Team Details

    a. **Team name:** We_Are_AmAIdeus
    b. **Team leader name:** Nikhil Krishna L
    c. **Problem statement:** Empowering Teachers in Multi-Grade Classrooms

Brief about the idea

Sahayak is an AI-powered teaching assistant designed for India's multi-grade, under-resourced classrooms. Using Google's Gemini and Firebase Studio, it helps teachers generate localized worksheets, visual aids, explanations, and even exam papers all from a photo, PDF, or a simple prompt in their local language. Built on an agentic architecture with real-time updates, personalization, and offline-friendly Android support, Sahayak becomes the teacher's AI co-pilot, saving time, improving learning, and scaling equity in education.

How different is it from any of the other existing ideas?

While many tools offer content generation or quiz creation, most are **monolithic and language-limited**. Our solution, *Sahayak*, stands apart through:

- A **modular agentic architecture (MCP)** where each AI agent handles a specialized task (content, worksheet, art, QA, exams).
- **Hyperlocal support**, accepting teacher inputs in regional languages and dialects.
- **Multimodal support**, generating differentiated materials from images, text, or speech — all within a teacher's mobile-accessible interface.
- Long-term **personalization via memory**, learning from each teacher's habits, language preferences, and syllabus needs.
- Providing the users **real time updates.**

How will it be able to solve the problem?

Sahayak addresses the core challenges of under-resourced, multi-grade classrooms by acting as an **AI-power** **teaching assistant** that supports teachers across the entire teaching cycle — from content planning to studer engagement:

- **Time-saving & Simplified Preparation:** Teachers can generate hyperlocal stories, lesson plans, and visuals in **own language**, cutting down prep time dramatically.
- **Differentiated Learning Materials:** Using image/PDF uploads (e.g. textbook pages), Sahayak generates **grad appropriate worksheets** for all learning levels in the class — ensuring no student is left behind.
- **Instant Explanations & Visual Aids:** Teachers get quick, accurate explanations with analogies and line diagra **explain complex topics simply.**
- **Assessment Automation:** Sahayak auto-generates **custom practice questions and exam papers** based on t content, aligned with curriculum.
- **Personalization Over Time:** It remembers teacher preferences (language, subject, grade focus) and improve content quality with every use.

By combining all these features in a **modular, agent-based AI system**, Sahayak lightens the teacher's burden w improving student learning outcomes — **making quality education more accessible and scalable** in low-resou settings.

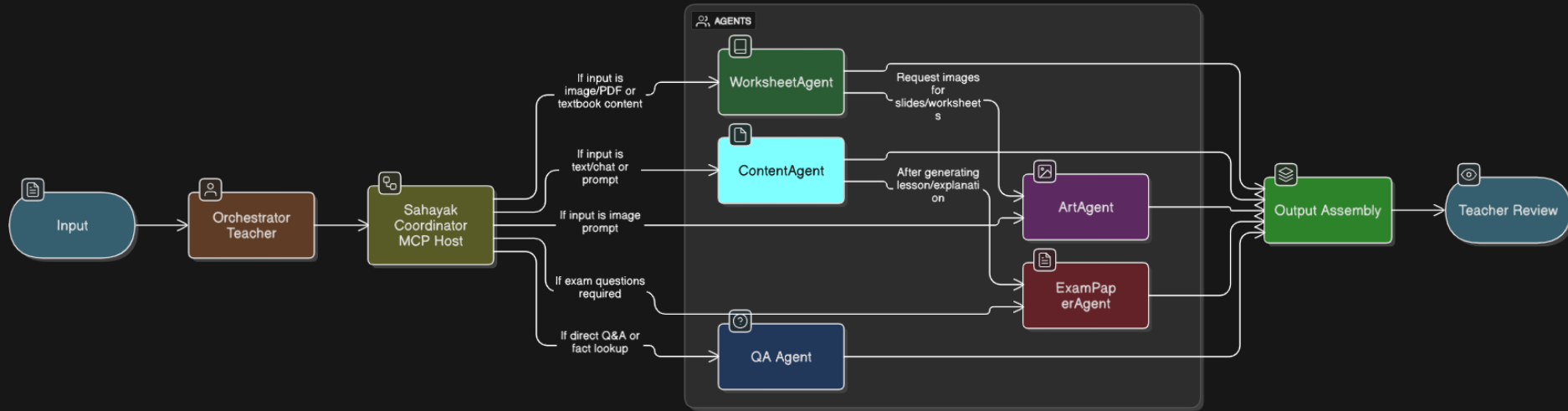Google Cloud   Agentic AI Day   Powered by H2S

