**AI Tutor Framework: Business Concept and Strategy**

**1. Executive Summary**

**Build a reusable AI Tutor Framework that allows anyone—educators, coaches, businesses, and organizations—to upload their own content (e.g., PDFs, manuals, textbooks, course material) and instantly generate a smart, chat-based tutor or coach. The AI engages with users in natural language and tracks all interactions for later analysis or progress tracking.**

**This isn't just another GPT wrapper—it's a reusable framework where the IP is not the model, but the method, system, and UX layer built on top of it. It supports multi-user access, persistent history, audit trails, and the ability to train or test users over time.**

**2. Key Use Cases**

* **Educators & Schools: Convert textbooks and syllabi into 24/7 study companions.**
* **Online Coaches: Turn digital courses into interactive accountability tutors.**
* **Businesses: Transform SOPs and onboarding documents into internal training bots.**
* **Authors & Experts: Turn their books into subscription-based tutors.**
* **Tutoring Centers: Offer curriculum-specific tutors for students based on regional exams.**

**3. Core Features**

* **Upload content (PDFs, Docs, URLs, plain text, images with OCR)**
* **Auto-embedding and knowledge indexing (via vector database)**
* **Smart Q&A with memory and personalization per user**
* **Session logging: every prompt/response recorded per user (audit trail)**
* **Analytics dashboard for admins (user engagement, topic frequency)**
* **Multi-user support (admin controls, roles, permissions)**
* **Export transcripts, learning reports, knowledge summaries**
* **Quiz and reflection modes (active recall and coaching)**
* **Master prompt control engine for tutor personality/behavior tuning**

**4. Market Timing: Why Start Now**

**"Why now is the best time" vs. "What will happen in 6–18 months"**

**Today:**

1. **OpenAI + API Ecosystem is Mature: Building on GPT-4+ lets us rapidly build high-value tools.**
2. **No All-in-One, Plug-and-Play Tutor System Exists Yet: The market is open.**
3. **Businesses and Schools are Just Starting to Explore GPTs: The education sector is cautiously experimenting, but hasn’t landed on winning models.**
4. **People are Hungry for Customized, Context-Specific AI Tutors: Generic GPTs don’t teach *your* content.**
5. **Huge Early Mover Advantage: Those who start now will gain traction, build communities, and lock in partnerships.**

**In 6–18 Months:**

1. **Mainstream players (OpenAI, Google, Anthropic) will release native tutor tools.**
2. **Market will be more crowded, and early adopters will already have strong brand equity.**
3. **Users will trust platforms with history—consistency matters.**
4. **Specialization will win: General-purpose GPTs won’t serve niche or local content well.**
5. **Switching costs go up: Once users onboard to your system with their content and users, they won’t want to migrate.**

**Conclusion: Early movers build trust, community, and product-market fit *before* GPT-native features commoditize the base tech.**

**5. Business Model Options**

* **SaaS (B2B): Monthly subscription for schools, training companies, and content creators.**
* **Usage-Based: Pay per token/chat/minute for enterprise clients.**
* **White-Label: Allow businesses to brand their own tutors.**
* **Marketplace (future): Allow content creators to sell tutor-based courses.**

**6. Technical Stack (MVP)**

* **- Frontend: Streamlit MVP (React planned for full app)**
* **- Embedding:**
* **- Open Source: HuggingFace models (bge-small-en, e5-base)**
* **- OpenAI: text-embedding-3-large**
* **Chat Engine:**
  + **Open Source: Mistral via Replicate or HuggingFace**
  + **OpenAI: GPT-4o via API key**
* **- Prompting:**
  + **Dynamic session-based prompt engine**
  + **Metadata-driven (intent, KB, timeframe)Backend: Python (FastAPI), Supabase or Firebase**
* **AI Engine: OpenAI API (GPT-4-Turbo or GPT-4o), embeddings via text-embedding-3-large**
* **Database: Postgres + ChromaDB → Pinecone/Weaviate (for scale)**
* **Storage: Cloudflare R2 / Firebase Storage**
* **Authentication: Firebase Auth / Clerk / Supabase Auth**
* **Session Logging: SQLite (MVP) → Supabase or Google BigQuery**

**7. Instruction Modes (Pedagogical Intelligence)**

**The system supports multiple modes of instruction, drawing on the latest research in cognitive science, metacognition, and mastery-based learning. Each mode is modular and can be toggled based on the learner’s profile, preferences, or coaching context.**

