Hackathon Project Phases Template that ensures students can complete it efficiently while covering all six phases. The template is structured to capture essential information without being time-consuming.

Hackathon Project Phases Template

Project Title:

Ai Study Planner

Team Name:

White Olive

Team Members:

- Sriramsetty Sri Satya Sai Gayathri Devi
- Swarna Venkata Vishnu Priya
- T V Sai Laxmi
- Vinoothna Vanimireddy

Phase-1: Brainstorming & Ideation

Objective:

- Identify the problem statement.
- Define the purpose and impact of the project.

Key Points:

1. **Problem Statement:**

   AI Personalized Study Planner is an intelligent application designed to create customized student study plans based on their specific goals, strengths, weaknesses, and preferences. Utilizing the BERT architecture, this tool helps students optimize their study schedules to achieve their academic targets efficientl y.

2. **Proposed Solution:**

Students wishing to improve in specific subjects can use Studbud to create a balanced study schedule incorporating various learning methods suited to their preferences.

3. **Target Users:**
   Students, Professionals & Lifelong Learners, Institutions & Coaching Centers

4. **Expected Outcome:**

1. *Personalized Study Plans* – AI-generated schedules based on user goals and learning pace.

2. *Improved Time Management* – Optimized study sessions with reminders and rescheduling.

3. *Enhanced Learning Efficiency* – Smart recommendations for study materials and techniques.

4.*Multi-Device Accessibility* – Smooth experience across web, mobile, and desktop.

Phase-2: Requirement Analysis

Objective:

- Define technical and functional requirements for Ai study planner app.

Key Points:

1. **Technical Requirements:**

   Hardware: Multi-core CPU, 16GB+ RAM, SSD, optional GPU for AI tasks.

   Software: Python, JavaScript, Flask / Fast API for backend, TensorFlow / Py Torch for AI, PostgreSQL / MongoDB for storage.

   AI Models: NLP for text processing, Machine Learning for recommendations, Reinforcement Learning for scheduling.

   APIs: Google Calendar for scheduling, OpenAI for AI suggestions, OCR for document scanning.

   Security: Data encryption, OAuth authentication, GDPR compliance.

2. **Functional Requirements:**
   User Management – Signup, login, and profile settings.
   Study Plan Generation – AI-powered personalized schedules.
   Smart Recommendations – Suggests study materials and techniques.
   Calendar & Reminders – Syncs with Google Calendar, sends notifications.
   Performance Tracking – Monitors progress and provides insights.
   Multi-Device Support – Works on web and mobile devices.
   AI Chatbot – Offers study tips and answers queries.
   Security – Data encryption, authentication, GDPR compliance
3. **Constraints & Challenges:**
   Limited Data, Curriculum Complexity, Student Engagement, Technological Limitations, Personalization, Adaptability, Content Integration, Feedback Mechanisms, Scalability, Data Security, Teacher Buy-in, Student Autonomy

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Phase-3: Project Design

Objective:

- Create the architecture and user flow.

Key Points:

1. **UI/UX Considerations:**

UI:

- Clean design

- Intuitive navigation

- Visual progress tracking

UX:

- Personalized experience

- Real-time feedback

- Gamification

- Accessibility

Phase-4: Project Planning (Agile Methodologies)

Objective:

- Break down the tasks using Agile methodologies.

Key Points:

1. **Sprint Planning:** (Divide work into tasks for each team member)
2. **Task Allocation: gayathri – testing and developing**
   Sai-frontend
   Vishnu-backend
   Vinoothna-design
3. **Timeline & Milestones:** (Set short deadlines for each task)

Phase-5: Project Development

Objective:

- Code the project and integrate components.

Key Points:

1. **Technology Stack Used: Frontend, Backend, AI/ML, APIs, DevOps**
2. **Development Process: Planning and Research, Design and Prototyping, AI/ML Development, Frontend and Backend Development, Testing and Quality Assurance, Deployment and Maintenance**
3. **Challenges & Fixes: Data quality issues, Bias in AI models, Student engagement, Integration with existing systems, Scalability, Data validation and cleansing, Diverse data sets and bias auditing, User research and gamification , scalable design**

Phase-6: Functional & Performance Testing

Objective:

- Ensure the project works as expected.

Key Points:

1. **Test Cases Executed:** functional testing, ai/ml testing, intergration testing , security testing, usability testing
2. **Bug Fixes & Improvements: data inconsistencies, ai model inaccurancies, ui updates ,real-time feedback**
3. **Final Validation: Functional validation, AI/ML validation, Integration validation, Security validation, Usability validation**

Final Submission

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