

illumination

Sprint 3

By Team 1 Tech Titans



Agenda

Team Member Roles and Responsibilities

Improvements made from Professor Feedback

Project Description

Team Working Agreement

Personas (at least 3)

MVP (Minimum Viable Product)

Technologies

Algorithms

Diagrams

Product Backlog

Sprint 3 Backlog

Metrics

Retrospective

Project Demo - Sprint 3

GitHub Link

Live Application Demo



Team Members



**Anuhyaa
Marapalli**

Scrum Master /
Developer



**Snehalatha
Boothpur**

Designer / Developer



**Rithin Guptha
Bajuri**

Developer



Team Members



**Harshitha
Rangaraju**

Team Leader and
Developer



**Srinivas Reddy
Bapathu**

Developer and Tester





Improvements

- Changing # to sno
- Removing sprint word from sprint 3



Project Description



Project Name:	Illumination
Team:	Tech Titans
Project Description:	<p>Illumination is an AI-driven mobile learning application designed to deliver personalized learning through real-time adjustment of article contents based on students' performances and preference.</p> <p>For students who wants more structured learning experience the Illumination</p> <p>is a app with it's advanced ML techniques, that adjusts the difficulty and provides personalized content recommendations, unlike traditional learning apps or already pre defined content application</p> <p>our application uses AI to continuously monitor student learning and it dynamically updates the learning path.</p>
Benefit Outcomes:	<ul style="list-style-type: none">• This will improve the understanding of the student in weak areas.• This continuous tracking, will also get personalized feedback, which will let students know where they lag.• This will improve students retention through spaced repetition.• This is also way more efficient in learning new concepts.
Github Link:	https://github.com/htmw/2024F-Tech-Titans/wiki

Team Agreement



Team Agreement

Team Tech Titans

- We, as members of the team, are committed to attending all scheduled meetings on time. When this is not possible, it should be communicated to the group in advance so that proper readjustment may occur.
- If a member is unable to attend a meeting, they will inform the team beforehand and stay updated on any decisions made during their absence. In situations where rescheduling isn't feasible, the absent member agrees to follow the majority decision.
- Every member is encouraged to seek help from the other members when they have any doubts or are facing issues, instead of waiting till the last minute.
- Team members can freely express their opinions and suggestions during meetings or discussions. In case, if they didn't give feedback, their decision is taken as Yes.
- Members are encouraged to be active in the discussions or meetings and even pay attention during key discussions. It is expected that everyone will be active and participate.
- Fair distribution of tasks in the group; each member will finish his/her part of the task by the agreed deadline, so that the work on the project proceeds consistently.
- It is expected that teammates respect the time and commitment of one another. Members should be punctual with responses in the group chat and adopt a professional attitude. Every member will try to put forth their best effort.



Ankit, 17 year old

Ankit is a high schooler who is preparing for IIT JEE exams where he is good at Mathematics and Chemistry but he struggles in Physics, even though he attends extra classes, but he never excels it. So, he feels like he needs personalized study material to improve his weak areas.

Goals:

- Have good grasp on difficult physics topics.
- Have access to personalized materials on complex topics or topics where he is weak at.
- Able to balance school, extra classes and self study.

Challenges

- There is a lot of content online or in books but unable to find proper content for his weakness topics.
- Searching for proper material is time taking.
- Unable to identify the weak topics.

Rajat, 28 year old

Rajat is CA (Chartered Accountant) aspirant from Mumbai, but he is also working full time in financial firm, which causes him have less time to study. He finds financial reporting and taxation difficult and even struggling to focus because of tight schedule.

Goals:

- Improve the understanding of the complex topics.
- Able to access the targetted material on the topics which he finds difficult.
- Able to balance both work and preparation.

Challenges:

- Its difficult to manage both work life and student life which leading him not to study well.
- Time consuming on finding the concepts he is weak at.
- Struggling to study all because of broad topics in CA.





Kavya, 21 year old



Kavya is engineering student, as she is near her job trials and she is interested in Machine Learning and GenAI, she want to study them and learn them, but she have no idea on machine learning. When she searching of google for roadmap, all those roadmap doesn't suit her well which causes her to distract.

Goals

- Master all Machine learning and deep learning concepts.
- Able to read fine quality materials which simplify the complex concepts into simple once.

Challenges

- There are alot of materials on it which causes to read alot of materials of same topics to understand them.
- Facing difficulties in retaining the concepts.
- Unable to keep up with the latest trends on ML.

MVP

- **Subject Selection:** Choose subjects to access articles.
- **Article Reading:** Browse and read subject-specific articles.
- **Mark Articles for Later:** Save articles for future review.
- **Search Functionality:** Search articles within a subject.
- **Personalized Recommendations:** Get suggestions based on performance.

Technologies

01.

Backend

fastAPI
Node JS
Mongodb
AWS
Pytorch

02.

Frontend

React Native

03.

Tools

Github
Postman
Google Colab
VSCode

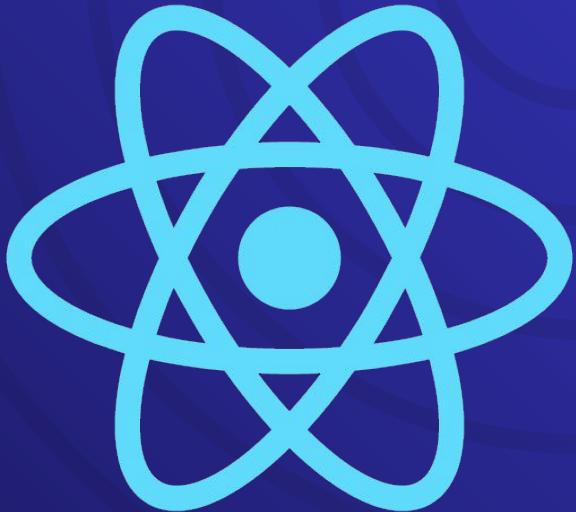
1. Backend

Here FastAPI is primarily used for machine learning backend tasks where as Node JS is primarily deals with Client Side code. MongoDB for Storing the data. AWS for hosting and even for storing the objective Data. Pytorch for Machine learning



2. Frontend

React Native is used for building cross platform mobile application.