**💬 Conversational Q&A Mode**

**Natural-language dialog between user and tutor. Ideal for open-ended exploration, real-time clarification, and self-directed learning. Includes context-aware follow-up and encourages curiosity and confidence in asking questions.**

**🧪 Quiz/Test Mode (Bloom’s Taxonomy Based)**

**AI-generated or admin-defined quizzes targeting multiple levels of cognitive skill: recall, understanding, application, analysis, synthesis, and evaluation. Quizzes are adaptive and can adjust difficulty based on user proficiency and progress data.**

* **Prompt behaviors are adjusted per mode: e.g., “exam\_prep” will include coverage summaries and progress pacing; “assignment” emphasizes structured completion support.**

**📚 Study Mode (Spaced Repetition + Active Recall)**

**Combines flashcards, summaries, and AI-driven recall testing using the principles of spaced repetition and active recall. Tracks which concepts need reinforcement and pushes them into future sessions at the optimal moment.**

**🧭 Guided Lesson Mode (Step-by-Step Tutoring)**

**Structured, goal-based lessons with milestone checks, integrated explanations, and embedded comprehension questions. Ideal for courses or certifications. Each lesson can end with a short assessment to validate comprehension.**

**🪞 Self-Reflection Mode (Meta-Cognitive Coaching)**

**Prompts the user to reflect on their learning progress, emotional state, and comprehension. Can include journaling, “what I learned today” summaries, or periodic check-ins. Useful for deeper internalization, behavioral nudges, and long-term learning retention.**

**Each mode is built to support learning science best practices and can be sequenced or combined dynamically based on learner needs, coach preference, or institutional standards.  
  
{extra not to self and chatgpt, I also want to add another mode, I am not sure if thisis teaching or coaching but if the knowledgebase could also be used to be analysed and then to guide people trhough a strucatured process to achieve something a goal, a task a deliverable, like a project or operations a process this prompt to drive this beahaivior wll at the knowledge from a different prerspecive not to stuady by to proive the perfect apparoahc, path, roadmap or plan to aachieve something with insihts guiding and more, it could be lead generation, or sales process for a partigular industry or anything that may be related. So paragraph I typed personaly I mus still send this through AI so it can be firmed and unpaked and decided if this concept warrents it own mode or is a su set of this section called instuiction mode, which it propably is**

**8. Master Prompt IP Strategy**

**This system does not rely on static prompting—it uses a flexible, modular prompting engine that is core to the system's proprietary value. It determines how the AI tutor behaves, responds, teaches, tests, or adapts.**

**🔧 Components of the Prompt Strategy**

* **Modular Prompt Templates: Templates are structured into layers—subject domain, tutoring role (e.g., math coach vs. life skills mentor), behavior style (e.g., Socratic, warm, direct), and user proficiency.**
* **Dynamic Prompt Assembly Engine: Constructs context-aware, behavior-controlled prompts in real time. Enables different "personalities" or learning styles (e.g., assertive coach vs. gentle guide).**
* **Prompt Version Control & A/B Testing: System supports experimentation across different tutor behaviors, tones, and scaffolding levels. Enables longitudinal analysis of tutoring outcomes based on prompt strategy.**
* **Prompt Logging & Compliance: Every system prompt is logged alongside user prompts to ensure transparency and reproducibility. Supports GDPR compliance and educational audit needs.**

**🧠 Strategic Value**

**The master prompt system becomes a teachable layer in itself—helping institutions refine how knowledge is delivered. It's also a defensible moat: no two tutors built on this system will behave the same way unless intentionally cloned.**

**This becomes core IP and is foundational for scaling specialized, regulated, or branded tutor experiences.**

**9. Progress Tracking & Educational Impact**

**To prove long-term educational value, the system must go beyond just providing answers. We track learning progress, engagement quality, and knowledge mastery using a mix of behavioral and performance-based indicators.**

**📊 What We Track (Multidimensional Metrics):**

* **Quiz Performance Per Concept: Each quiz interaction is stored and analyzed to monitor understanding of specific subtopics, question difficulty level, accuracy, and response time.**
* **Study Time Per User and Topic: Tracks how long a user engages with a concept or lesson. Useful for identifying cramming vs. spaced repetition behavior.**
* **Module Completion Metrics: Tracks how many modules have been opened, completed, or revisited. Includes checkpoints for guided lessons.**
* **Chat Behavior & Intent Analysis: All chats are categorized by type (e.g., concept clarification, example request, meta-cognition) to infer cognitive engagement.**
* **Repetition & Recall Events: Integrated spaced-repetition memory engine tracks how often users return to specific flashcards or quizzes.**

