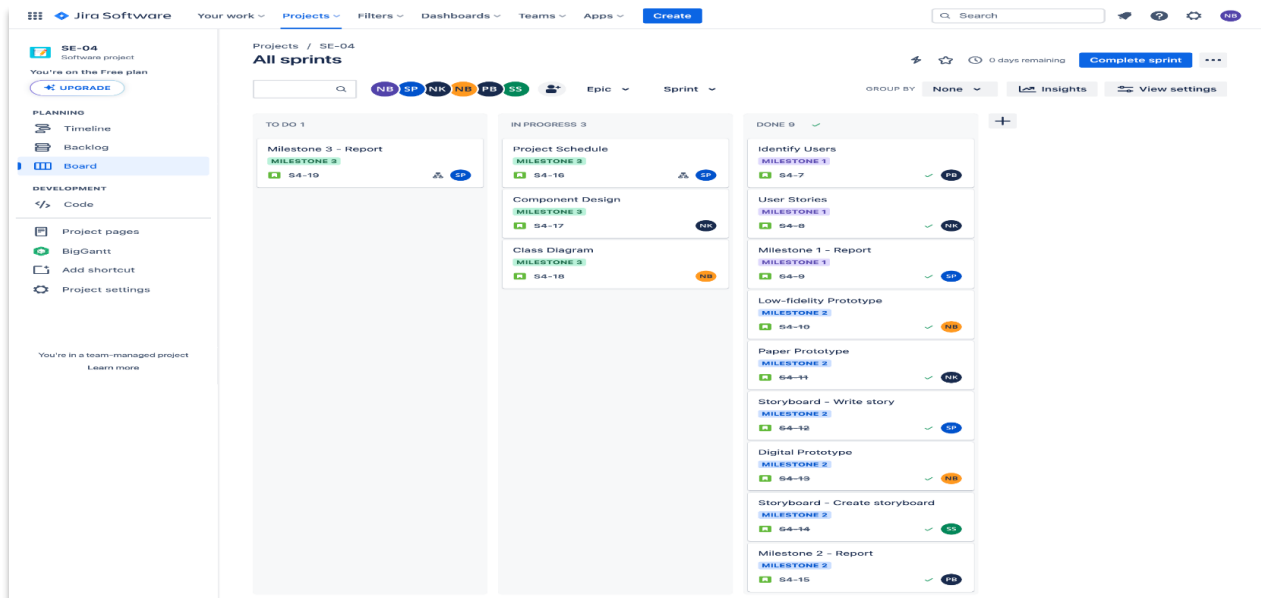
The Gantt-Chart for the project schedule is shown below. For the high-resolution image of the chart, please click here [Gantt Chart Timeline](#)



