Hackathon Project

Project Title:

LOGO CRAFT : “INNOVATIVE LOGO GENERATION WITH DIFFUSION TECHNOLOGY”

Team Name:

CODEHOLICS

Team Members:

- B.Siri
- N.Geethanjali
- G.Vaishnavi
- P.Rakshitha
- C.Akshitha

Phase-1: Brainstorming & Ideation

Objective:

Design a modern and sleek logo for a tech company focused on crafting innovative technology solutions. The logo should feature a blend of sharp geometric shapes and smooth curves to symbolize precision and creativity.

Key Points:

1. **Problem Statement:**
    - specializes in crafting innovative technology solutions that address complex challenges across various industries

we lack a logo that truly captures our commitment to innovation and technology. We need a logo design that effectively communicates our objective to revolutionize industries with intelligent and connected technology

2. **Proposed Solution:**

    - To address the need for a strong and meaningful visual identity, we propose the development of a modern, sleek logo that captures the essence of our innovative technology solutions.
    - represent both precision and creativity, reflecting our technical expertise and innovative approach.

3. **Target Users:**

    - **Tech-Savvy Professionals**: These users prioritize efficiency, high performance, and forward-thinking technology to solve business challenges, streamline processes, and improve operational effectiveness.
    - **Startups and Emerging Tech Companies**: : Entrepreneurs and startup founders in the tech space, seeking cutting-edge technology solutions to help scale their businesses and stay ahead of industry trends.
    - **Enterprises & Corporations** : They value professionalism, trust, and proven success, seeking technology that not only meets current demands but also prepares them for the future.

4. **Expected Outcome:**

    - The new logo will increase brand awareness and distinguish our company in a competitive tech industry. By aligning the visual identity with our core values of innovation, precision, and connectivity, the logo will create a memorable and recognizable brand that resonates with our target audience.

Phase-2: Requirement Analysis

Objective:

The primary objective of this logo design project is to create a visually compelling and professional brand identity that effectively represents our company's core mission: to craft innovative technology solutions that address complex business challenges. The logo should serve as a clear visual representation of our commitment to precision, creativity, and forward-thinking, positioning us as a leader in the tech industry.

Key Points:

1. **Technical Requirements:**

- Programming Language: **Python**
- Backend: **Google Collab**
- Frontend: **Google Collab**
- Database: **Not required initially (API-based queries)**

2. **Functional Requirements:**

Scalability:

- The logo must be scalable, meaning it should maintain its clarity and visual impact when resized, from small formats like app icons to large displays on banners or signage.

Legibility:

- The logo's typography must be legible and clear at all sizes, ensuring the company name or initials are easy to read and distinguish in various contexts (digital, print, mobile, etc.).

Adaptability for Multiple Platforms:

- The logo must be compatible with a variety of platforms, including web, social media, business stationery, and marketing materials. It should be easily adaptable to different background colors and textures without losing its impact.

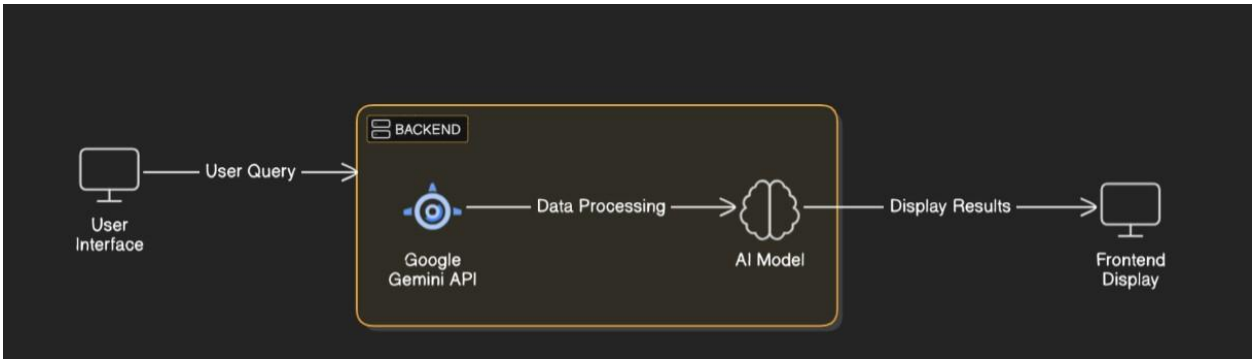
3. **Constraints & Challenges:**

- Balancing Innovation with Simplicity
- Scalability and Legibility Across Sizes

Phase-3: Project Design

Objective:

Develop the architecture and user flow of the application.



Key Points:

1. **System Architecture:**

- User enters a prompt in the code

- Query is processed using **Google Collab**
- AI model fetches and processes the data.
- The frontend displays **the logo of the user requirements**

2. **User Flow:**
   - Step 1: User enters a prompt
   - Step 2: The Google Collab accepts the prompt and processes the request.
   - Step 3: Based on the users specification it displays the logo
3. **UI/UX Considerations:**
   - **Minimalist, user-friendly interface** for seamless navigation.
   - **Filters based on the users specification**
   - **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 collab Python, Streamlit	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	Logo generation and processing	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 packages.
(🔴 High Priority) Integrate **Google Collab.**
(🟡 Medium Priority) Build a **basic Logo with input prompts**.

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:

The application will harness innovative technology to solve complex problems, streamline workflows, and provide actionable insights or services.

Key Points:

1. **Technology Stack Used:**
    - **Frontend:** Google Collab
    - **Packages**: Torch, Diffusers ,Transformers**.**
    - **Programming Language:** Python
2. **Development Process:**
    - Implement **API using Google Collab**
    - Develop **logo generation with diffusion technology**.
    - Optimize **search queries for performance and relevance**.
3. **Challenges & Fixes:**

- **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 AutoSage App works as expected.

Test Case ID	Category	Test Scenario	Expected Outcome	Status	Tester
TC-001	Functional Testing	Query "A minimalist logo for a futuristic technology company with sleek lines and geometric shapes."	The required output is displayed.	☑ Passed	Tester 1
TC-002	Functional Testing	Query "A high-end jewelry store logo with a diamond icon, black and gold color scheme, and sophisticated serif font."	The requirements should be provided.	☑ Passed	Tester 2
TC-003	Performance Testing	API response time under 500ms	API should return results quickly.	⚠ Needs Optimization	Tester 3
TC-004	Bug Fixes & Improvements	Fixed incorrect API responses.	Data accuracy should be improved.	☑ Fixed	Developer
TC-005	Final Validation	Ensure UI is responsive across devices.	UI should work on mobile & desktop.	❌ Failed - UI broken on mobile	Tester 2
TC-006	Deployment Testing	Host the app using Streamlit Sharing	App should be accessible online.	🚀 Deployed	DevOps

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