**📈 Value Output (System-Generated Reports & Insights):**

* **Learner Dashboards: Visual maps of progress, mastery level, strengths, and gaps per subject or module. Motivational features like streaks, badges, and completion tracking.**
* **Teacher & Parent Reports: Auto-generated PDFs showing week-by-week activity, attention patterns, quiz outcomes, and concepts needing revision.**
* **Admin Insights Dashboard: Aggregated data per tutor module, class group, or organization. Helps detect curriculum issues or underperforming modules.**
* **Trend & Impact Data: Detects knowledge bottlenecks across users. Can be used to revise content or generate proactive nudges (e.g., “80% of users struggled with AI economics - revise now?”)**

**This tracking strategy ensures the system not only feels intelligent—but produces measurable, auditable learning outcomes aligned with modern pedagogical standards.**

* **Learner dashboards**
* **Teacher/parent reports**
* **Admin engagement stats**
* **Trend data (e.g. most missed concepts)**
* **School & education results log, measure and track – demonstratable value**

**10. Adaptive Coaching & Personalization Layer**

**To improve outcomes for learners who traditionally struggle with academic content, the AI Tutor will support a deep personalization framework based on cognitive psychology, behavior-based profiling, and inclusive pedagogy.**

**👥 User Profiles & Personality Mapping**

* **Parent or Teacher Configurable Profiles: Include learner’s academic history, learning challenges, attention span, motivation level, strengths, and preferences.**
* **Personality-Aware Tutoring Styles: Choose between coaching personas (e.g., gentle mentor, energetic motivator, friendly peer, or strict instructor).**
* **Cognitive + Emotional Markers: System adapts tone, pacing, and question framing based on signs of fatigue, frustration, or disengagement.**

**🧠 Adaptive Engagement Mechanics**

* **Trend Detection & Nudging: Monitors user activity, engagement drops, and incorrect-answer patterns to suggest reinforcement, easier explanations, or encouragement.**
* **Fun & Motivation Layer: Built-in streaks, customizable avatars, unlockable coach characters, and gamified modules to increase daily engagement.**
* **Multiple Modalities: Supports switching between video tutor, chatbot, audio-only tutor, and guided reading coach depending on preference or need.**

**🧬 Inclusion & Differentiated Learning Support**

* **Neurodiversity-Friendly Interfaces: Includes adjustable UI for ADHD, dyslexia, or processing challenges.**
* **Voice Interface & Speech Coaching: For users who prefer to speak rather than type; logs voice input, supports whisper-to-text, and builds speaking confidence.**
* **Feedback Loops: Parents, teachers, or team leads can annotate learner progress and receive feedback alerts when intervention may be needed.**

**This humanized and empathetic layer turns the AI Tutor into more than just a learning app—it becomes a supportive, evolving companion tailored to each learner’s journey.**

**11. OpenAI Key Management & Open-Source LLM Strategy**

**🔐 OpenAI API Key Flow for Public Users**

**To ensure flexibility and sustainable cost management, the MVP supports users bringing their own OpenAI API keys. This allows us to:**

* **Enable users to access GPT-4-class intelligence without billing the platform.**
* **Avoid premature infrastructure cost overload at scale.**
* **Comply with OpenAI’s fair-use policy by keeping usage personalized.**

**🔸 How it Works:**

* **Upon first use, users are prompted to paste in their OpenAI API key.**
* **They are directed to the correct location on their** [**OpenAI account**](https://platform.openai.com/account/api-keys) **with simple, visual instructions.**
* **We notify users that OpenAI gives $5–$10 in free usage for new accounts.**

**🔸 User Benefits:**

* **Transparent pay-as-you-go model.**
* **No need to subscribe to OpenAI monthly unless they choose.**
* **Retains full control over usage limits and visibility via their own OpenAI dashboard.**

**🧠 Cost Considerations for Scale**

**With average usage scenarios (e.g., 1000 Q&A turns):**

* **OpenAI GPT-4o costs around $1–4 per 1000 turns depending on prompt/response size.**
* **Even light users (students) can operate for weeks on $1–2 in usage.**