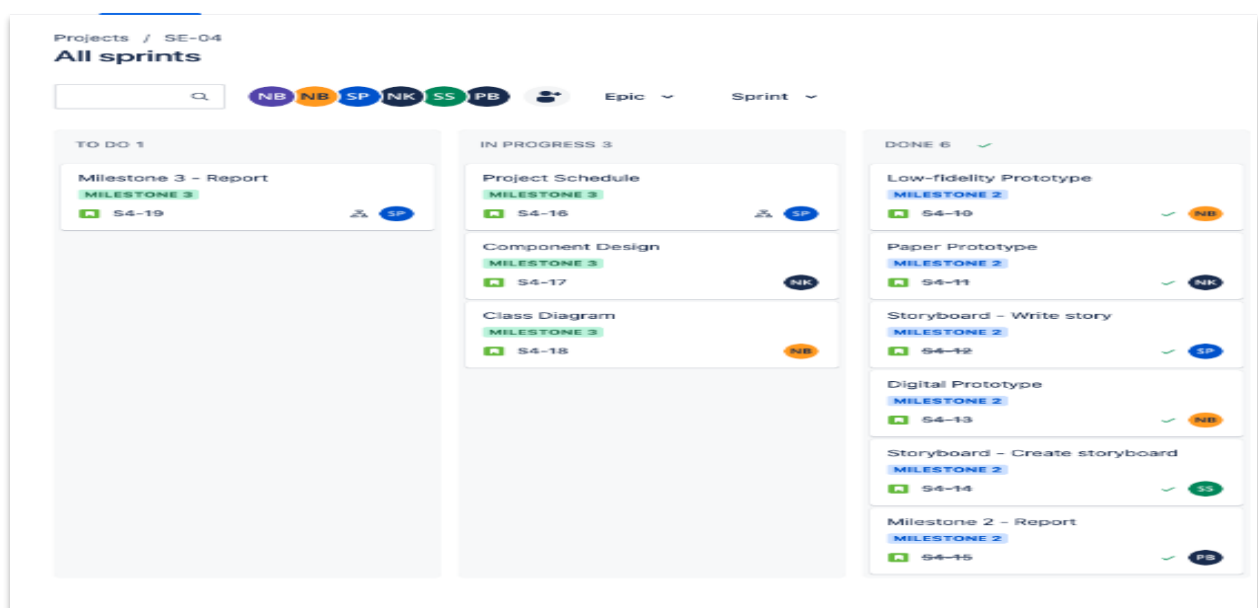
### 1.3 SCRUM BOARD

The scrum board consists of 'To Do', 'In Progress' and 'Done' for the active sprint. The scrum board for the milestones till now (completed and in progress) is shown below.

- This photo is after completing milestone 1 and sprint 1 of Scrum board.



- This photo is after completing milestone 2 and sprint 2 & 3.





➤ This photo is before milestone 3 completion.

Projects / SE-04

### S4 Sprint 4

Project Scheduling Component Design Class Diagram Milestone 3 Report Submission.

Q

NB

SP

NK

NB

Epic ▾

GROUP BY

None ▾

Insights

View settings

TO DO 1

Milestone 3 - Report

MILESTONE 3

S4-19

SP

IN PROGRESS 3

Project Schedule

MILESTONE 3

S4-16

SP

Component Design

MILESTONE 3

S4-17

NK

Class Diagram

MILESTONE 3

S4-18

NB

DONE ✓

## 1.4 SCRUM MEETING

**Few Scrum meeting details are given below:**

### Meet 1

**Date: 27-09-2023, Day: Wednesday, Time: 6 pm**

#### Attendees

- Niwesh
- Pratham
- Nidhish
- Shri Krishna
- Shreyosi

#### Agenda

- Understanding problem statement
- Introduction with role assignment

#### Discussion Results

- Introduction
- Discussion about User Stories Requirements
- Discussion on Milestone 1, Assigned Tasks
- WhatsApp Group Creation for General Discussion
- Sheet Creation for Centralized Project Details

#### Work Assignment

- Niwesh - Assigned to the frontend development of the app
- Pratham - Assigned to the backend development and API of the app
- Nidhish - Assigned to the backend development and API of the app
- Shri Krishna - Assigned to collect students' requirements in a recommendation system
- Shreyosi - Assigned to the frontend development of the app

**Minutes Covered:** 30 minutes.

**Meet 5**

**Date: 18-10-2023, Day: Wednesday, Time: 6 pm**

**Attendees**

- Niwesh
- Pratham
- Nidhish
- Shri Krishna
- Shreyosi

**Agenda**

- Milestone 2 - Work Review session
- Future Work Assignment

**Discussion Results**

- Prototypes Review: The team reviewed incomplete prototypes, discussing their progress and identifying areas that require further development.
- Storyboard Development: The team discussed the creation of a storyboard, focusing on the script and the tools for building it. The goal was to define the narrative structure and select appropriate tools for this task.
- Initiation of Storyboard Development:
  - Niwesh, Shri Krishna and Pratham began brainstorming ideas for the story that will be depicted in the storyboard.
  - Niwesh and Shreyosi took the initiative to start developing the storyboard using storyboardthat.com.