3. Tools

Github is where code and even the documents are shared. Postman is for API Testing. Google Colab for training the Machine Learning Model. VSCode is used for writing the code





Algorithms

Reinforcement Learning

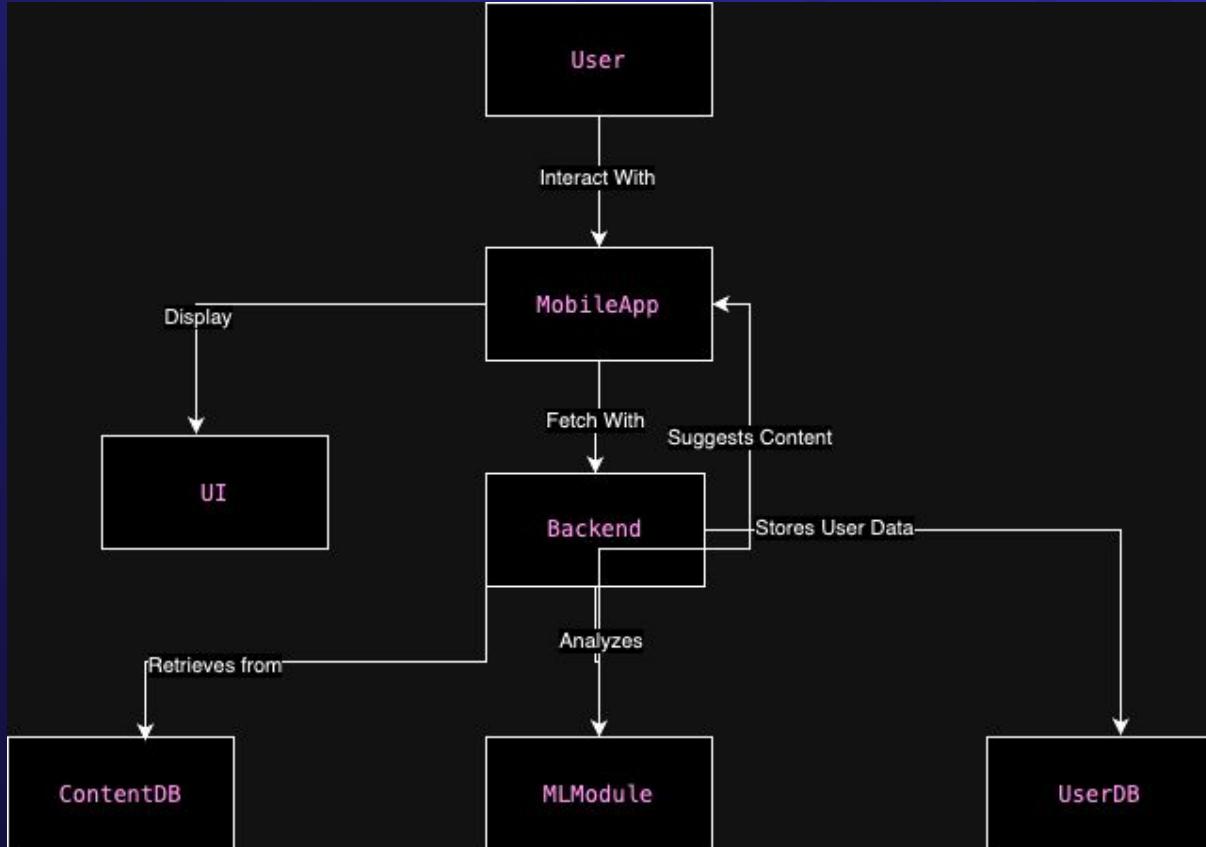
Reinforcement Learning (RL) is a machine learning paradigm where an agent learns by interacting with an environment and receiving rewards for actions. In adaptive learning, RL is used to dynamically adjust content difficulty based on student responses, maximizing engagement and learning efficiency over time.

Word2Vec

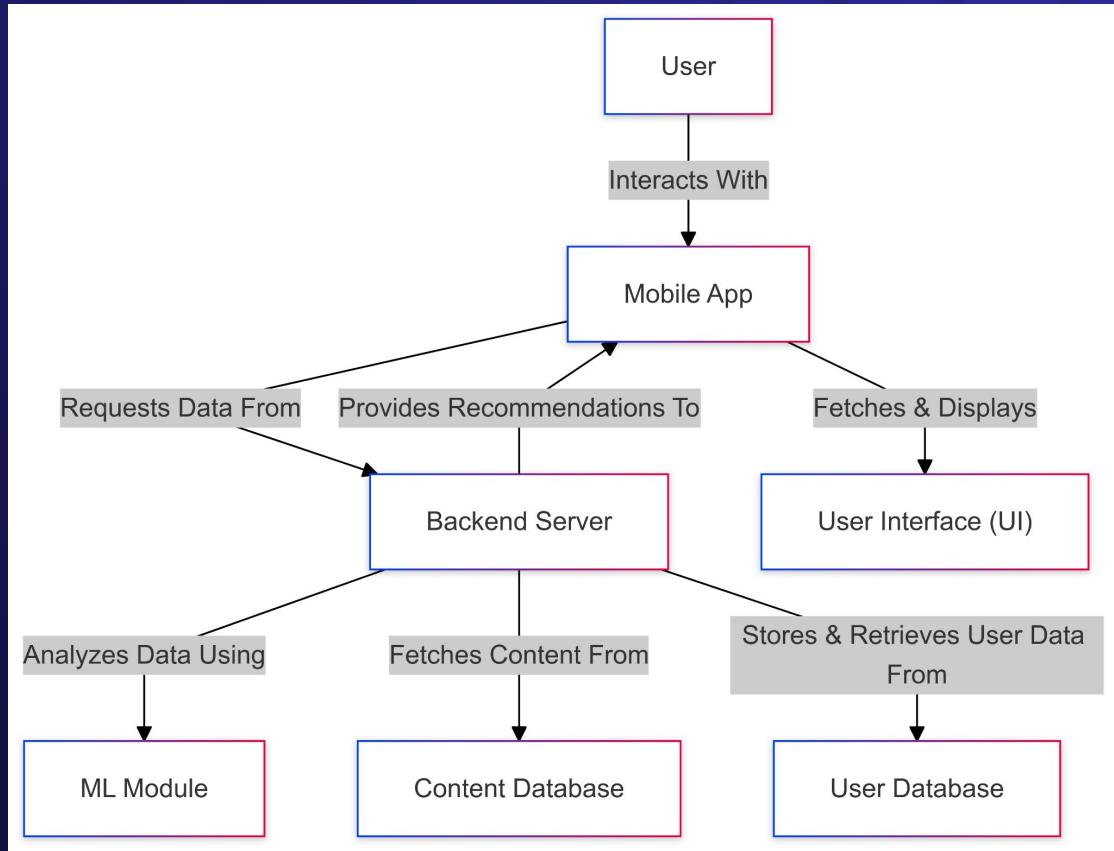
Word2Vec is a deep learning-based model that transforms words into continuous vector representations, capturing semantic relationships between words. In content-based filtering, it is used to convert textual content (article text) into vectors, allowing us to measure similarity between content items. Similar vectors imply similar content, enabling personalized recommendations.