**This means our core product pricing (e.g., $5–$20) remains viable, even if users cover OpenAI usage directly. For enterprise/B2B plans, we can bundle in tokens or negotiate volume discounts.**

**🆓 Open-Source LLM Integration (Coming Phase 2)**

**We aim to support open-weight models such as Mistral, Mixtral, Claude (if public), or LLaMA derivatives via APIs like Ollama, Groq, or Replicate.**

**🔸 Benefits:**

* **Zero marginal cost per use.**
* **Offline / private / regulated environment deployment for education or government.**
* **More accessible for under-resourced schools or users in lower-income areas.**

**🔸 User Option Toggle:  
We plan to add a “Choose your AI engine” toggle at login:**

| **Option** | **Cost** | **Features** |
| --- | --- | --- |
| **OpenAI (GPT-4o)** | **User pays** | **Most accurate, fastest response, best UX** |
| **Open LLM** | **Free** | **Slightly less intelligent, but evolving fast** |

**We'll prompt-engineer tailored behavior to align both models with our coaching framework.**

**“In the MVP, the AI engine selection determines both embedding and chat models to avoid billing confusion and simplify UX. Mix-and-match may be enabled in future enterprise tiers.”**

**13. User-Specific Knowledge Architecture**

**A key advantage of the AI Tutor Framework is its ability to isolate and customize learning experiences for each user through a modular vectorstore system. Each user's interaction begins by entering a name or email, which becomes their session "namespace." This namespace functions as a unique container in the vector database (ChromaDB) that:**

* **Separates uploaded content per user**
* **Enables user-specific Q&A sessions**
* **Logs user-specific chats and audit trails**

**This makes it trivial to:**

* **Support 1-on-1 private tutors for each user**
* **Deploy differentiated knowledge bases per client or school**
* **Track individual user performance in isolation**

**In practical terms, each user has a completely unique knowledge base, even if they are using the same system. If multiple users want to access a shared knowledge base (e.g., a central curriculum or book), the system allows for a shared namespace (e.g., "math\_grade9") which can be preloaded by an admin or institution.**

**14. Creating and Managing Knowledge Bases  
*Updated to Include Knowledge Base Switching and Learning Plans***

**The system allows:**

* **Any user to upload and instantly generate their own knowledge base**
* **Admins or schools to preload shared content under a fixed namespace (e.g., "math\_grade9", "english\_novels")**
* **The ability to create hybrid systems where a user has access to both personal and shared content**

**This model supports scalable deployments across:**

* **Schools with shared curriculums and private student notes**
* **Corporate training systems with private department content**
* **Coaches or tutors offering personal vs. packaged experiences**

**NEW: Knowledge Base Selector UI**

* **At login or from the sidebar, users can select their active knowledge base from a dropdown menu (e.g., English, Math, History, etc.)**
* **The selected base becomes the active namespace for that session**
* **The “Knowledge Base Selector” UI also shows the engine used (Open Source vs OpenAI) and KB intent. Switching between KBs updates the tutoring context and prompt logic.**

**Storage Structure in Vector DB (Chroma)  
Knowledge is stored under Chroma collection names in the format:**

**organizationID\_\_teamLeaderID\_\_userID\_\_kbName**

**Examples:**

* **school001\_\_teacher\_sue\_\_alex\_k\_\_math**
* **org002\_\_coach\_ravi\_\_john\_d\_\_project\_mgmt**

**This system supports hierarchical organization mapping and allows flexible delivery of differentiated content across teams, departments, or classrooms.**

**NEW: Knowledge Base Intent & Session Goals  
When uploading or selecting a knowledge base, users will be asked:**

* **What is your intention for this session? (Study / Exam Prep / Revision / Assignment / Mastery)**
* **What timeframe are you working with? (e.g., Exam date or study schedule)**
* **What is your learning goal? (e.g., Finish module, understand topic, complete test)**

**This metadata will:**

* **Inform the AI tutor on how to prioritize content**
* **Adjust the pacing and detail level of responses**
* **Enable timed learning plans with milestone nudges and notifications**

**Future Expansion**

* **Merge logic: Combine multiple selected KBs for simultaneous Q&A**
* **RBAC: Control read/write access to KBs based on role (student, teacher, team leader)**
* **Adaptive plan builder: Tutor recommends study path based on time, goal, and memory recall quality**