**Work Assignment**

- Niwesh - Create storyboard
- Pratham - Write script for the storyboard
- Nidhish - Complete previous work assignment
- Shri Krishna - Write script for the storyboard
- Shreyosi - Create storyboard

**Minutes Covered:** 25 minutes.

**Meet 6**

**Date: 19-10-2023, Day: Thursday, Time: 7 pm**

**Attendees**

- Niwesh
- Pratham
- Nidhish
- Shri Krishna
- Shreyosi

**Agenda**

- Milestone 2 - Work Review session
- Create Storyboard

**Discussion Results**

- Storyboard Development:
  - Shri Krishna and Pratham framed the story by writing the script for the story and collaborating in the development of the storyboard.
- Wireframe and PDF Front Page:
  - Niwesh was responsible for designing the cover page of the PDF containing the Storyboard and Wireframe. Additionally, Niwesh and Shreyosi worked on the Wireframe design.
- All the tasks of Milestone 2 were reviewed.
- Paper Prototype:
  - Nidhish and Niwesh collaborated in the creation of the paper prototype, a crucial step in the development process.

**Work Assignment**

- Niwesh - Continue working on storyboard and wireframe
- Pratham - Export storyboard images and create PDF using Xournal
- Nidhish - Print and take pictures for paper prototype and submit the milestone 2
- Shri Krishna - Export storyboard images and create PDF using Xournal
- Shreyosi - Continue working on storyboard and wireframe

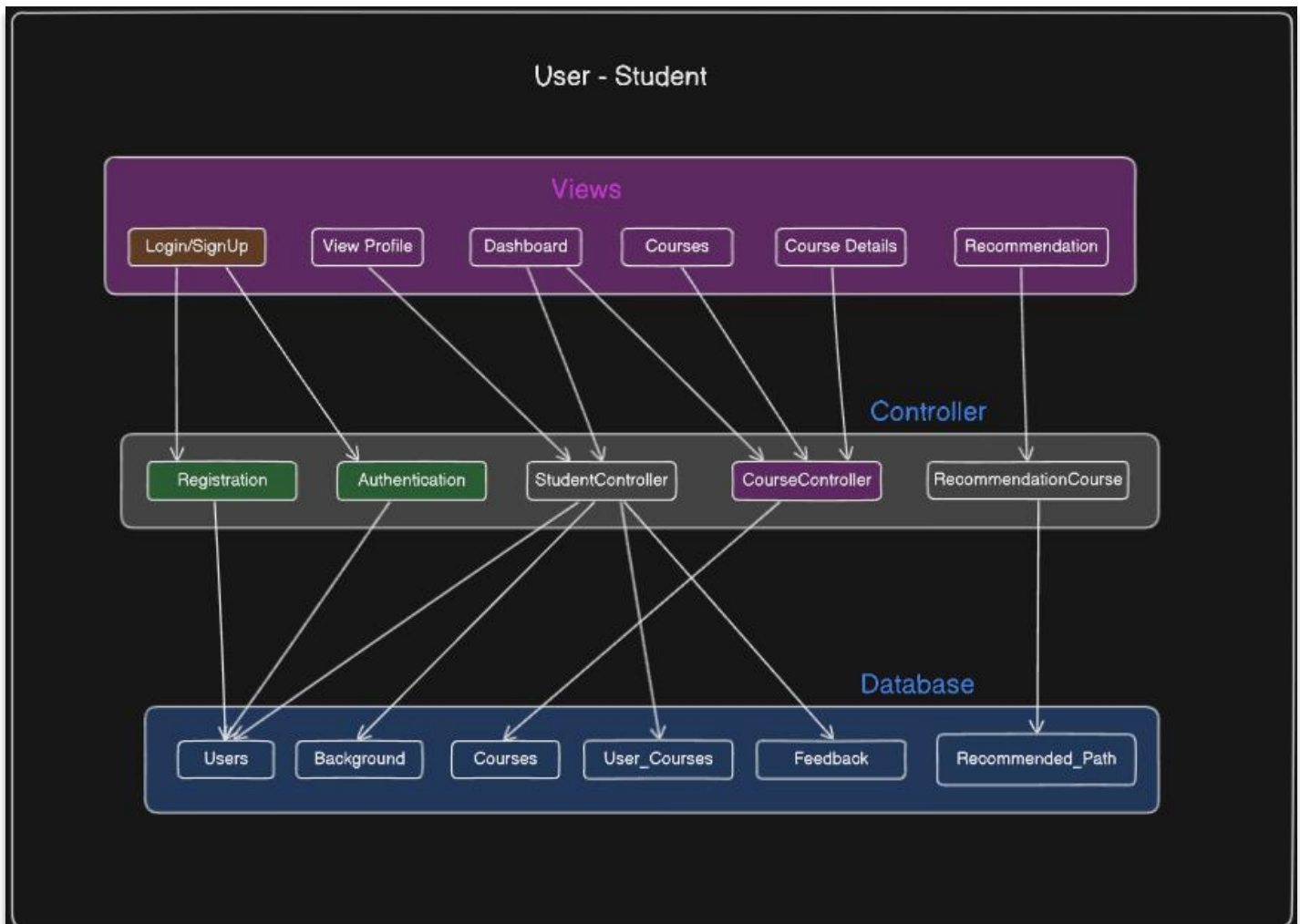
**Minutes Covered:** 30 minutes.