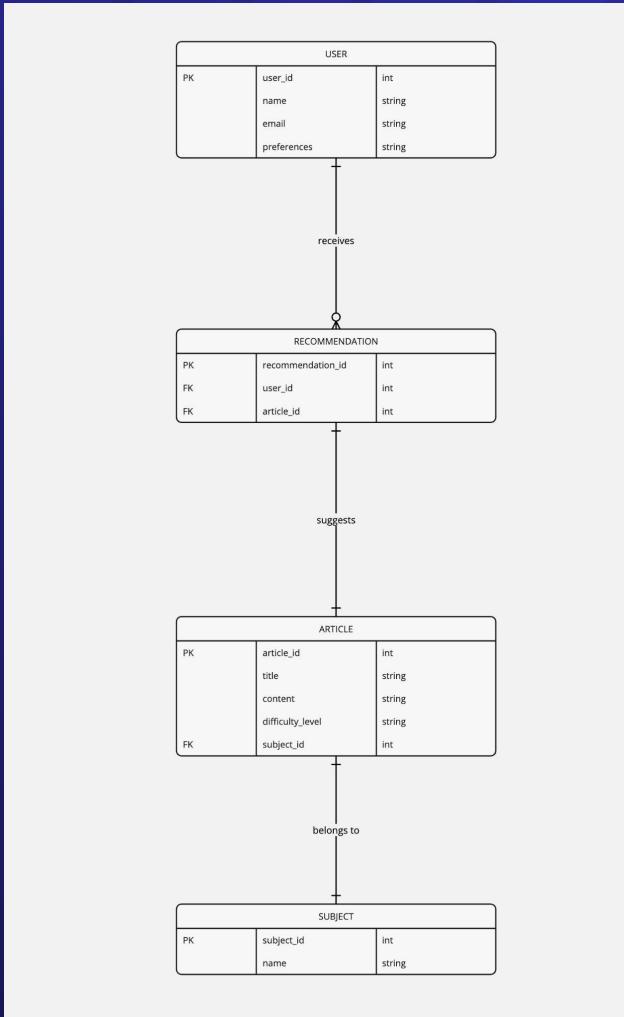
Architecture Diagram



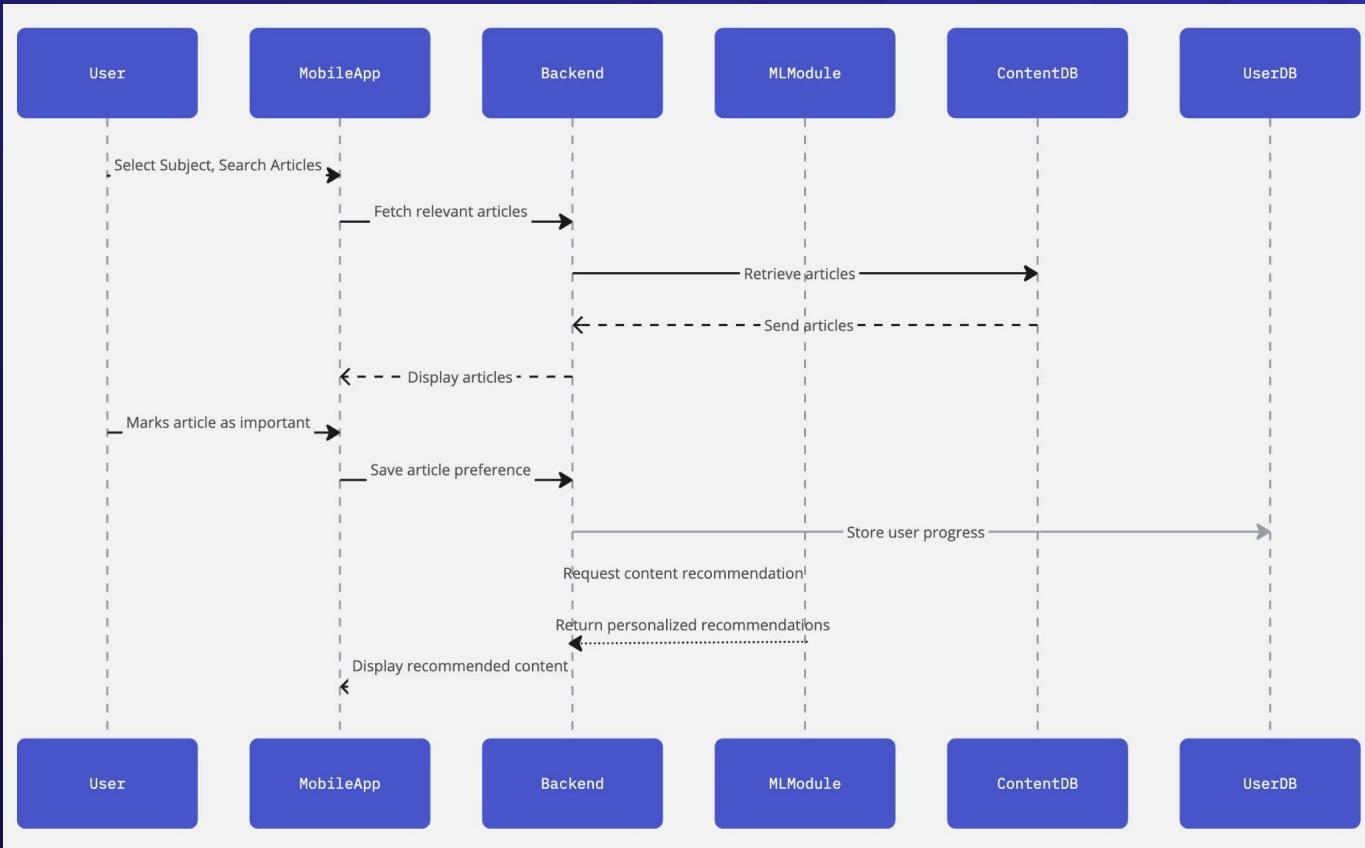
Context Diagram



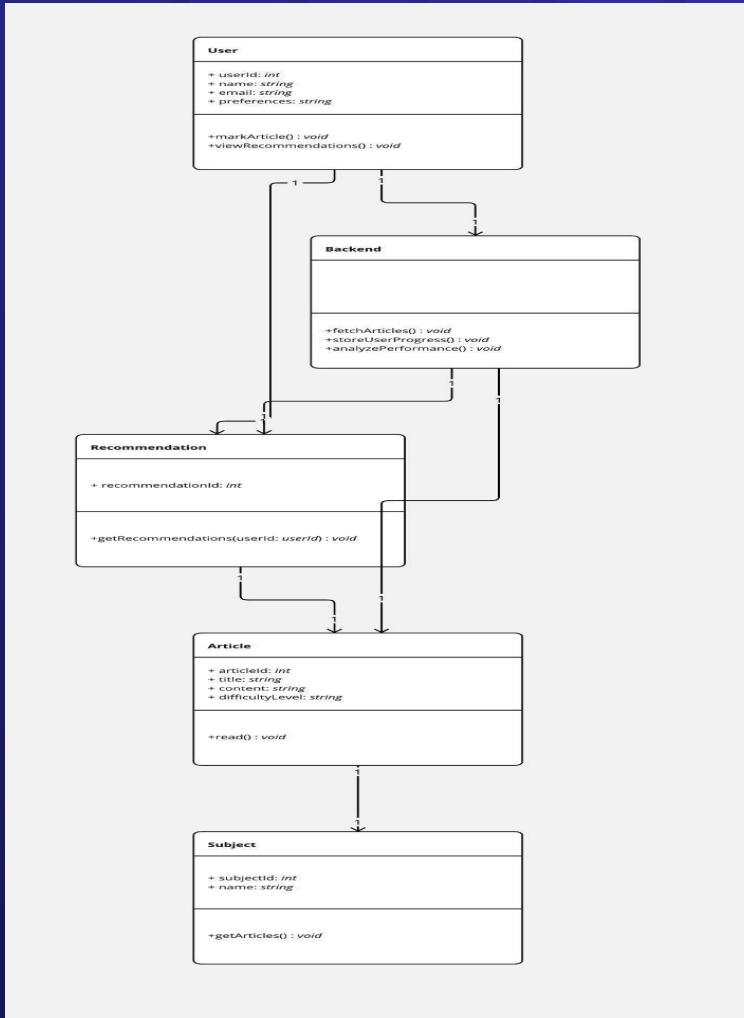
ER Diagram



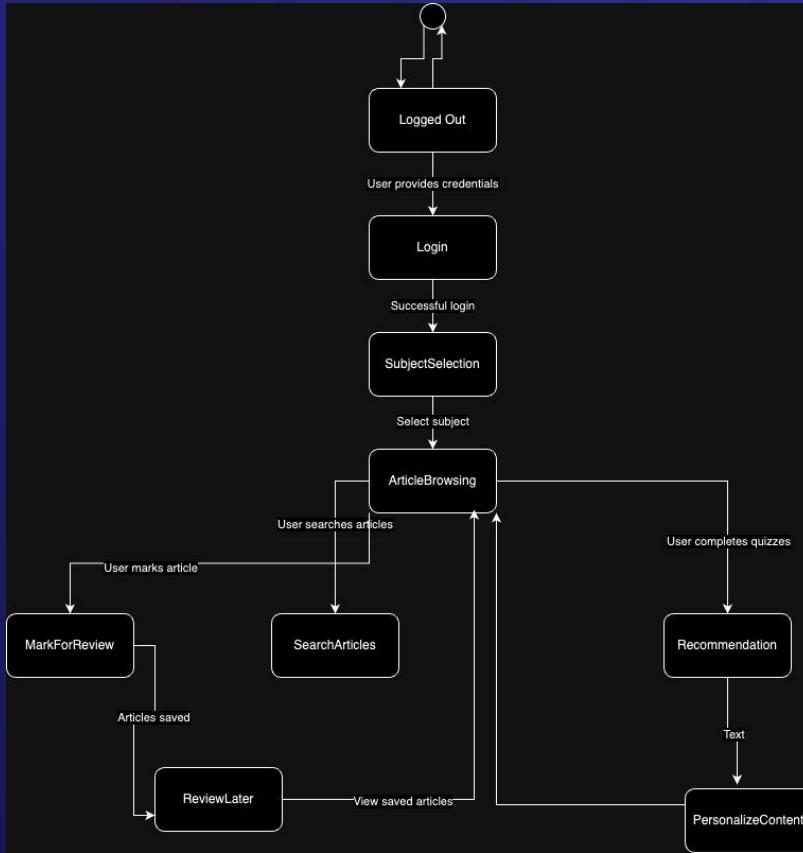
Sequence Diagram



Class Diagram



State Diagram



Sprint 2 Recap

- **Personalized Recommendations:** Recommended articles based on quiz performance to address weak areas.
- **Spaced Repetition:** Scheduled prompts for revisiting challenging topics to improve retention.
- **Performance Dashboard:** Visualized progress with quiz scores, time spent, and subject performance.

Product Backlog

SNo	Sprint	Feature	User Story/Technical Story	Acceptance Criteria
1	Sprint 1	Subject Selection	User Story 1: As a student, I want to select a subject so I can access relevant learning content.	Users can select from multiple subjects (e.g., Math, Science, History). Selected subjects load relevant articles.
2	Sprint 1	Article Reading	User Story 2: As a student, I want to browse and read articles related to the subject I selected.	Articles display in a clean, mobile-friendly interface. Users can scroll and navigate within articles seamlessly.
3	Sprint 1	Mark Articles for Later	User Story 3: As a student, I want to mark articles as "difficult" or "important" for later review.	Users can mark articles as "difficult" or "important". Marked articles appear in a "Review Later" section.
4	Sprint 1	Article Search	User Story 4: As a student, I want to search for specific articles within a subject.	Users can search for articles by keywords within a subject. Search results are displayed based on relevance.
5	Sprint 1	Article Navigation 	User Story 5: As a student, I want to navigate between articles within the same subject.	Users can use "next" and "previous" buttons or a navigation bar to move between articles. Ensure smooth transitions.

Product Backlog

SNo	Sprint	Feature	User Story/Technical Story	Acceptance Criteria
6	Sprint 1	Basic UI for Articles	Technical Story 1: Set up basic UI/UX for browsing and reading articles.	Clean, intuitive design for subject selection and article reading. Ensure mobile responsiveness.
7	Sprint 1	Content Management System	Technical Story 2: Implement content management system for loading articles by subject.	Articles are stored and categorized by subject. Efficient retrieval of content from a backend system.