**15. True Memory System Beyond GPT  
*Additional Phase 2 Enhancements Added Below***

**GPT-4o, Claude, and other large language models (LLMs) are powerful but limited in "memory." They operate with a limited context window (typically 4K–128K tokens) and do not persist memory across sessions natively.**

**The AI Tutor Framework goes far beyond this:**

**Persistent Knowledge Memory  
User-uploaded files are stored, embedded, and indexed forever using a per-user, per-knowledge-base namespace.**

* **User-uploaded files are stored, indexed, and retrieved forever.**
* **Q&A results are contextualized using vector similarity and retrieval chains.**
* **This memory is not constrained by GPT token limits.**

**Session-Based Recall  
Every prompt and response is logged by user ID and knowledge base. Future UI features will allow recall of past questions, auto-suggest follow-up prompts, and pattern-based nudges.**

* **Every prompt and response is logged by user ID.**
* **Future UI features will allow recall of past questions, auto-suggest follow-up prompts, and pattern-based nudges.**

**NEW: Memory Dashboard  
A personalized view into each user's Q&A history. Users will be able to:**

* **Browse their last 10 or 50 questions**
* **Search historical answers by topic**
* **Export their full interaction history**
* **Resume earlier conversations from saved checkpoints**

**NEW: Memory Modes  
Toggle between "short-term memory" (recent chat context) and "long-term memory" (all uploaded knowledge + prior chat logs).**

**Cognitive Tracking (In Progress)  
Memory layers will allow the system to track what each user understands or struggles with over time.**

* **Planned logic for tracking what each user understands or struggles with.**
* **Memory layers allow targeted coaching based on historical gaps.**

**Memory-Aware Coaching System  
Each session is guided by the AI Tutor based on personalized learning plans. Tutors will proactively:**

* **Send email or in-app nudges when the user misses planned study time**
* **Recommend specific modules or knowledge segments based on memory performance**
* **Encourage habit-forming learning behavior (e.g., daily 10-minute check-ins)**

**This capability represents a foundational IP strength: the Tutor remembers what the model cannot.**

**16. Strategic Value of Memory and Namespace Design**

**This namespaced memory design allows:**

* **GDPR-compliant data isolation and user-level data ownership**
* **Multi-tenant delivery for schools, businesses, and coaches**
* **Longitudinal learning tracking (across weeks, months, or years)**
* **Plug-and-play onboarding for new clients (just upload → done)**

**The combination of structured memory, content indexing, and personalized namespaces forms a unique system architecture that current GPT wrappers, chatbots, and tutoring tools cannot match.**

**This isn't just an LLM frontend. It's an IP-defensible learning engine that turns memory into personalized intelligence.**

**17. Organizational Structure and Hierarchical User Roles**

**As the AI Tutor Framework evolves from MVP to an enterprise-grade platform, it must support complex organizational structures. This includes institutions with multiple roles and layered authority across users, managers, and administrative oversight. To that end, the system will be designed to handle:**

**1. Individual Users**

**These are end-users who interact with the tutor, upload knowledge bases, and participate in learning. Each user:**

* **Has their own private namespace for knowledge**
* **Can upload personal documents**
* **Can create and manage one or more knowledge bases (subject to plan limits)**
* **Will have tracked learning history, usage, and preferences**

**2. Managers (e.g., Teacher, Supervisor, Coach, Department Head)**

**Managers act as mid-level authorities. They:**

* **Oversee multiple users (e.g., students, employees)**
* **Can create shared knowledge bases for group access**
* **Review progress reports across their group**
* **Have permission to moderate user activity or access depending on their role**
* **May belong to one or more organizational units (departments, classes, or teams)**

**3. Organizations (e.g., School, Company, Coaching Group)**

**At the top of the hierarchy, organizations can:**

* **Register multiple managers and users**
* **Assign user-role profiles**
* **Control visibility/access to shared resources**
* **Define subscription plans (e.g., # of users, knowledge bases, features)**
* **Own global knowledge bases (e.g., onboarding manuals, textbooks)**
* **Receive aggregate analytics and usage reporting**

**This hierarchical model allows flexible deployment across education, business, and coaching environments. For example:**

* **A school may have multiple grades, each with different classes, each led by one or more teachers, with students in each class.**
* **A business may have departments with managers and employees.**

