Project Plan - Diet Code

Project Objective

The objective of the project is to develop an intelligent tutoring app that revolutionizes the way students learn by leveraging the power of artificial intelligence and adaptive learning techniques. The app aims to provide personalized and interactive learning experiences to students across various subjects and levels of difficulty.

The primary goal of the project is to create a platform that understands and caters to individual student needs, preferences, and learning styles. By utilizing advanced algorithms and an OpenAI model, the app will generate adaptive lessons, quizzes, and exercises that align with each student's learning goals and adapt in real-time based on their performance and progress. This personalized approach ensures that students receive content and guidance tailored to their unique requirements, maximizing their engagement and learning outcomes.

The project seeks to address the limitations of traditional educational approaches, where one-size-fits-all teaching methods often fail to fully engage and support students with diverse learning needs. By incorporating an intelligent tutoring system, the app will provide customized feedback, guidance, and resources, taking into account each student's learning style, mistakes, and progress. This individualized approach aims to enhance comprehension, retention, and overall learning effectiveness.

Additionally, the project aims to track and visualize students' learning outcomes, strengths, and weaknesses. By analyzing data on student performance and progress, the app will generate insights and recommendations for improvement, highlighting areas where students can focus their efforts to enhance their understanding and skills. This data-driven approach empowers students to take ownership of their learning journey and make informed decisions on their educational path.

Ultimately, the project seeks to create an educational experience that transcends the boundaries of traditional classroom settings. By providing students with an intelligent and adaptable learning companion, the app aims to foster a love for learning, promote self-directed learning, and enable students to achieve their full potential. Through the power of AI and personalized instruction, the project seeks to revolutionize education, making it more accessible, engaging, and effective for students around the world.

Roles

In our project, we have implemented a distributed role assignment strategy to ensure robustness and coverage across different areas of responsibility. Each role within the team has been carefully assigned at least two developers, allowing for effective collaboration and knowledge sharing while providing redundancy and flexibility in case of absences or increased workload. This approach ensures that no single team member becomes a bottleneck or single point of failure, as there is always another developer available to provide support, share insights, and contribute to the assigned role's tasks. By distributing the roles in this manner, we promote a culture of teamwork, collaboration, and shared ownership, enabling smooth progress and continuous development even in the face of unforeseen circumstances. Additionally, this approach fosters cross-training and skill diversification among team members, further enhancing our collective capabilities and adaptability.

Roles	Dev1	Dev2
Front-end	Jayesh Bhatt	Sehba Nourein
Back-End	Rayyan	Ross Murphy
Cloud	Kartik Dhongadi	Sehba Nourein
Administration	Kartik Dhongadi	Rahul Kantode
Data Science & ML	Rahul Kantode	Rayyan
Integration	Ross Murphy	Jayesh Bhatt