8	Sprint 1	Mark and Save Articles	Technical Story 3: Add functionality for marking and saving articles for later review.	Users can save marked articles to a "Review Later" list. Data is persisted across sessions.
9	Sprint 1	Search Functionality	Technical Story 4: Implement article search functionality.	Enable a search feature within each subject. Search results are displayed quickly and accurately.
10	Sprint 2	Personalized Recommendations	User Story 6: As a student, I want personalized content recommendations based on my performance so I can improve weak areas.	The system provides content recommendations based on quiz performance and article difficulty. Users are directed to articles covering weak areas.

Product Backlog

SNo	Sprint	Feature	User Story/Technical Story	Acceptance Criteria
11	Sprint 2	Spaced Repetition	User Story 7: As a student, I want the app to implement spaced repetition to reinforce key concepts over time.	The app identifies and schedules spaced repetition for topics users struggle with. Users are prompted to revisit articles or take quizzes at optimal intervals.
12	Sprint 2	Performance Dashboard	User Story 8: As a student, I want to track my progress in a performance dashboard.	The dashboard shows quiz scores, articles read, and time spent on each subject. Users can see areas of strength and weakness visually.
13	Sprint 2	Targeted Feedback on Quizzes	User Story 9: As a student, I want to receive targeted feedback after quizzes so I can understand my mistakes.	Detailed feedback is provided for each quiz question. Feedback explains why certain answers are correct/incorrect.
14	Sprint 2	Dynamic Content Adjustment	User Story 10: As a student, I want the app to dynamically adjust content difficulty based on my performance.	The difficulty of content increases if the user performs well. If a student struggles, simpler articles or review content is recommended.
15	Sprint 2	Basic Machine Learning for Recommendations	Technical Story 5: Implement a basic machine learning model for personalized content recommendations.	The model analyzes quiz performance and article difficulty to recommend personalized learning paths. Adjustments are made based on user progress.

