Youth Development:
Personalized Learning Assistant

Lewisville Community Alliance

Tackling Diverse Learning Challenges in Youth Development

Diverse Learning Needs

Students have varied interests and learning challenges, making it hard to deliver a one-size-fits-all curriculum.

Time Intensive Planning

Developing individualized learning plans is labour-intensive for educators.

Engagement Gap

Low engagement with standardized materials that fail to capture students' unique interests

Goal: To create an **AI-powered solution** that generates customized learning plans, lesson content, and activity suggestions tailored to each student’s profile, interests, and progress.

AI-Powered Personalized Learning Plans

Vision: The Youth Development team can scale and improve the quality of after-school programs by using **Generative AI** to create **personalized learning plans** for each student.

Key Features

Personalization

Automation

Feedback Loop

Scalability

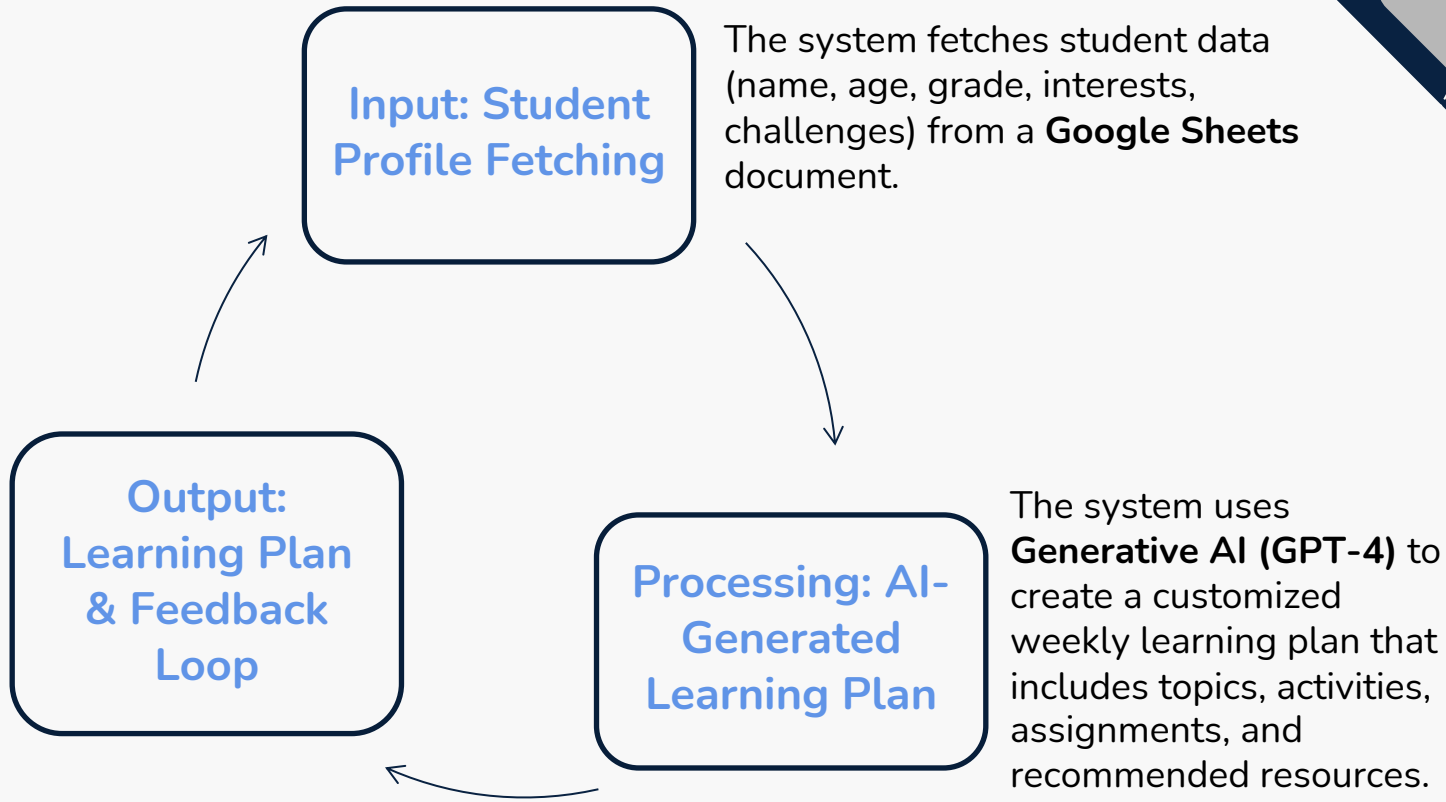
Expected Impact

Enhanced Engagement

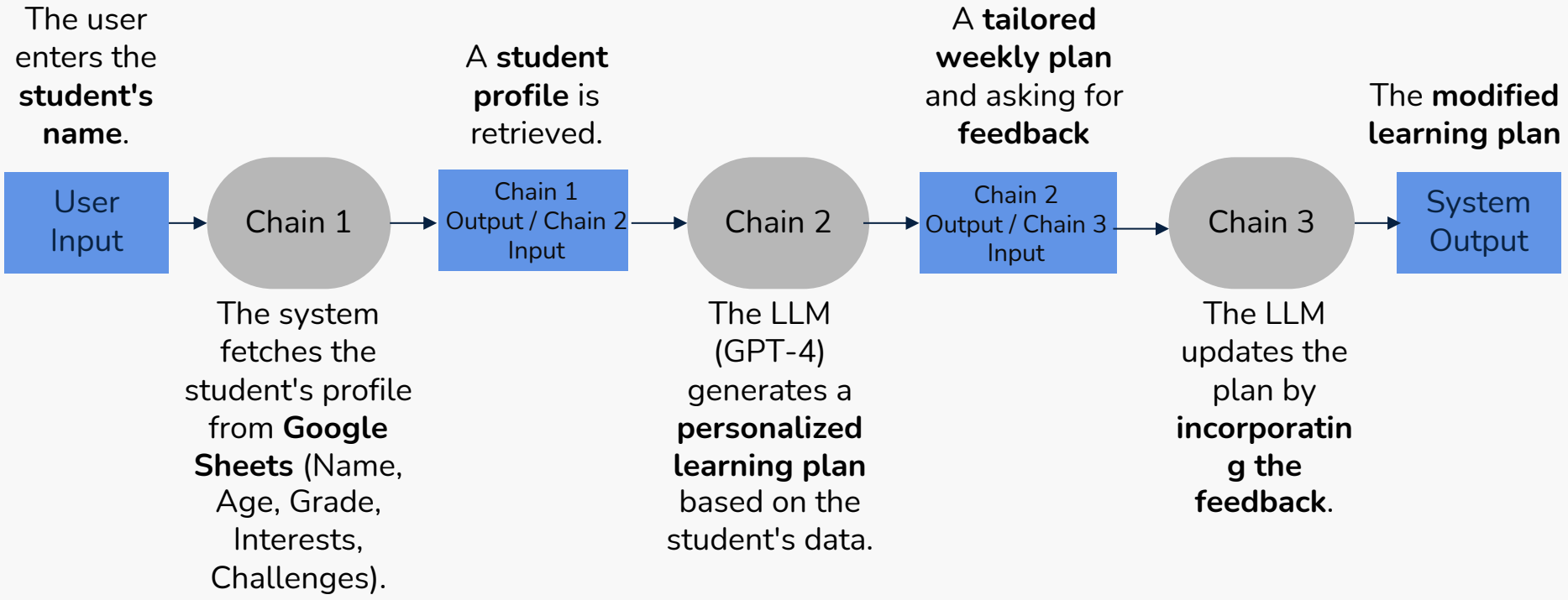
Improved Learning Outcomes

Efficiency Gains

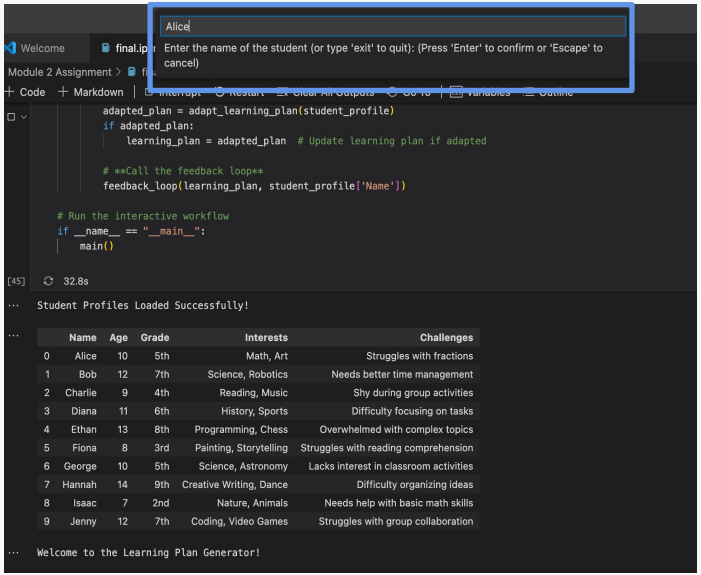
How the AI Solution Works: Workflow Overview