Architecture

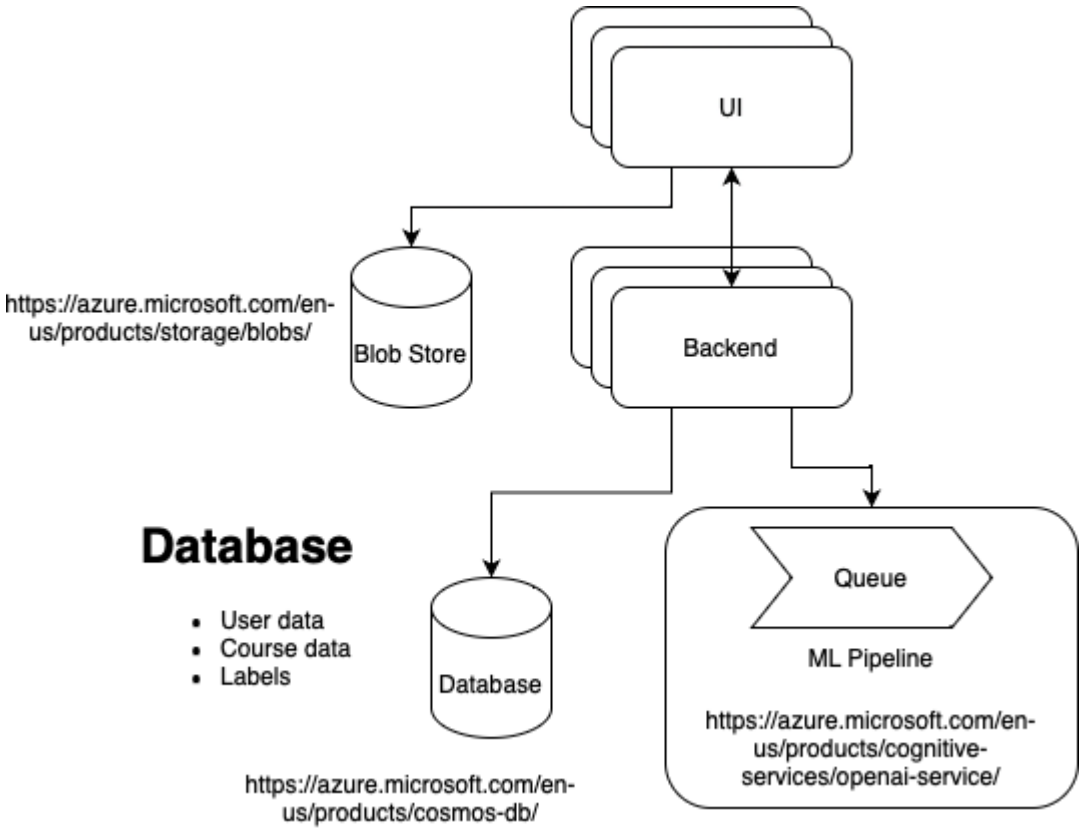
In our project, we have chosen to leverage the power of Azure Cosmos DB and Azure Cloud Service to build a robust and scalable architecture .Azure Cloud Service is a platform-as-a-service (PaaS) offering that allows developers to deploy and manage scalable applications without worrying about the underlying infrastructure.

Benefits of Azure Cloud Service:

- **Simplified Deployment and Management**: Azure Cloud Service abstracts away the infrastructure concerns, providing a simplified deployment model. It automatically handles underlying infrastructure management, such as operating system updates and

patching, allowing developers to focus on application development and business logic.

- **Scalability and Load Balancing**: Azure Cloud Service enables horizontal scaling by allowing the application to run across multiple instances, providing increased performance and load balancing capabilities.
- **Security and Compliance**: Azure Cloud Service provides various security features, including network isolation, access controls, and integration with Azure Active Directory, ensuring a secure environment for application deployment.
- **Monitoring and Diagnostics**: Azure Cloud Service offers built-in monitoring and diagnostics capabilities, allowing developers to gain insights into application health, performance, and resource usage



Data

For the development and operation of the intelligent tutoring app, we will utilize a combination of existing educational data and data generated through user interactions. The data sources include textbooks, lecture notes, online resources, and educational datasets. These materials will serve as the foundation for training the OpenAI language model and generating adaptive lessons, quizzes, and exercises.

In addition to the pre-existing data, the app will generate data through user interactions such as answers to quizzes and exercises, preferences, and performance metrics. This user-generated data will provide valuable insights into individual learning patterns, progress, and areas of improvement.

To evaluate the effectiveness of the intelligent tutoring app, we will require evaluation data that measures various aspects, including learning outcomes, user satisfaction, and engagement. This data will be collected through user feedback surveys, performance metrics, and comparison studies with existing educational approaches. We will ensure that the evaluation data is diverse and representative of the target user population to obtain meaningful and reliable results.

