

Hackathon Project Phases Template for the **logo craft** project.

Hackathon Project Phases Template

Project Title:

Logo craft using diffusion technology

Team Name:

Code stromers

Team Members:

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Phase-1: Brainstorming & Ideation

Objective:

Develop an AI-powered tool that automatically generates logos based on user instructions, leveraging AI models to provide creative and customizable logo designs.

Key Points:

1. Problem Statement:

- Many individuals and businesses struggle to create a professional logo without design skills.
- Hiring a designer can be expensive and time-consuming.
- Existing online tools have limited AI-powered customization options.

2. **Proposed Solution:**

- An AI-powered logo generator that creates logos based on text-based inputs and style preferences.
- Users provide details such as brand name, industry, colour scheme, and design preferences.
- AI generates multiple logo variations, allowing users to refine and download them.

3. **Target Users:**

- Startups and small businesses needing a cost-effective logo design solution.
- Freelancers and individuals looking for quick branding assets.
 - Marketing teams requiring on-demand logo variations

4. **Expected Outcome:**

- A functional AI-based tool that generates high-quality logos tailored to user inputs.
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Phase-2: Requirement Analysis

Objective:

Define the technical and functional requirements for the AI-Powered Logo Generator

Key Points:

1. **Technical Requirements:**

- Programming Language: JavaScript (Node.js)
- Backend: Express.js with AI-based image generation models (such as DALL-E, Stable Diffusion, or custom-trained models)
- Frontend: React.js
- Database: MongoDB or Firebase (for user preferences and logo storage)

2. **Functional Requirements:**

- User inputs brand name, industry, and preferences.
- AI generates multiple logo design variations.
- Users can select, refine, and download high-resolution logos.
- Option to tweak colours, fonts, and styles using an interactive editor.

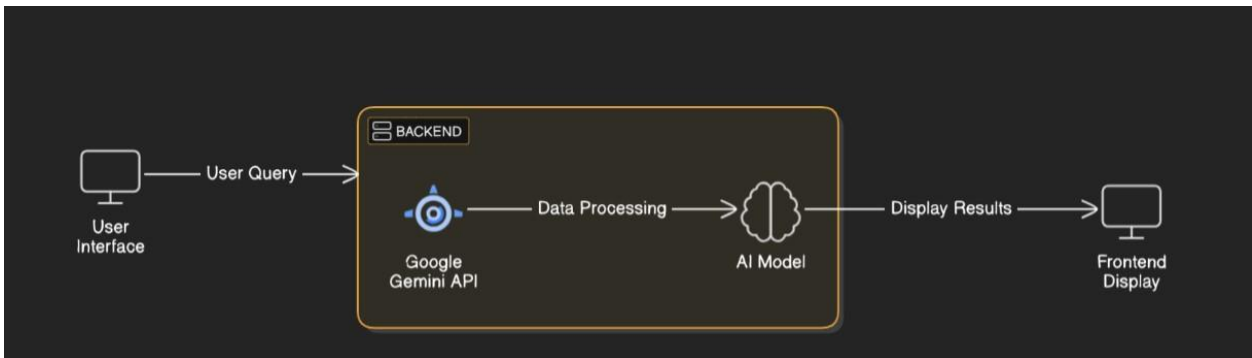
3. **Constraints & Challenges:**

- Ensuring AI generates unique, high-quality logo designs.
 - Handling concurrent user requests efficiently.
 - Providing an intuitive and easy-to-use UI.
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Phase-3: Project Design

Objective:

Develop the architecture and user flow of the application.



Key Points:

1. System Architecture:

- User provides logo design input via UI.
- Backend processes request and calls AI model to generate logos.
- AI model outputs logo variations based on input parameters.
- Frontend displays generated logos for selection and refinement.

2. User Flow:

- Step 1: User enters details such as brand name, industry, and style preferences.
- Step 2: AI processes the input and generates logo designs.
- Step 3: User reviews logos, makes refinements, and downloads the final version.

3. UI/UX Considerations:

- Clean, user-friendly interface for easy navigation.
- Customization tools to tweak logo elements.

- Dark & light mode for better user experience.

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	Member 1	Google API Key, Python, Streamlit setup	API connection established & working
Sprint 1	Frontend UI Development	Medium	2 hours (Day 1)	End of Day 1	Member 2	API response format finalized	Basic UI with input fields
Sprint 2	Vehicle Search & Comparison	High	3 hours (Day 2)	Mid-Day 2	Member 1 & 2	API response, UI elements ready	Search functionality with filters
Sprint 2	Error Handling & Debugging	High	1.5 hours (Day 2)	Mid-Day 2	Member 1&4	API logs, UI inputs	Improved API stability
Sprint 3	Testing & UI Enhancements	Medium	1.5 hours (Day 2)	Mid-Day 2	Member 2& 3	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 AI-Powered Logo Generator.

Key Points:

1. Technology Stack Used:

- **Frontend:** react js
- **Backend:** Node.js with Express.js
- **AI model** : DALL-E, Stable Diffusion, or custom-trained models
- **Data base** : MongoDB/Firebase

2. Development Process:

- Implement AI model integration for logo generation.
- Develop a user-friendly interface for input and customization.
- Optimize backend for faster response times.

3. Challenges & Fixes:

- **Challenge:** :Ensuring logo uniqueness.
Fix: Fine-tune AI model training and introduce variation parameters.

- **Challenge:** Slow response time for AI-generated logos.
Fix: Optimize AI inference and implement caching.

Phase-6: Functional & Performance Testing

Objective:

Ensure that the AI-Powered Logo Generator works as expected.

Test Case ID	Category	Test Scenario	Expected Outcome	Status	Tester
TC-001	Functional Testing	User enters brand name & industry	AI generates relevant logo variations	✅ Passed	Tester 1
TC-002	Functional Testing	User modifies colours & fonts	Customizations are applied correctly	✅ Passed	Tester 2
TC-003	Performance Testing	Logo generation under 3 seconds	AI returns results within time limit	❌ Needs Optimization	Tester 3
TC-004	Bug Fixes & Improvements	Fixed incorrect logo designs	Improved accuracy in outputs	✅ Fixed	Developer
TC-005	Final Validation	Ensure UI is responsive	Works on desktop & mobile	❌ Failed - UI issues on mobile	Tester 2
TC-006	Deployment Testing	Deploy app on cloud	Accessible online.	✅ Deployed	DevOps

Final Submission

1. **Project Report Based on the templates**

2. **Demo Video (3-5 Minutes)**
3. **GitHub/Code Repository Link**
4. **Presentation**