System Functionality: Data Input, Processing, and Output

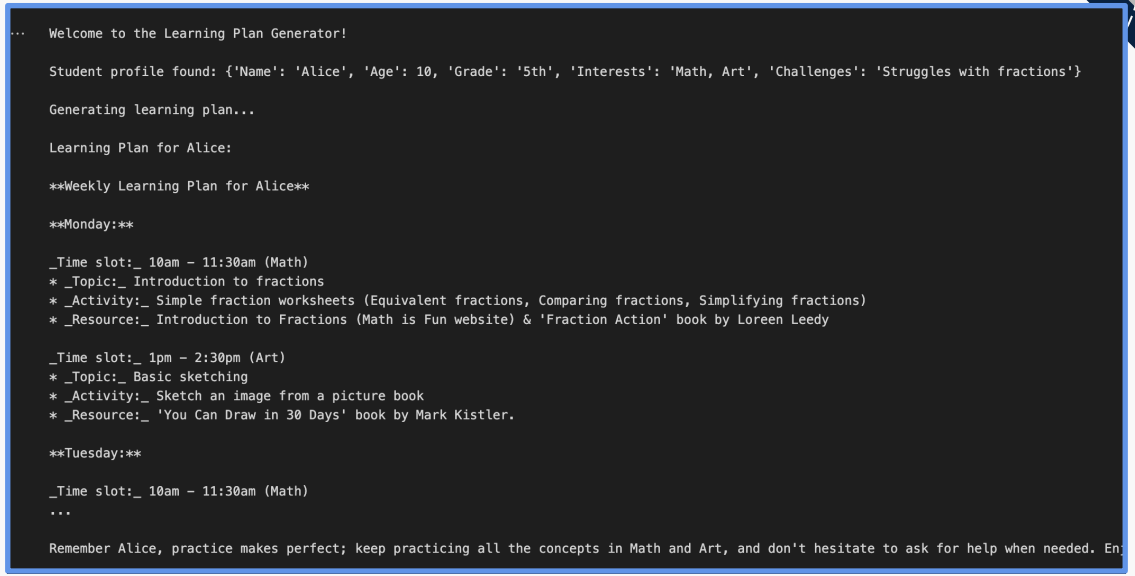


Prototype Demonstration: Generating a Learning Plan



Input Screenshot

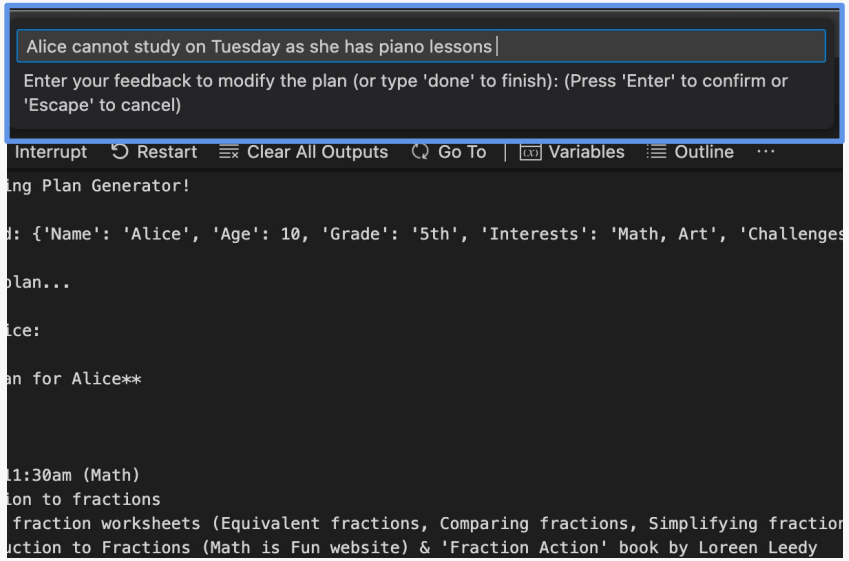
User is **entering a student's name** (e.g., "Alice") to fetch their profile from Google Sheets. This shows how the **input process works**.