USP of the proposed solution

Designed for under-resourced classrooms, Sahayak transforms a smartphone into an AI-powered co-teacher that speaks the teacher's language, adapts to multiple grade levels, and generates everything from board-ready visuals to personalized learning content — all within seconds.

List of features offered by the solution

- **Hyperlocal support**, accepting teacher inputs in regional languages and dialects.
- **Multimodal support**, generating differentiated materials from images, text, or speech — all within a teacher's mobile-accessible interface.
- Long-term **personalization via memory**, learning from each teacher's habits, language preferences, and syllabus needs.
- Providing the users **real time updates.**
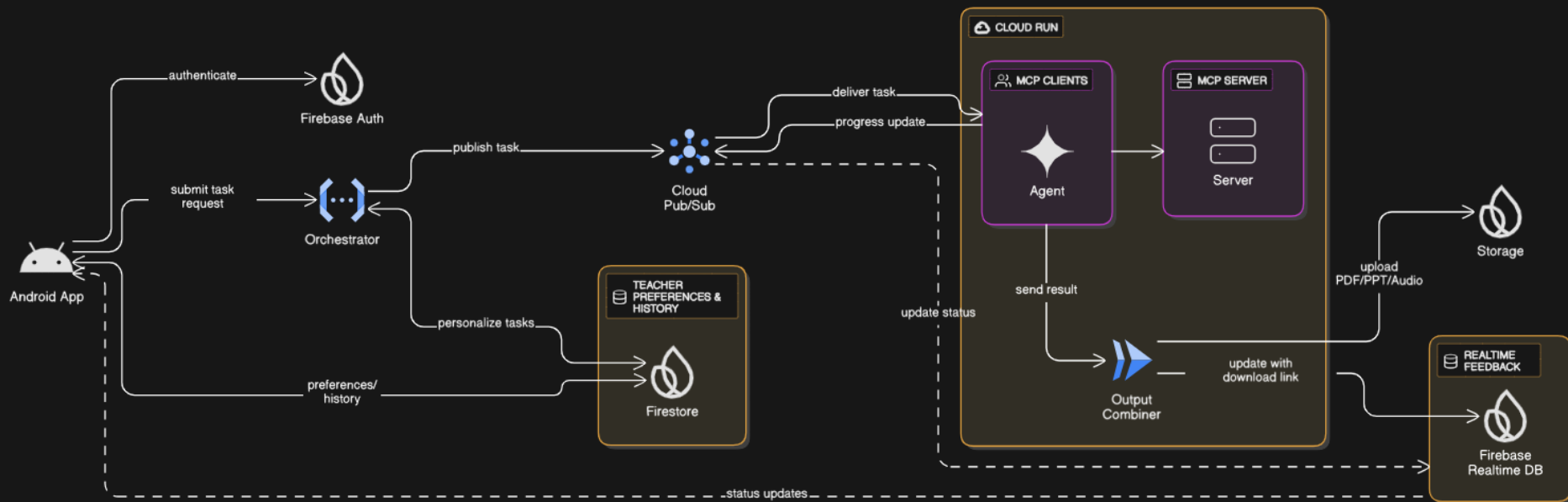
Process flow diagram or use-case diagram