**Sprint 2**

**All Scrum meeting details till 2/Nov/2023 are in the given link: [Scrum Meeting Details](#)**

## 2. COMPONENT DESIGN

*Components as per User- Student*

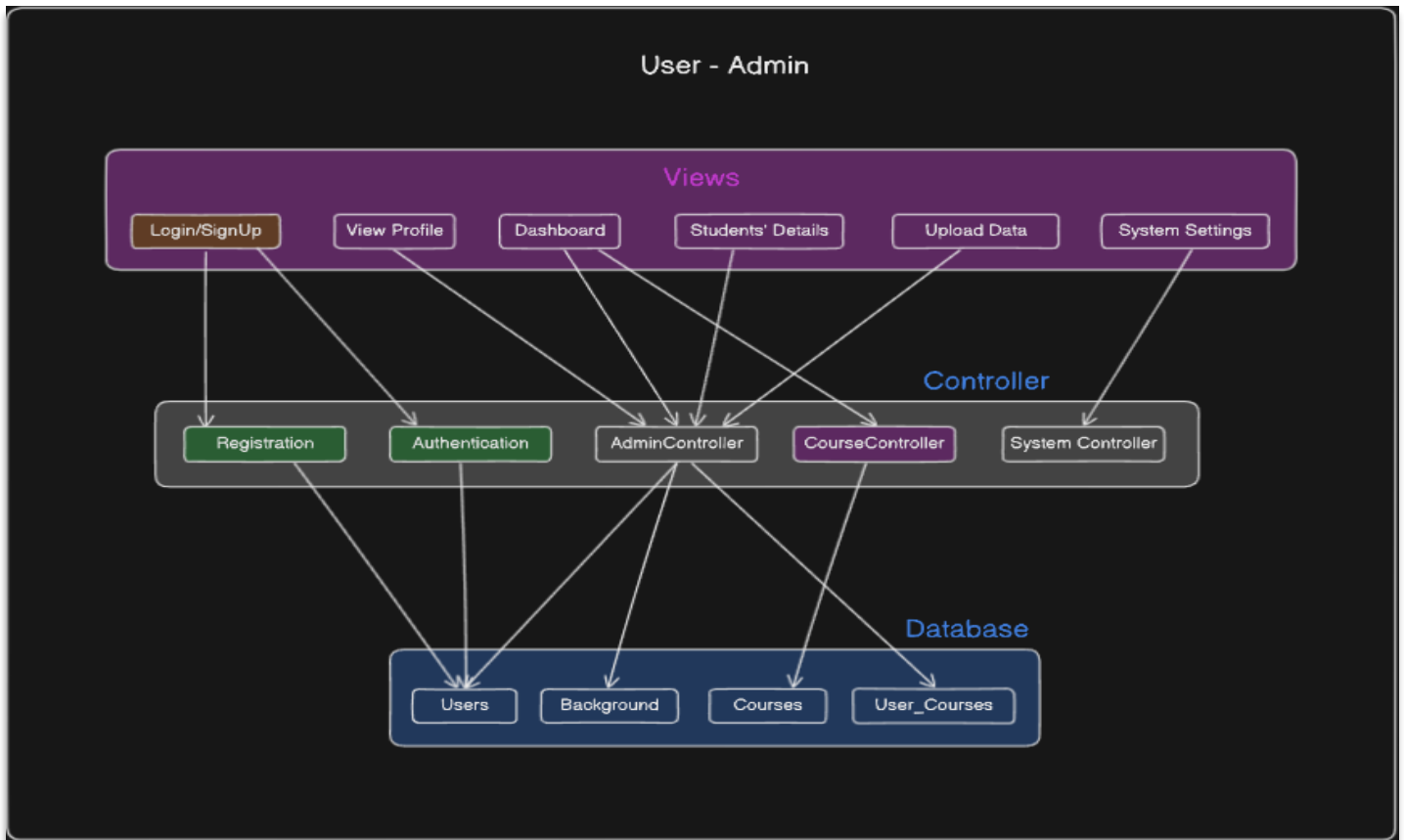


### Student Component:

- **Login/Signup:** This view component uses the Registration and Authentication controller, which interacts with the Users database.
- **Dashboard:** The Dashboard view is managed by the StudentController, which accesses data from the Users, Background, User\_courses, and Feedback databases.
- **Courses:** The Courses view is supported by the CourseController, connecting to the Courses database.
- **View Profile:** This component relies on the StudentController, which utilizes data from the Users, Background, User\_courses, and Feedback databases.
- **Course Details:** The Course Details view is powered by the CourseController, fetching information from the Courses database.

- **Recommendation:** The Recommendation view is influenced by the RecommendationCourse controller, which interacts with data from the Users, Courses, Feedback, and Recommendation\_path databases.