Product Backlog

SNo	Sprint	Feature	User Story/Technical Story	Acceptance Criteria
16	Sprint 2	Spaced Repetition Algorithm	Technical Story 6: Integrate spaced repetition algorithm to reinforce key concepts.	Use spaced repetition techniques to schedule when users should revisit difficult topics. Ensure the system prompts users at the right time for maximum retention.
17	Sprint 2	Performance Dashboard Development	Technical Story 7: Build a performance dashboard to visualize progress.	The dashboard shows quiz results, time spent, and subject mastery. Visual charts display performance trends.
18	Sprint 2	Quiz Feedback Mechanism	Technical Story 8: Provide detailed quiz feedback for user learning.	Implement feedback mechanisms to explain quiz results. Feedback is both constructive and designed to reinforce learning.
19	Sprint 3	User Accounts & Syncing	User Story 11: As a student, I want to create an account and log in so I can save my progress and preferences across devices.	Users can create accounts with email/password. User progress, preferences, and recommendations are saved and synced across devices.
20	Sprint 3	Adaptive Study Paths	  User Story 12: As a student, I want my study path to adapt based on my long-term learning trends and preferences.	The app uses ML to analyze long-term trends and dynamically adjust learning paths. Preferences are stored, and content is adapted based on user learning styles.

Product Backlog

SNo	Sprint	Feature	User Story/Technical Story	Acceptance Criteria
21	Sprint 3	Reminders for Spaced Repetition & Recommendations	User Story 13: As a student, I want to receive reminders for spaced repetition and personalized study recommendations.	Notifications prompt users for spaced repetition and recommended articles. Reminders are personalized based on past performance and study schedules.
22	Sprint 3	Learning History	User Story 14: As a student, I want to view my learning history so I can review previously studied articles and performance.	Users can access their study history, including completed articles and quizzes. History includes quiz scores, article read dates, and time spent.
23	Sprint 3	Adaptive Feedback Based on Trends	User Story 15: As a student, I want to receive adaptive feedback based on my performance trends over time so I can improve continuously.	The app provides adaptive feedback based on overall performance and trends. Feedback is more tailored as the system learns from the user's progress and actions.
24	Sprint 3	User Authentication	Technical Story 9: Implement user authentication and profile management.	Secure user authentication system with account creation, login, and password recovery. Ensure user progress and data are stored across sessions.
25	Sprint 3	Refined ML for Long-Term Learning	Technical Story 10: Refine the machine learning model for adaptive feedback based on long-term learning trends.	The ML model adapts based on user learning patterns and feedback. Ensure the model evolves based on long-term trends and personalized learning data.

Product Backlog

S.NO	Sprint	Feature	User Story/Technical Story	Acceptance Criteria
26	Sprint 3	Reminders & Notifications	Technical Story 11: Implement reminders and notifications for spaced repetition and content recommendations.	Notifications are sent based on spaced repetition schedules and content recommendations. Ensure reminders are relevant and personalized to user learning paths.
27	Sprint 3	Final UI/UX Improvements	Technical Story 12: Finalize UI/UX improvements for a polished, engaging user experience.	Refine the user interface for a smooth, intuitive experience. Ensure the app is fully responsive and accessible on different devices.



Sprint 3



#	Sprint	Story/Task	Story Points	Acceptance Criteria
1	Sprint 3	User Story 11: User Accounts & Syncing	8 Points	Users can create accounts with email/password. User progress, preferences, and recommendations are saved and synced across devices.
2	Sprint 3	User Story 12: Adaptive Study Paths	13 Points	The app uses ML to analyze long-term trends and dynamically adjust learning paths. Preferences are stored, and content is adapted based on user learning styles.
3	Sprint 3	User Story 13: Reminders for Spaced Repetition & Recommendations	5 Points	Notifications prompt users for spaced repetition and recommended articles. Reminders are personalized based on past performance and study schedules.
4	Sprint 3	User Story 14: Learning History	8 Points	Users can access their study history, including completed articles and quizzes. History includes quiz scores, article read dates, and time spent.
5	Sprint 3	User Story 15: Adaptive Feedback Based on Trends	8 Points	The app provides adaptive feedback based on overall performance and trends. Feedback is more tailored as the system learns from the user's progress and actions.

Sprint 3

#	Sprint	Story/Task	Story Points	Acceptance Criteria
6	Sprint 3	Technical Story 9: User Authentication	3 Points	Secure user authentication system with account creation, login, and password recovery. Ensure user progress and data are stored across sessions.
7	Sprint 3	Technical Story 10: Refined ML for Long-Term Learning	8 Points	The ML model adapts based on user learning patterns and feedback. Ensure the model evolves based on long-term trends and personalized learning data.
8	Sprint 3	Technical Story 11: Reminders & Notifications	5 Points	Notifications are sent based on spaced repetition schedules and content recommendations. Ensure reminders are relevant and personalized to user learning paths.
9	Sprint 3	Technical Story 12: Final UI/UX Improvements	3 Points	Refine the user interface for a smooth, intuitive experience. Ensure the app is fully responsive and accessible on different devices.
10	Sprint 2 (Carryover)	User Story 9: Targeted Feedback on Quizzes	5 Points	Detailed feedback is provided for each quiz question. Feedback explains why certain answers are correct/incorrect.

Sprint 3



#	Sprint	Story/Task	Story Points	Acceptance Criteria
11	Sprint 2 (Carryover)	User Story 10: Dynamic Content Adjustment	8 Points	The difficulty of content increases if the user performs well. If a student struggles, simpler articles or review content is recommended.
12	Sprint 2 (Carryover)	Technical Story 8: Quiz Feedback Mechanism	5 Points	Implement feedback mechanisms to explain quiz results. Feedback is both constructive and designed to reinforce learning.



Test Cases

Story/Task	Test Case ID	Test Case Description	Preconditions	Steps	Expected Result	Status
User Story 11: User Accounts & Syncing	TC-11-01	Test account creation with valid email and password	None	<ol style="list-style-type: none">1. Navigate to the signup page.2. Enter a valid email and password.3. Click "Sign Up".	Account is successfully created, and the user is redirected to the dashboard.	Pass
User Story 11: User Accounts & Syncing	TC-11-02	Test account syncing across devices	Account already created	<ol style="list-style-type: none">1. Log in to the account on Device A.2. Perform some actions (e.g., complete a quiz).3. Log in on Device B.	Progress and preferences are consistent across devices.	Fail
User Story 12: Adaptive Study Paths	TC-12-01	Test ML-based study path adjustment	User has completed a sufficient number of quizzes	<ol style="list-style-type: none">1. Complete quizzes with varying results.2. Observe the recommended study path.	The study path dynamically adjusts based on long-term trends and preferences.	Pass
User Story 12: Adaptive Study Paths	TC-12-02	Test preference-based content adaptation	User has updated preferences	<ol style="list-style-type: none">1. Update preferences in the settings.2. Observe the changes in recommended content.	Recommendations align with updated preferences.	Pass



