Hackathon Project Phases Template

Project Title:

Smart Study planner Website

Team Name:

Tech Avengers

Team Members:

- K. Srinivasa Pranav
- L. Ganesh
- M. Hemanth Reddy
- K. Harshitha Reddy
- H. Mridhini

Phase-1: Brainstorming & Ideation

Objective:

- A smart study planner website that optimizes time management, tracks progress, and enhances productivity through personalized schedules and reminders.
- It should integrate AI-driven recommendations, collaboration features, and adaptive

learning strategies for efficient studying.

Key Points:

1. **Problem Statement:**

   Students struggle with organizing their study schedules effectively, leading to poor time management and inconsistent learning. A smart **powered Study Planner** can help by providing **personalized schedules, quizzes, reminders, and performance tracking** to enhance productivity and retention

2. **Proposed Solution:**

   Develop an **AI-powered Study Planner** that integrates **smart scheduling, quizzes, reminders, and performance tracking**, helping students manage their time efficiently and improve learning outcomes through personalized recommendations.

3. Target Users:

Students & Exam Aspirants – School, college, and competitive exam candidates needing structured study plans and reminders.

Self-Learners & Educators – Individuals taking online courses and teachers managing study schedules for students.

4. Expected Outcome:

Users can efficiently plan, track, and complete their study schedules with automated reminders and AI-driven suggestions.

Phase-2: Requirement Analysis

Objective:

Define the technical and functional requirements for the Study planner Web.

Key Points:

1. **Technical Requirements:**

- Programming Language: **Python,HTML,CSS,JS**
- Backend: **Google Gemini Flash API**
- Frontend: **AI Tools**

2. **Functional Requirements:**

- **User Management & Authentication –** Allow users to sign up, log in, and manage profiles with authentication via email or social media.

- **Study Schedule & Task Management –** Enable users to create, edit, and organize study plans with deadlines, priorities, and reminders.

- **Progress Tracking & Analytics –** Provide visual reports, study time tracking, and performance insights to monitor progress.

- **Notifications & Reminders –** Send automated alerts via email, SMS, or push notifications for upcoming tasks and deadlines.