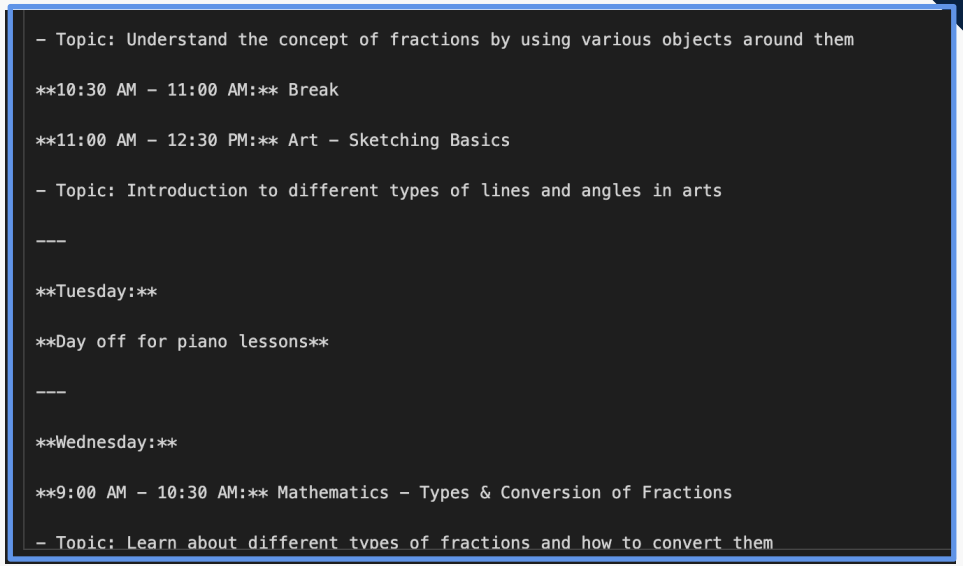


Output Screenshot (Learning Plan Generation)

The system generating a **personalized learning plan** for the student based on their profile (e.g., Alice is 10 years old, grade 5, interested in Math and Art). This screenshot shows part of the **generated learning plan** with topics, activities, and recommended resources.