**All roles are nested under an organizational identity, allowing scalable control and separation of access.**

**18. Knowledge Base Slotting and Plan-Based Limits**

**To support pricing models and differentiated feature access, the system will include the concept of knowledge base slots per user:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Plan Type** | **Knowledge Bases** | **User Limit** | **Shared KB Access** | **Notes** |
| **Free** | **1** | **1** | **❌** | **Single-user sandbox** |
| **Pro Individual** | **Up to 5** | **1** | **✅ (read-only)** | **Great for power learners** |
| **Team** | **Up to 10** | **5** | **✅** | **Small teams or classrooms** |
| **Enterprise/Org** | **Unlimited** | **Unlimited** | **✅ (custom roles)** | **Full administrative structure** |

**Users may create, rename, or archive knowledge bases (e.g., math-grade9, personal\_notes, projectX). These collections are logically separate but tied to the same user or team account.**

**Each KB is stored in ChromaDB under a namespace like:**

**organizationID\_\_userID\_\_kbName**

**This ensures full scalability and logical isolation.**

**19. Admin Console (Roadmap Feature)**

**The admin backend will allow:**

* **Assigning users to roles (student, manager, teacher)**
* **Setting knowledge base limits per plan**
* **Adding/removing users from orgs**
* **Viewing usage stats and performance metrics per unit**
* **Controlling upgrade paths and plan enforcement**
* **Reviewing global or local chat logs for compliance**
* **Managing access to premium content (e.g., tutor packs)**

**This lays the groundwork for integrating:**

* **Stripe/SaaS billing integrations**
* **Role-based access control (RBAC)**
* **Federated logins for school domains or company SSO**
* **Tiered licenses (e.g., view-only vs. contributor roles)**

**20. Early Design Consideration: Profile Classification and Future Logic**

**Even if advanced logic isn’t implemented in MVP, the system will capture key identity markers upfront:**

* **Is this user an individual, student, parent, teacher, business, or admin?**
* **Are they part of a larger organization?**
* **Are they signing up as themselves or on behalf of a team?**

**This will allow:**

* **Retrofitting advanced permissions later without data loss**
* **Auto-sorting users during onboarding**
* **Future analytics by cohort, role, and learning behavior**

**Simple onboarding questions or tags can drive this structure, and data will be stored in an extensible user profile system.**

**The framework will support exponential scale by aligning early UX with later architectural and business logic requirements.**

**21. Next Steps (Launch MVP)**

1. **Define use case (first single PDF-based tutor)**
2. **Build content upload + chat UI**
3. **Implement logging (SQLite initially)**
4. **Launch MVP with 3–5 pilot users**
5. **Build admin dashboard + analytics viewer**
6. **Iterate, refine, expand learning modes**

**This is the full, IP-rich, educationally-aligned, scalable AI Tutor Framework business strategy.**

**Would you like a PDF version exported or next steps in product roadmap? ✅**

**DATA SCHEMA**

**PART 1: Backend Schema Design**

**📁 KnowledgeBaseMeta (New SQLite Table or NoSQL Collection)**

| **Field Name** | **Type** | **Description** |
| --- | --- | --- |
| **id** | **string** | **Unique ID (UUID or auto-increment)** |
| **organization\_id** | **string** | **e.g., school001** |
| **team\_leader\_id** | **string** | **e.g., teacher\_sue** |
| **user\_id** | **string** | **e.g., alex\_k** |
| **kb\_name** | **string** | **e.g., math** |
| **intent** | **string** | **e.g., exam\_prep, study, assignment** |
| **timeframe\_type** | **string** | **deadline or duration** |
| **timeframe\_value** | **string/date** | **e.g., 2025-06-10 or 14 days** |
| **goal\_description** | **text** | **Free-text field like “Finish chapters 1–5”** |
| **created\_at** | **datetime** | **Timestamp** |
| **last\_accessed\_at** | **datetime** | **Last time used** |

**This is tightly coupled with vector storage (org\_\_team\_\_user\_\_kb) and extends KB memory into learning plan memory.**

**Memory Recall Logging Extension**

**In logger.py, extend logs table:**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| **kb\_name** | **string** | **Which KB was active** |
| **intent** | **string** | **Goal intent at time of Q&A** |
| **timeframe** | **string** | **Study duration or deadline** |
| **plan\_summary** | **string** | **Generated summary to explain the tutor's path** |

**This allows future insights like:**

* **“Did the user meet the planned coverage before deadline?”**
* **“Which intent types led to highest retention?”**