Test Cases

Story/Task	Test Case ID	Test Case Description	Preconditions	Steps	Expected Result	Status
User Story 13: Reminders for Spaced Repetition & Recommendations	TC-13-01	Test spaced repetition notification	Spaced repetition content exists for the user	1. Enable notifications in the app. 2. Wait for the scheduled reminder. 3. Observe the notification.	User receives a notification for spaced repetition.	Fail
User Story 13: Reminders for Spaced Repetition & Recommendations	TC-13-02	Test recommendation notification	Recommendations available	1. Enable notifications in the app. 2. Wait for the scheduled reminder. 3. Observe the notification.	User receives a personalized recommendation notification.	Pass
User Story 14: Learning History	TC-14-01	Test access to learning history	User has completed quizzes or read articles	1. Navigate to the learning history page. 2. Observe displayed data.	History includes completed articles, quizzes, scores, and time spent.	Pass
User Story 14: Learning History	TC-14-02	Test accurate history display	Multiple articles/quizzes completed	1. Complete multiple articles and quizzes. 2. Verify the accuracy of history data.	All activities are accurately displayed in the history.	Pass

Test Cases

Story/Task	Test Case ID	Test Case Description	Preconditions	Steps	Expected Result	Status
User Story 15: Adaptive Feedback Based on Trends	TC-15-01	Test feedback based on performance trends	Sufficient data exists for trend analysis	1. Complete multiple quizzes. 2. Observe the feedback provided in the dashboard or after quizzes.	Feedback reflects long-term trends and offers actionable insights.	Fail
Technical Story 9: User Authentication	TC-09-01	Test login functionality	Account exists	1. Navigate to the login page. 2. Enter valid credentials. 3. Click "Log In".	User successfully logs in and is redirected to the dashboard.	Pass
Technical Story 9: User Authentication	TC-09-02	Test password recovery	Account exists	1. Navigate to the "Forgot Password" page. 2. Enter registered email. 3. Submit the form.	Password recovery email is sent to the user.	Pass
User Story 9: Targeted Feedback on Quizzes	TC-09-01	Test detailed feedback for correct answers	Quiz completed	1. Answer questions in a quiz. 2. Observe feedback for correct answers.	Feedback explains why the answer is correct.	Pass

Test Cases

Story/Task	Test Case ID	Test Case Description	Preconditions	Steps	Expected Result	Status
User Story 9: Targeted Feedback on Quizzes	TC-09-02	Test detailed feedback for incorrect answers	Quiz completed	1. Answer questions in a quiz. 2. Observe feedback for incorrect answers.	Feedback explains why the answer is incorrect and provides resources.	Pass
User Story 10: Dynamic Content Adjustment	TC-10-01	Test difficulty adjustment based on user performance	User has completed quizzes	1. Complete quizzes with good scores. 2. Observe the next recommended content.	Recommended content increases in difficulty for high scores.	Pass
User Story 10: Dynamic Content Adjustment	TC-10-02	Test content simplification for struggling users	User has performed poorly in quizzes	1. Complete quizzes with low scores. 2. Observe the next recommended content.	Simplified or review content is recommended.	Pass

Sprint 3 Completed Stories

Story/Task	Story Points
User Story 11: User Accounts & Syncing	8 Points
User Story 12: Adaptive Study Paths	13 Points
User Story 13: Reminders for Spaced Repetition & Recommendations	5 Points
User Story 14: Learning History	8 Points
User Story 15: Adaptive Feedback Based on Trends	8 Points
Technical Story 9: User Authentication	3 Points
Technical Story 10: Refined ML for Long-Term Learning	8 Points
Technical Story 11: Reminders & Notifications	5 Points
Technical Story 12: Final UI/UX Improvements	3 Points

Sprint 3 Not Completed Stories

Story/Task	Story Points
User Story 13: Reminders for Spaced Repetition & Recommendations	5 Points
User Story 15: Adaptive Feedback Based on Trends	8 Points
Technical Story 11: Reminders & Notifications	5 Points

Team Velocity - This Sprint

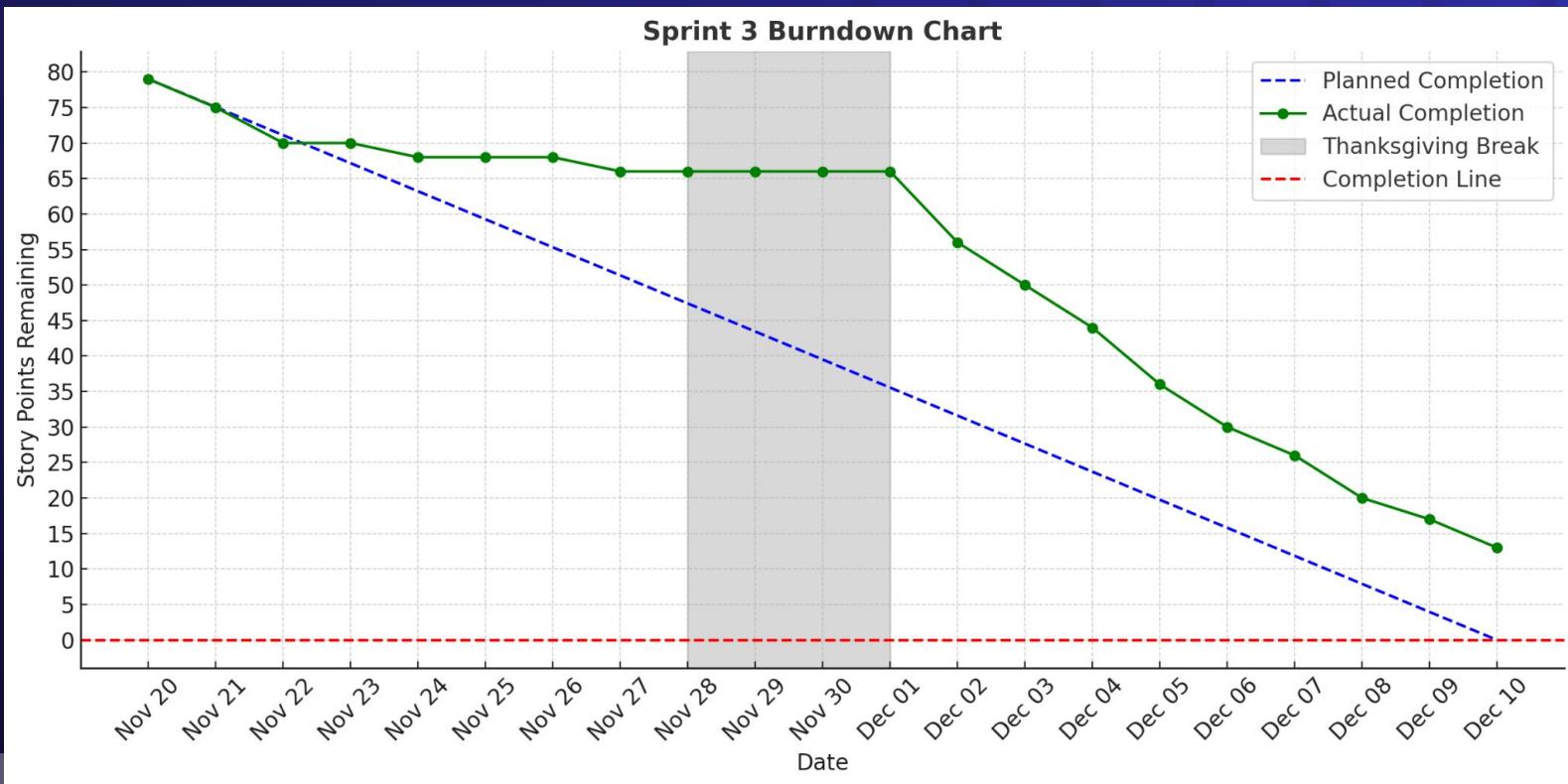
Total Story Points Completed: 66 Points

Team's Historical Velocity (Average)

Historical Velocity (Average): Calculated by averaging the total points completed across previous sprints (excluding Sprint 0).