Technologies to be used in the solution

- Vertex AI Gemini
- Document AI
- Cloud TTS
- Cloud Run
- Cloud Pub/Sub
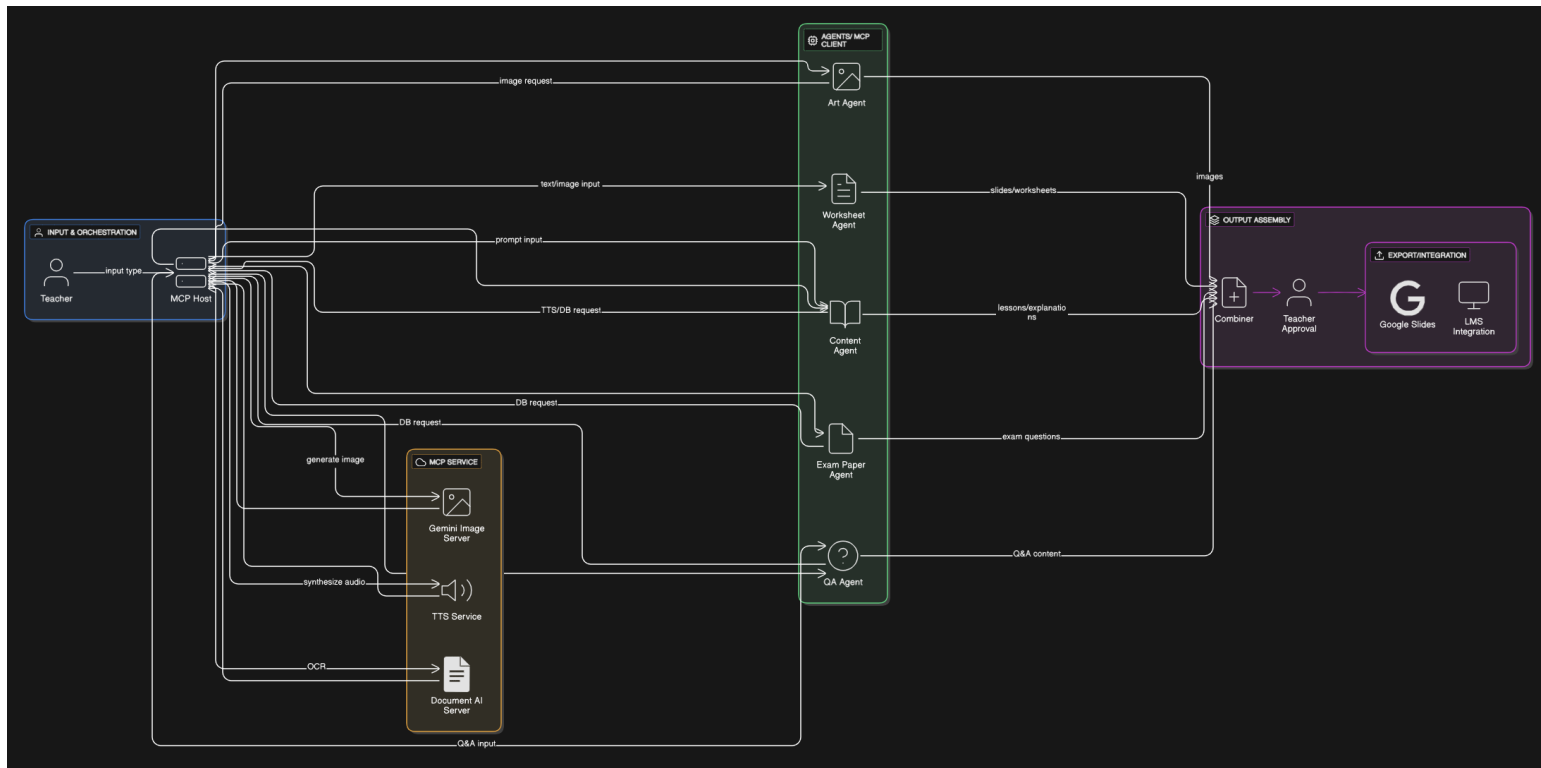- Google Slides API
- Firestore
- Firebase Studio

Architecture diagram of the proposed solution
a) Overall Overview

Architecture diagram of the proposed solution

b) Detailed Overview of the Agentic Architecture

Google Cloud

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Thank you!