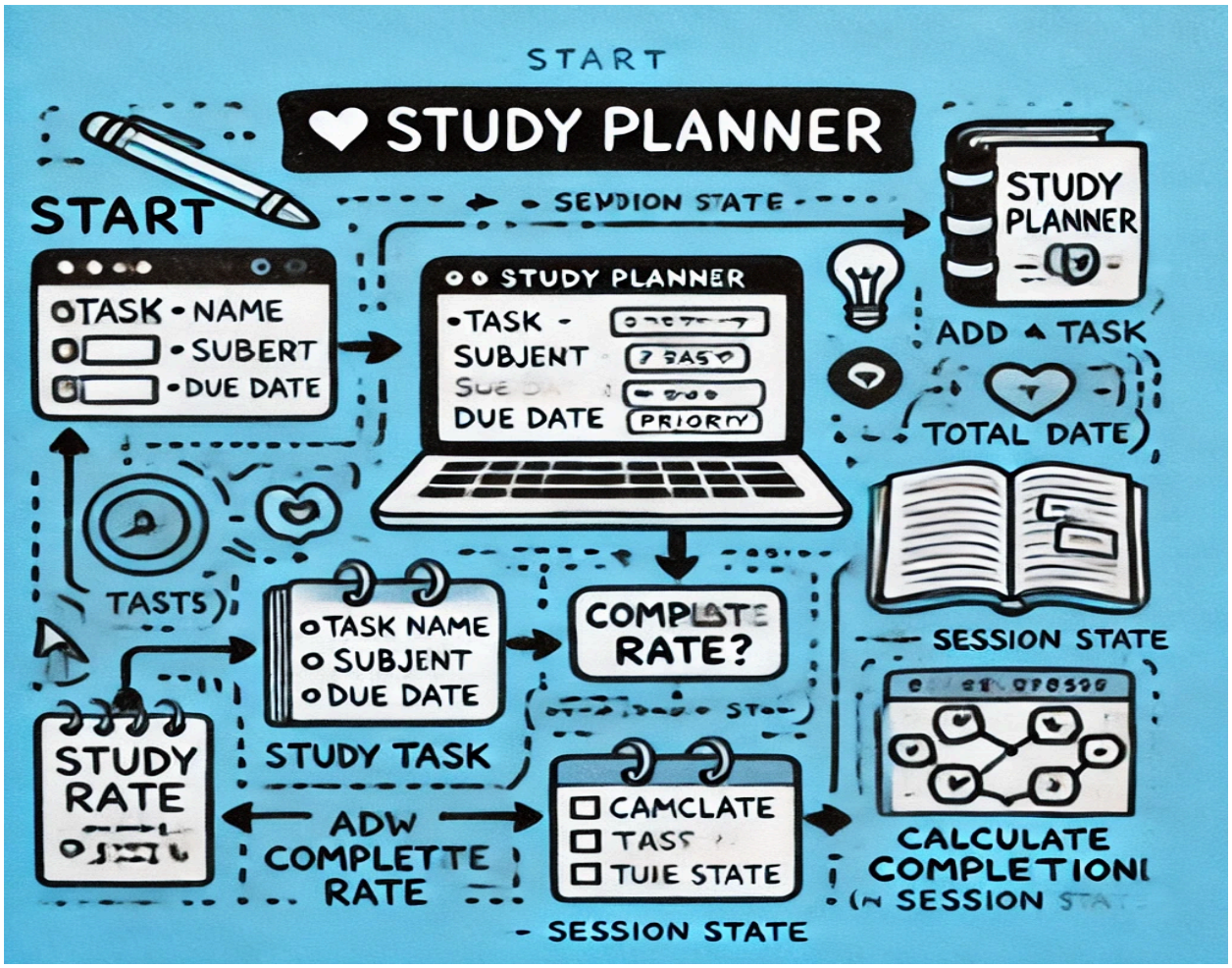
3. **Constraints & Challenges:**

    - Ensuring real-time updates from **Gemini API** .
    - Handling **API rate limits** and optimizing API calls.

Phase-3: Project Design

Objective:

this is an image to display the flow of work in the project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Key Points:

1. **System Architecture:**
    - User enters vehicle-related query via.
    - Query is processed using **Google Gemini API** .
    - AI model fetches and processes the data.
    - The frontend displays **username, calendar, schedule and quiz** .
2. **User Flow:**
    - Step 1: User enters a subject (e.g., "Timetable for effective study").
    - Step 2: The backend **calls the Gemini Flash API** to retrieve vehicle data.
    - Step 3: The app processes the data and **displays results** in an easy-to-read format.
3. **UI/UX Considerations:**
    a. **Minimalist, user-friendly interface** for seamless navigation.

Phase-4: Project Planning (Agile Methodologies)

Objective:

Break down development tasks for efficient completion.

Sprint	Task	Priority	Duration	Deadline	Assigned To	Dependencies	Expected Outcome
Sprint 1	Environment Setup & API Integration	🔴 High	6 hours (Day 1)	End of Day 1	K. Srinivasa Pranav	Google API Key, Python, Streamlit setup	API connection established & working
Sprint 1	Frontend UI Development	🟡 Medium	2 hours (Day 1)	End of Day 1	L .Ganesh	API response format finalized	Basic UI with input fields
Sprint 2	Key features	🔴 High	3 hours (Day 2)	Mid-Day 2	K. Harshitha Reddy	API response, UI elements ready	Search functionality with filters
Sprint 2	Error Handling & Debugging	🔴 High	1 hour (Day 2)	Mid-Day 2	M. Hemanth Reddy	API logs, UI inputs	Improved API stability

Sprint 3	Testing & UI Enhancements	🟡 Medium	1 hour (Day 2)	Mid-Day 2	H. Mridhini	API response, UI layout completed	Responsive UI, better user experience
Sprint 3	Final Presentation & Deployment	🟢 Low	1 hour (Day 2)	End of Day 2	Entire Team	Working prototype	Demo-ready project

Sprint Planning with Priorities

Sprint 1 – Setup & Integration (Day 1)

(🔴 **High Priority)** Set up the **environment** & install dependencies.
(🔴 **High Priority)** Integrate **Google Gemini API** .
(🟡 **Medium Priority)** Build a **basic UI with input fields** .

Sprint 2 – Core Features & Debugging (Day 2)

(🔴 **High Priority)** Implement **search & comparison functionalities** .
(🔴 **High Priority)** Debug API issues & handle **errors in queries** .

Sprint 3 – Testing, Enhancements & Submission (Day 2)

(🟡 **Medium Priority)** Test API responses, refine UI, & fix UI bugs. (🟢 **Low Priority)** Final **demo preparation & deployment** .

Phase-5: Project Development

Objective:

Implement core features of the AutoSage App.

Key Points:

1. **Technology Stack Used:**

    a. **Frontend:** Streamlit
    - **Backend:** Google Gemini Flash API
    - **Programming Language:** Python

2. **Development Process:**

   a. Implement **API key authentication** and **Gemini API integration** .
   ○ Develop **vehicle comparison and maintenance tips logic** . ○ Optimize **search queries for performance and relevance** .

3. **Challenges & Fixes:**

   a. **Challenge:** Delayed API response times.
      Fix: Implement **caching** to store frequently queried results.
   ○ **Challenge:** Limited API calls per minute.
      Fix: Optimize queries to fetch **only necessary data** .

Phase-6: Functional & Performance Testing

Objective:

Ensure that the study planner web works as expected.

Test Case ID	Category	Test Scenario	Expected Outcome	Status	Tester
TC-001	Functional Testing	Query "remainder is set at the user relevant time "	should give remainders at the time set by user and display the task that	✅ Passed	H.Mridhini
TC-002	Functional Testing	Query "effective study tips "	According to the subject and the performance of the user suggestions must be displayed	✅ Passed	L. Ganesh M. Hemanth Reddy
TC-003	Performance Testing	API response time under 500ms	API should return results quickly.	⚠ Needs Optimization	K. Srinivasa Pranav
TC-004	Bug Fixes & Improvements	Fixed incorrect API responses.	Data accuracy should be improved.	✅ Fixed	K. Harshitha Reddy
TC-006	Deployment Testing	Host the web using Streamlit Sharing	Web should be accessible online.	🚀 Deployed	All Team

Final Submission

1. **Project Report Based on the templates**
2. **Demo Video (3-5 Minutes)**
3. **GitHub/Code Repository Link**
4. **Presentation**