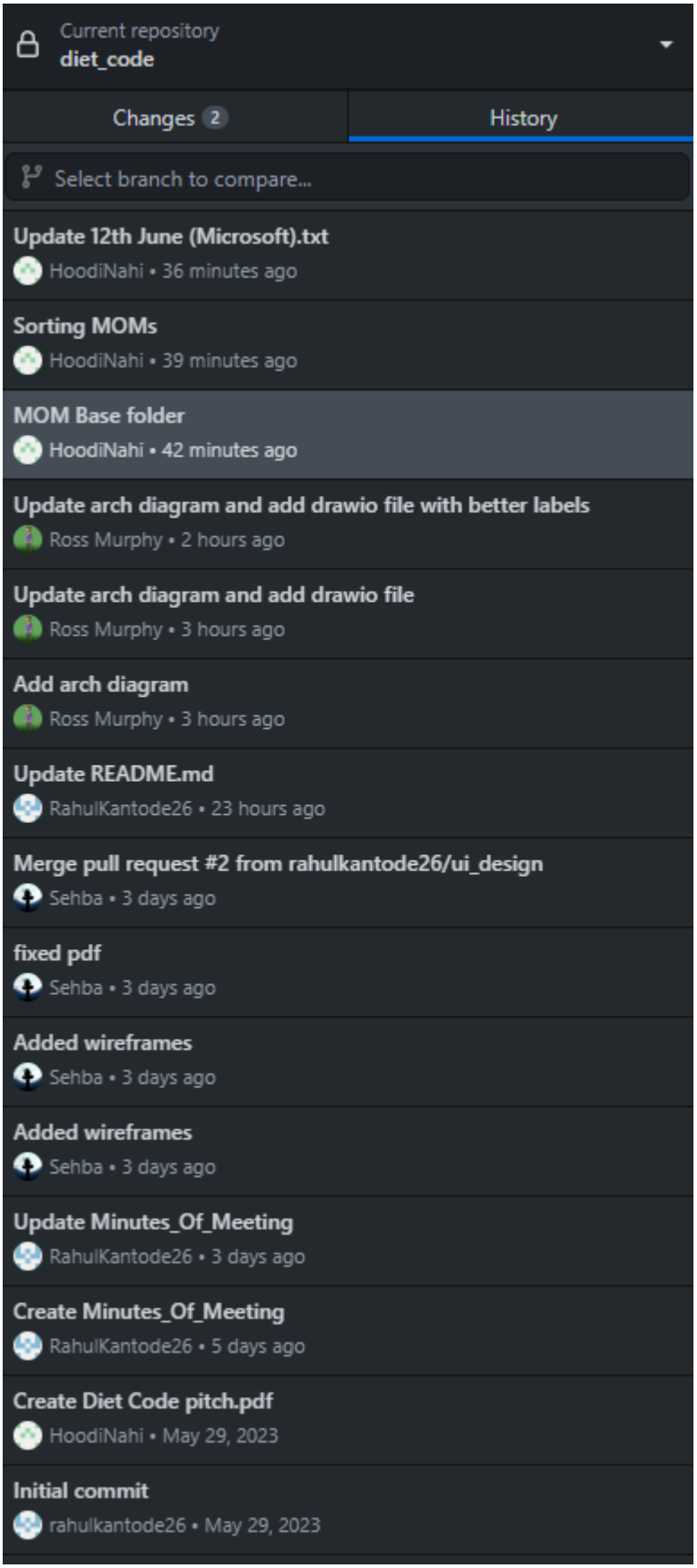
Furthermore, we will adhere to privacy regulations and anonymize any personally identifiable information in the collected data to maintain data privacy and confidentiality.

The combined use of existing educational data and user-generated data, along with the evaluation data, will provide a robust foundation for the development, assessment, and refinement of the intelligent tutoring app, ensuring its effectiveness in addressing the learning challenges faced by students.

Github

Since we started ourproject, members of our team have consistently made regular, non-arbitrary commits to the team GitHub repository, demonstrating their active participation and contribution. This evidence is evident through a variety of valuable additions to the repository, such as commits containing meeting minutes, design diagrams, sections of the project plan document, figures, and other essential documentation. By regularly committing and pushing these updates, team members have ensured that our collaborative efforts are transparent, well-documented, and easily accessible to everyone involved. The commit history showcases the team's dedication to maintaining a shared repository of knowledge and progress, fostering effective communication and collaboration among all members.