### *Components as per User- Admin*

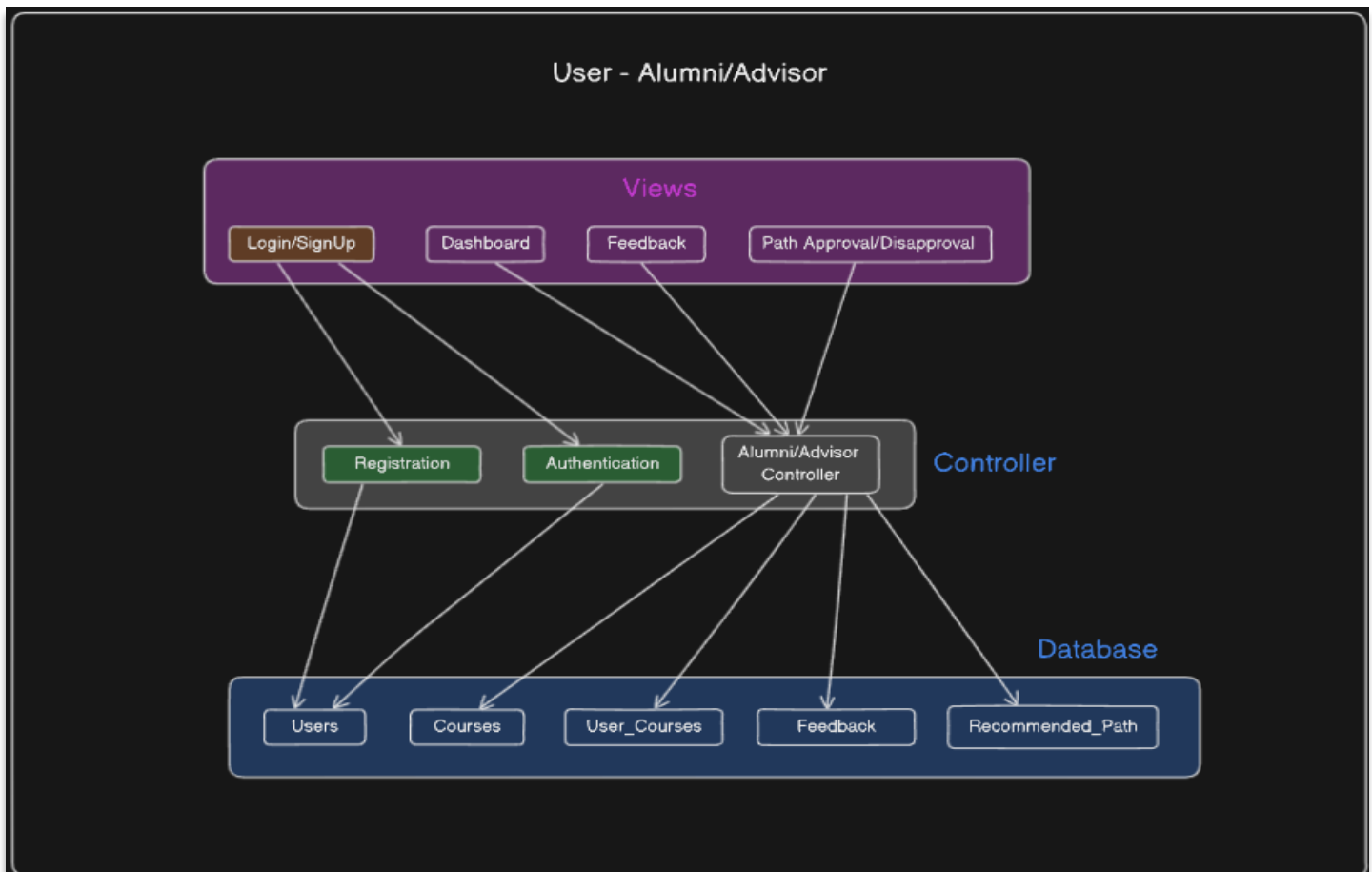


### **Admin Component:**

- **Login/Signup:** This view component is responsible for user authentication and registration, utilizing the Registration and Authentication controllers. It accesses user account data stored in the Users database.
- **View Profile:** This component, managed by the AdminController, allows administrators to access and update user profiles, incorporating data from the Users, Background, and User\_courses databases.
- **Dashboard:** The Dashboard view, overseen by the AdminController and CourseController, provides administrators with an organized overview of the system. It fetches data from the Users, Background, User\_courses, and Courses databases.

- **Students' Details:** This view component, managed by the AdminController, focuses on providing administrators with detailed information about students. It accesses data from the Users, Background, and User\_courses databases.
- **Upload Data:** This component, under the management of the AdminController, allows administrators to upload and manage user-related data. It interacts with the Users, Background, and User\_courses databases.
- **System Settings:** The System Settings view, under the jurisdiction of the SystemController, enables administrators to configure system parameters and settings, enhancing system performance and functionality. It will call various system related API calls.