- **Sprint 1:** 42 points
- **Sprint 2:** 42 points
- **Sprint 3:** 66 points
- **Average Velocity:** 50 story points

Burndown Chart - Sprint 3



Completed/Committed Ratio

- **Committed:** 79 story points
- **Completed:** 66 story points
- **Ratio:** $(66 / 79) * 100 = 83.54\%$



Completed/Committed Ratio - Average and Historical

- **Sprint 1:** 100% completion (42 out of 42 points)
- **Sprint 2:** 70% completion (42 out of 60 points)
- **Sprint 3:** 83.54% completion (66 out of 79 points)
- **Average Completed/Committed Ratio:** $(100 + 70 + 83.54) / 3 = 84.51\%$



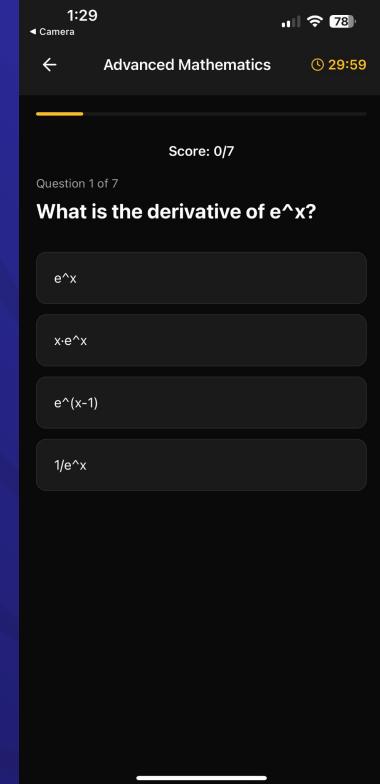
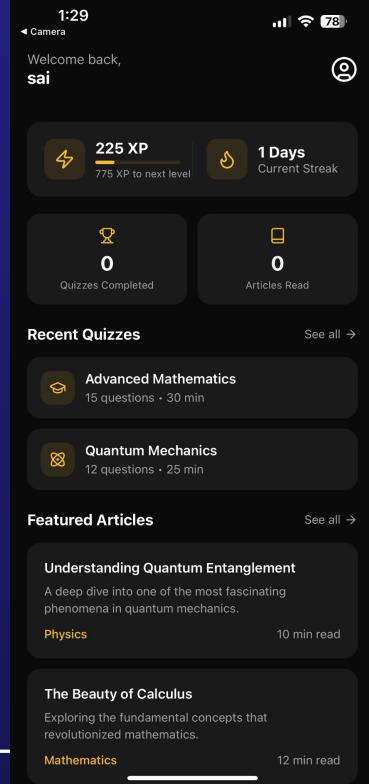
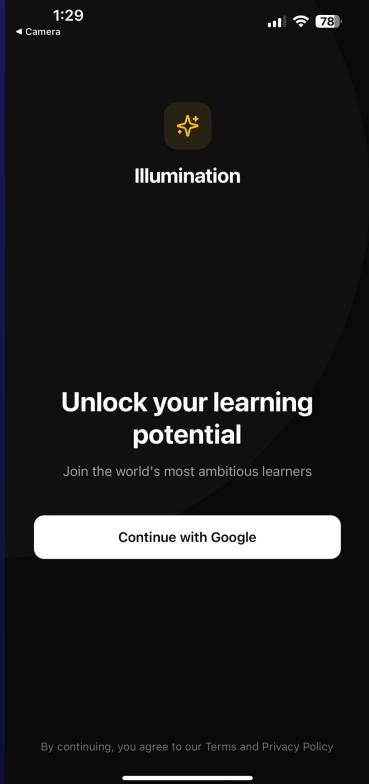
Retrospective

The screenshot shows a retrospective session on IdeaBoardz for Sprint 3. At the top, there are five video feeds of team members: Harshitha Rangaraju, Srinivas Reddy Bapathu, Anuhyaa Marapalli, Rithin bajuri, and Snehalatha Boothpur.

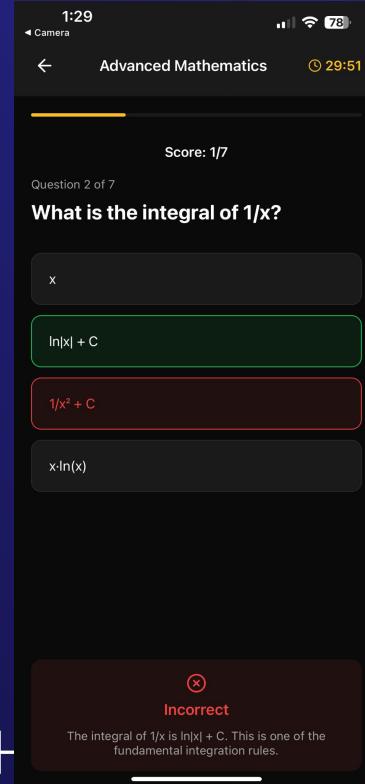
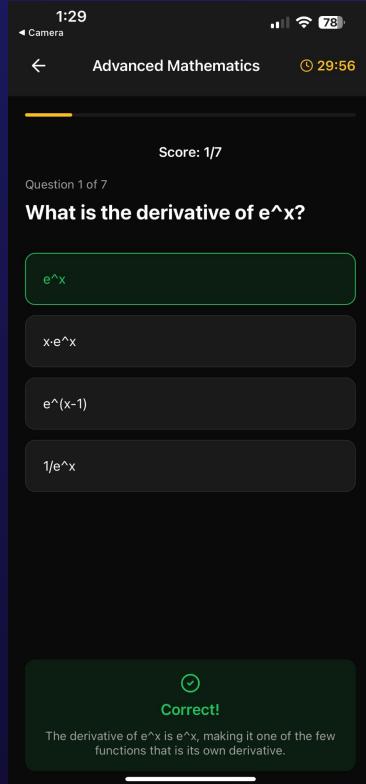
The main interface displays the following sections:

- What went well:**
 - Tools & Processes: team collaboration (+2), Learning and Growth (+4), understanding of the user stories (+3), comparing previously working on tasks this time were good (+2).
 - Time management (+2), team has encountered the challenges (+2), Collaborated well on last minute errors (+2), better involvement of everyone compared to previous sprints (+2).
- What can be improved:**
 - Documenting every commit in the github which makes ease to the work (+4), better understanding of ML models (+3), communication gaps (+1), we had less meetings than required (+1), starting and completion of tasks (+1).
 - time management of tasks (+1), need to focus on main tasks (+2), There were some problems faced with merge conflicts when pushing the code in github (+2), finding and using better system for updating of tasks (+4), update sprint task daily (+2).
- Action Items:**
 - Update the task regularly (+0), Make a documentation of your tasks as part of completing Regular Meetings (+0).
 - Before pushing your work in github let everyone know (+0).