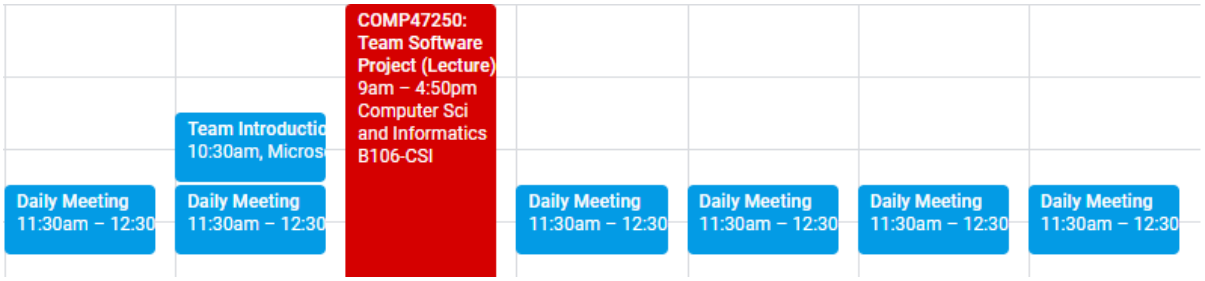
GitHub link: https://github.com/rahulkantode26/diet_code/tree/main


Current repository
diet_code
Changes 2
History
Select branch to compare...
Update 12th June (Microsoft).txt
HoodiNahi • 36 minutes ago
Sorting MOMs
HoodiNahi • 39 minutes ago
MOM Base folder
HoodiNahi • 42 minutes ago
Update arch diagram and add drawio file with better labels
Ross Murphy • 2 hours ago
Update arch diagram and add drawio file
Ross Murphy • 3 hours ago
Add arch diagram
Ross Murphy • 3 hours ago
Update README.md
RahulKantode26 • 23 hours ago
Merge pull request #2 from rahulkantode26/ui_design
Sehba • 3 days ago
fixed pdf
Sehba • 3 days ago
Added wireframes
Sehba • 3 days ago
Added wireframes
Sehba • 3 days ago
Update Minutes_Of_Meeting
RahulKantode26 • 3 days ago
Create Minutes_Of_Meeting
RahulKantode26 • 5 days ago
Create Diet Code pitch.pdf
HoodiNahi • May 29, 2023
Initial commit
rahulkantode26 • May 29, 2023

Team Management

Daily Team Meeting:

In our team management approach, we have established a daily meeting schedule to ensure regular updates and maintain open lines of communication. While we acknowledge that coordinating everyone's schedules can be challenging due to individual commitments we make concerted efforts to accommodate everyone's availability as much as possible. We understand the importance of active participation and collaboration from all team members to maintain project momentum and address any emerging issues promptly. In situations where scheduling conflicts arise, we encourage team members to provide updates asynchronously, leveraging digital communication tools and shared project documentation. By prioritizing regular communication and staying flexible in our approach, we strive to foster a supportive and collaborative environment that maximizes team engagement and keeps everyone informed about project progress and developments.



Well structured Mintues for these meeting are also uploaded in our GitHub.

Jira Tool:

In our project management approach, we utilize Jira as our primary tool for organizing and tracking our sprints and tickets. Jira serves as a central hub where we capture, prioritize, and manage our work items in an efficient and systematic manner. With Jira, we can create user stories, tasks, and sub-tasks, assign them to team members, and set due dates and priorities.

By leveraging Jira's agile project management features, we can plan and execute our sprints effectively. We break down our project into manageable chunks, known as tickets or issues, which represent specific pieces of work to be completed. These tickets are organized on a Kanban board or within a Scrum board, depending on our chosen methodology. This enables us to visualize the workflow, track progress, and quickly identify any bottlenecks or impediments.

Jira provides various features that enhance our collaboration and productivity. We can use comments and attachments to provide detailed information, updates, and relevant documentation within each ticket. Additionally, we can assign tickets to team members, allowing for clear ownership and accountability.

By utilizing Jira as our project management tool, we streamline our workflow, enhance team collaboration, and maintain a structured approach to sprint planning and execution. This ultimately contributes to improved efficiency, effective task management, and successful project delivery.