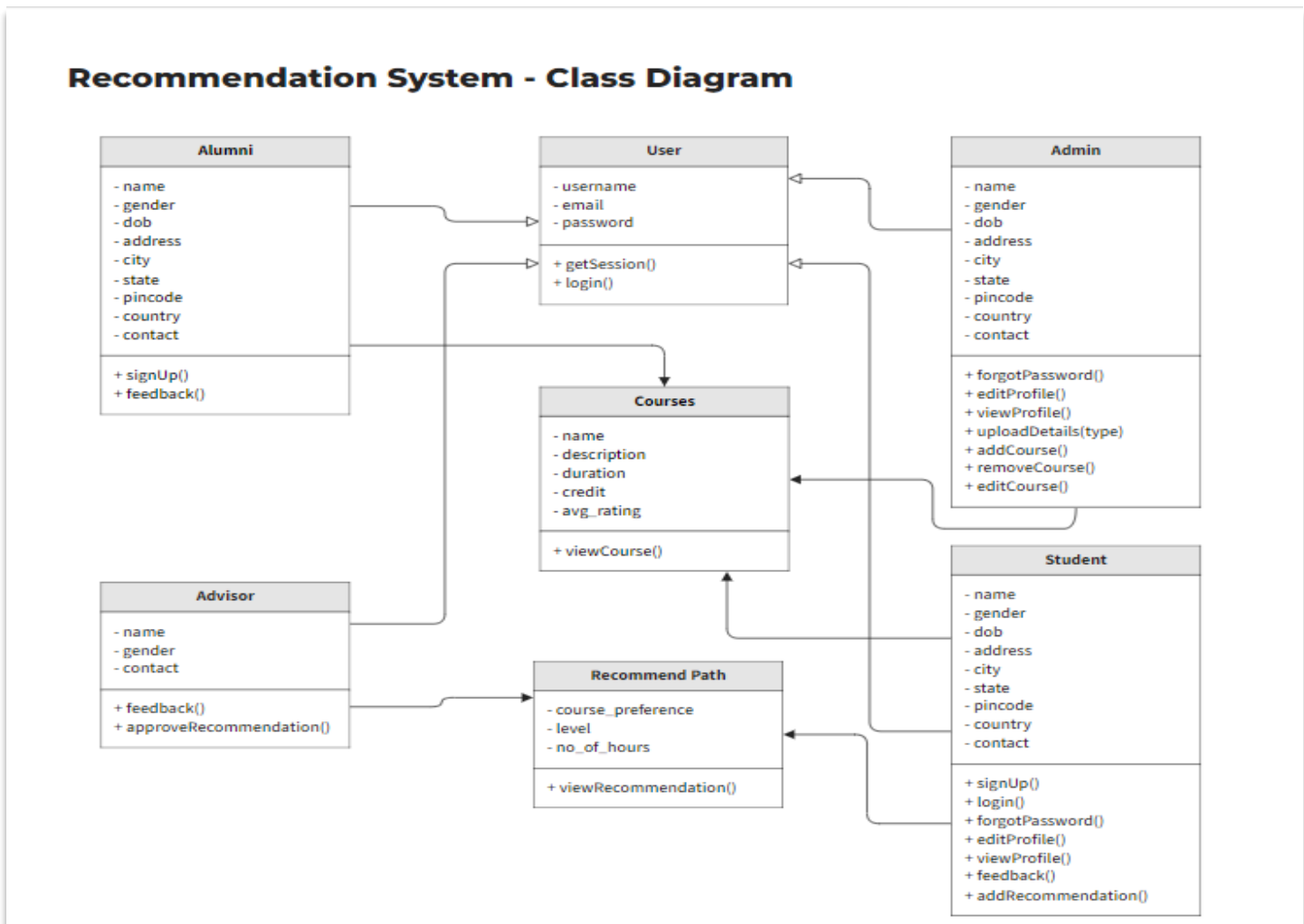
### *Components as per User- Alumni/Advisor*



### **Alumni/Advisor Component:**

- **Login / Signup:** This view component will use the Registration and Authentication controller which is going to use the Users table in the database.
- **Dashboard, Feedback and Path Approval / Disapproval:** These view components will use the functionalities of Admin/Advisor Controller which will use Courses, User\_Courses, Feedback and Recommended\_Path table in the database.