App Screenshots



App Screenshots



App Screenshots

This screenshot shows the 'Featured Articles' section of the app. At the top, there's a header with the time '1:30', signal strength, battery level at 77%, and a camera icon. Below the header, the title 'Featured Articles' is displayed. The main content area is divided into two columns. The left column is for 'Physics' and the right column is for 'Mathematics'. Each column contains three article cards.

- Physics:**
 - Understanding Quantum Entanglement**: A deep dive into one of the most fascinating phenomena in quantum mechanics... by Dr. Sarah Chen, duration 10 min.
 - The Theory of Relativity Explained**: Breaking down Einstein's famous theory into digestible concepts... by Prof. James Miller, duration 15 min.
- Mathematics:**
 - The Beauty of Prime Numbers**: Exploring the patterns and mysteries behind prime numbers... by Dr. Michael Chang, duration 8 min.
 - Understanding Calculus Intuitively**: A visual approach to understanding the fundamentals

This screenshot shows the details of the 'Introduction to Physics' article. At the top, it says '1:30', 'Camera', and has a green checkmark icon. Below the header, the title 'Introduction to Physics' is shown. A progress bar indicates a duration of '15 min' and a status of 'Completed'. The main content area contains several sections of text and headings.

- What is Physics?**

Physics is the natural science that studies matter, its fundamental constituents, its motion and behavior through space and time, and the related entities of energy and force.
- Why Study Physics?**

Physics helps us understand the world around us. It explains everything from why apples fall from trees to how smartphones work. Physics principles are behind many modern technologies and continue to drive innovation in fields like medicine, engineering, and computing.
- Main Branches of Physics**
 - Classical Mechanics: Studies motion and forces
 - Thermodynamics: Deals with heat and energy
 - Electromagnetism: Covers electricity and magnetism
 - Quantum Mechanics: Explores atomic and subatomic particles

This screenshot continues from the previous one, showing the 'Introduction to Physics' article. It includes the same header and progress bar. The main content area is identical to the previous screenshot. At the bottom of the screen, there is a large yellow button with the text 'Mark as Complete'.

API

The screenshot shows the Postman application interface. At the top, there's a navigation bar with 'Home', 'Workspaces', 'API Network', a search bar 'Search Postman', and various account and settings icons. A prominent 'Upgrade' button is visible.

The main workspace is titled 'Team Workspace'. On the left, there's a sidebar with 'Collections' (empty), 'Environments' (empty), and 'History' (empty). The central area shows an 'Overview' tab for a collection named 'GET http://localhost:3000/api/*'. Below it, a request card for 'http://localhost:3000/api/health' is displayed, showing a 'GET' method and the URL. The 'Headers' tab indicates 7 headers are present.

The 'Body' tab shows a JSON response:

```
1 [ {  
2     "status": "ok"  
3 } ]
```

At the bottom, there are footer links for 'Postbot', 'Runner', 'Start Proxy', 'Cookies', 'Vault', 'Trash', and other utility icons.

API

The screenshot shows the Postman application interface. At the top, there's a navigation bar with Home, Workspaces, API Network, a search bar for 'Postman', and various user account options like 'Invite', 'Upgrade', and 'Logout'. Below the header is a left sidebar titled 'Team Workspace' containing sections for Collections, Environments, and History. The main workspace is titled 'http://localhost:3000/api/subjects' and shows a 'GET' request. The 'Params' tab is selected, showing a single parameter 'Key'. The 'Body' tab contains a JSON response with two subjects: Mathematics and Physics. The 'Cookies' tab is also visible. At the bottom, there are tabs for Body, Cookies, Headers (8), and Test Results, along with status information (Status: 200 OK, Time: 22 ms, Size: 464 B) and a 'Save as example' button.

```
[{"id": "1", "name": "Mathematics", "icon": "calculator", "color": "#58CC02"}, {"id": "2", "name": "Physics", "icon": "planet", "color": "#CE82FF"}]
```

Postman interface elements include: Home, Workspaces, API Network, Search Postman, Invite, Upgrade, Logout, Team Workspace, New, Import, Overview, GET http://localhost:3000/api/subjects, API documentation, Save, Send, Params, Authorization, Headers (7), Body, Pre-request Script, Tests, Settings, Cookies, Body, Cookies, Headers (8), Test Results, Status: 200 OK, Time: 22 ms, Size: 464 B, Save as example, Pretty, Raw, Preview, Visualize, JSON, Online, Find and replace, Console, Postbot, Runner, Start Proxy, Cookies, Vault, Trash.

API

The screenshot shows the Postman application interface. At the top, there's a navigation bar with Home, Workspaces, API Network, a search bar, and various global settings like Invite, Upgrade, and environment selection. The main workspace is titled "Team Workspace". On the left sidebar, there are sections for Collections, Environments, and History. The central area displays a request configuration for a GET method to the URL `http://localhost:3000/api/subjects/1/articles`. The "Params" tab is selected, showing a single query parameter named "Key". Below the request, the response section is visible, showing a status of 200 OK with a response body containing two articles.

GET http://localhost:3000/api/subjects/1/articles

Params

Key	Value	Description
Key	Value	Description

Body

```
[{"id": "m1", "subjectId": "1", "title": "Introduction to Calculus", "content": "Calculus is the mathematical study of continuous change...", "xp": 20}, {"id": "m2", "subjectId": "1", "title": "Linear Algebra Basics", "content": "Linear algebra is the branch of mathematics concerning linear equations...", "xp": 15}]
```

Body Cookies Headers (8) Test Results

Status: 200 OK Time: 12 ms Size: 567 B Save as example

Online Find and replace Console

Postbot Runner Start Proxy Cookies Vault Trash

API

The screenshot shows the Postman application interface. On the left, there's a sidebar titled "Team Workspace" with sections for Collections, Environments, and History. The main area is titled "Overview" and shows a "POST" request to "http://localhost:3000/api/review-marks". The "Body" tab is selected, displaying a JSON response:

```
1 {
2   "userId": "user1",
3   "markedArticles": [
4     "m1"
5   ]
6 }
```

At the bottom, there are navigation links for "Online", "Find and replace", and "Console", along with various status indicators and icons for "Postbot", "Runner", "Start Proxy", "Cookies", "Vault", "Trash", and "Help".

Wiki Link

<https://github.com/htmw/2024F-Tech-Titans/wiki>

Live Demo