Prototype Demonstration: Adapting the Learning Plan





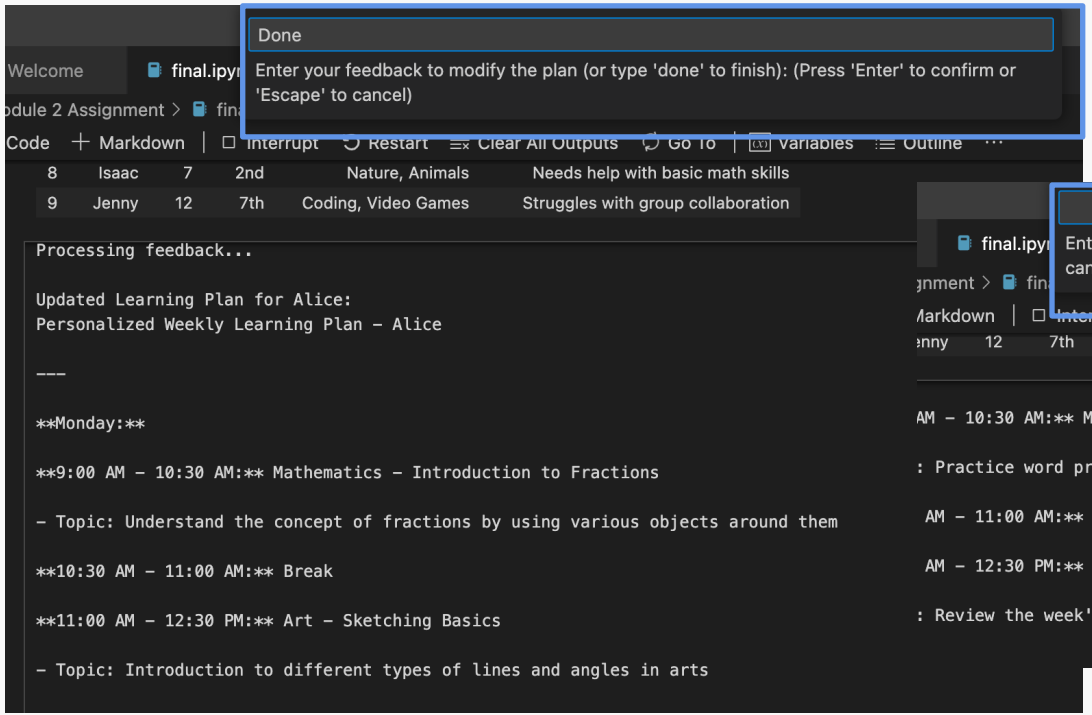
User Feedback Input

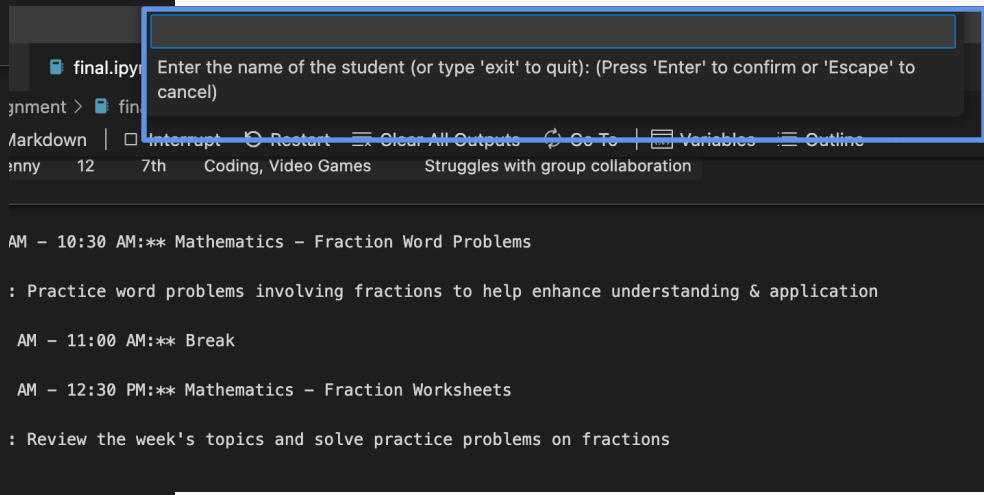
The user gives feedback to modify the learning plan. This screenshot illustrates the feedback loop.

Updated Learning Plan

The modified learning plan after the AI has processed the feedback. The lessons for Tuesday has been shifted .

Prototype Demonstration:
Final Learning Plan and Feedback Iteration





The user is **confirming that they're done modifying the plan** or iterating further based on additional feedback or **can ask the learning plan for another student.**

Key Features and Solutions of the Learning Plan System

Value Proposition

Efficiency Gains
Automates learning plan creation, saving time for teachers and administrators to focus on student engagement.

Cost Reductions
AI-driven plan generation reduces manual effort, cutting costs on administrative tasks and resources.

Customer Satisfaction
Personalized, engaging plans meet students' learning needs, improving satisfaction and outcomes.

Scalability & Flexibility
Scalable solution with easy expansion as student numbers grow; integrates seamlessly with Google Sheets.

Solutions

Personalized Education:
Automates personalized learning plans for each student, ensuring plans are tailored to individual needs.

Efficiency and Time Savings
Saves valuable time by automating plan creation, allowing focus on high-impact student interactions

Increased Engagement:
Boosts student engagement by delivering plans customized to their interests and learning pace

Implementation Challenges

Data Accuracy
Relies on accurate, up-to-date student data.
Mitigation: Regular data audits to ensure consistency.

System Integration:
Challenges if using platforms other than Google Sheets.
Mitigation: Develop flexible integration options and explore API solutions.

Feedback Handling:
Poor or unclear feedback can cause plan modifications issues.
Mitigation: Provide clear feedback guidelines and user training

Scalability:
Increasing student numbers may impact performance.
Mitigation: Monitor performance and use cloud scaling solutions.

Key Implementation Risks and Mitigation Strategies

User Adoption

Resistance to new AI-driven systems.
Mitigation: Offer training and user-friendly interfaces.:

External Dependency

Reliance on Google Sheets and OpenAI API.
Mitigation: Have backup plans and alternative solutions

Data Privacy

Concerns over student data security.
Mitigation: Implement encryption, secure authentication, and compliance with data laws.

Thankyou!