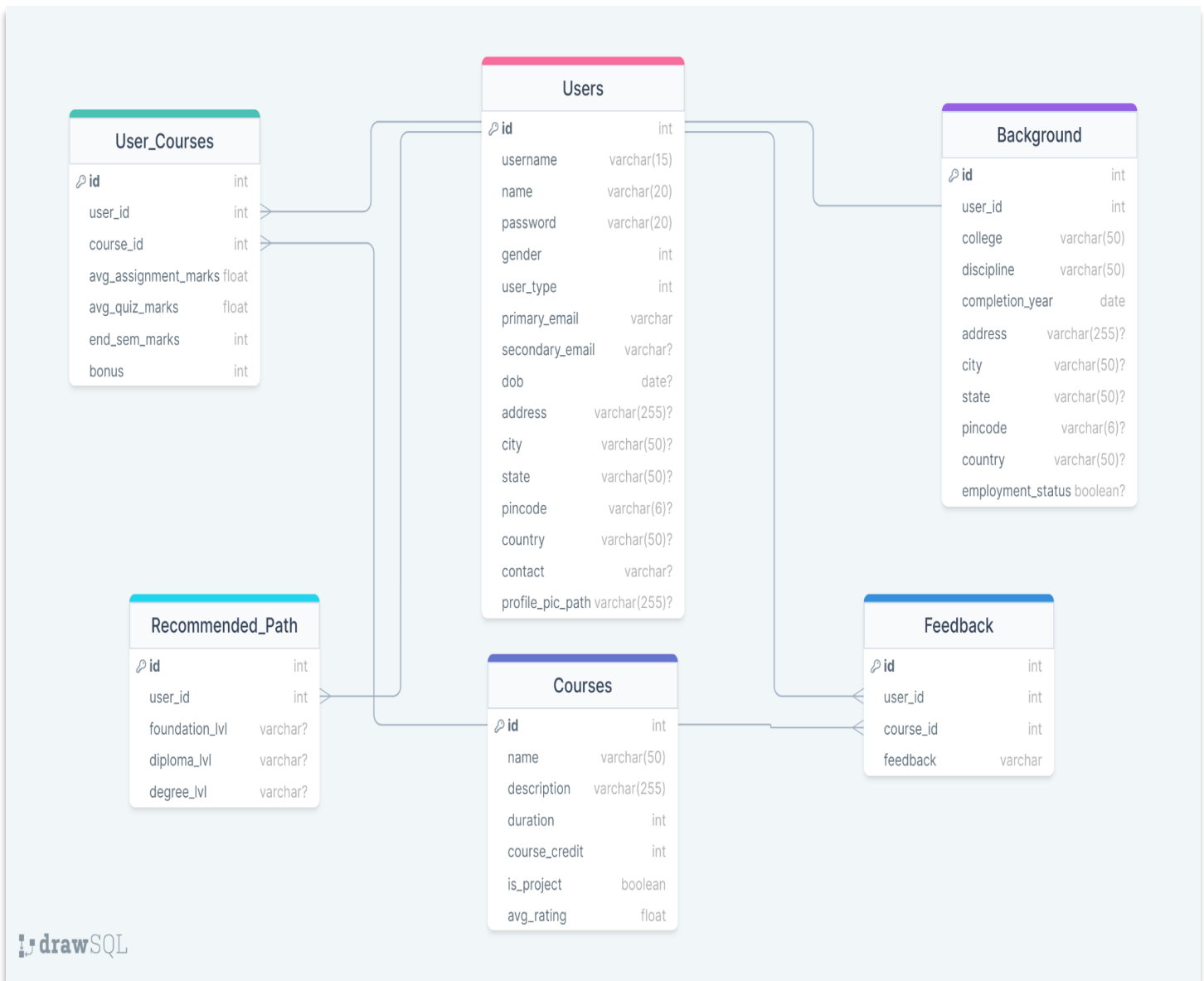
### 3. CLASS DIAGRAM



- The class diagram is shown above. For the high-resolution image of the chart click here: [CLASS DIAGRAM LINK](#)



## 4. DB SCHEMA



➤ For the high-resolution image of the DB Schema click here: [DB SCHEMA LINK](#)