**Hackathon Project Phases Template** for the **Logo AI Generation with Diffusion Technology** project.

# **Hackathon Project Phases Template**

## **Project Title:**

**LOGO CRAFT: Innovative logo generation with diffusion technology.**

## **Team Name: Logo Creator’s**

## **Team Members:**

* Aarthi Pasare (23RA1A501)
* Akshitha Manne (23RA1A0512)
* Ashwini Mokala (23RA1A0521)
* Vaishnavi Rachamalla (23RA1A05G2)

## **Phase-1: Brainstorming & Ideation**

### **Objective:**

Developing a logo for establishing a memorable brand identity through a captivating logo which is crucial for businesses.

### **Key Points:**

* **Problem Statement:**   
  + Many small businesses and entrepreneurs lack a visually compelling and professional logo that effectively communicates their brand identity.
  + It leads to a potential disadvantage in market recognition and customer engagement, thus requiring a design solution to create a unique and impactful logo that accurately represents their brand.
* **Proposed Solution:**
  + A well-designed logo makes a company look more legitimate and trust worthy.
  + Logo often evoke emotions and create a psychological bond with customers.
* **Target Users:**
  + **Tech start-ups**: Young professionals, tech-savvy individuals, early adopters.
  + **Luxury fashion brand:** High income individuals, fashion enthusiasts, people seeking exclusivity.
  + **Eco-friendly company:** Eco-conscious consumers, health-focused individuals.
* **Expected Outcome:**
* In a crowded market a unique logo sets a business apart from its competitors.
* A strong logo increases brand visibility recall in customer’s mind.

## **Phase-2: Requirement Analysis**

### **Objective:**

Define the technical and functional requirements for the logo craft project

### **Key Points:**

* **Technical Requirements:**
  + **Programming Language**: Python
  + **Backend**: Business Logic and Data Management
  + **Frontend**: user interface
  + **Database**: Not required initially (API-based queries)
* **Functional Requirements:**
  + **Business requirements**: Describing a project’s high-level goals, objectives and needs
  + **Stake holder requirements**: includes information about what stake holders expect from a particular solution.
  + **Solution requirements**: includes product characteristics that meets the client expectations and business needs.
  + **Transition requirements**: define actions to be taken to move an organization from its current state to desired state.
* **Constraints & Challenges:**
  + Ensuring that products tech stack and engineering team limit design works securely
  + Handling departmental and project budgets
  + Providing designer skills and experience and professional short comings.

## **Phase-3: Project Design**

### **Objective:**

Develop the architecture and user flow of the application.

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| Frontend (UI) |

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| | Canvas/Design | | Tools/Icons Library | |

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| | Image Rendering | | Export/Save Logic | |

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| API Calls (REST/Graph QL) |

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Backend (Server-side Logic) |

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| Logo Generation | | Authentication | |

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| Image Processing | | Data Storage | | File Storage |

| (Sharp, Image Magick)| | (PostgreSQL, | | (AWS S3) |

| | | MongoDB) | | |

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### **Key Points:**

1. **System Architecture:**
   * The conceptual model that defines the structure behavior and views.
   * A unique architecture logo which gives the business visual identity.
   * The frontend displays **Logo that helps the customer to understand**.
2. **User Flow:**
   * Step 1:creating a logo, with understanding the clients needs.
   * Step 2: processing through different designs stages like brainstorming, sketching.
   * Step 3: presenting the final logo to the client.
3. **UI/UX Considerations:**
   * **Creating a visually recognizable, memorable design that aligns with brand identity**.
   * **Ensuring consistency across platforms.**
   * **Facilitating easy user-interaction**.

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## **Phase-4: Project Planning (Agile Methodologies)**

### **Objective:**

Break down development tasks for efficient completion.

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Task ID** | **Task Name** | **Priority** | **Duration** | **Deadline** | **Assigned To** | **Dependencies** | **Expected Outcome** |
| 1 | Project initiation | High | 6 hours (Day 1) | End of Day 1 | Aarthi pasare | Google API Key, Python, Stream lit setup | API connection established & working |
| 2 | Requirement gathering | Medium | 2 hours (Day 1) | End of Day 1 | Vaishnavi rachamalla | API response format finalized | Basic UI with input fields |
| 3 | System and data base design | High | 3 hours (Day 2) | Mid-Day 2 | Akshitha manne | API response, UI elements ready | Search functionality with filters |
| 4 | UI/UX  Design | High | 1.5 hours (Day 2) | Mid-Day 2 | Team member 1 and 4 | API logs, UI inputs | Improved API stability |
| 5 | Testing and documentation | Medium | 1.5 hours (Day 2) | Mid-Day 2 | Ashwini mokalla | API response, UI layout completed | Responsive UI, better user experience |
| 6 | Deployment &maintenance | High | 1 hour (Day 2) | End of Day 2 | Entire Team | Working prototype | Demo-ready project |

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### **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**.

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

**(🟡 Medium Priority)** Testing the code  
 **(🟢 Low Priority)** Final **demo preparation & deployment**.

## **Phase-5: Project Development**

### **Objective:**

Implement core features of the Logo craft.

### **Key Points:**

1. **Technology Stack Used:**
   * **Frontend:** user interface
   * **Backend:** Business Logic and Data Management
   * **Programming Language:** Python
2. **Development Process:**
   * Defining brand identity.
   * Seek inspiration and brainstorm and determining logo style.
   * Choosing type, colors scheme,font,logo shape & create logo.
3. **Challenges & Fixes:**
   * **Challenge:** improper alignment of logo elements  
      **Fix:** All smaller elements can be placed on one side and then balance them out.
   * **Challenge:** The incorrect logo color format.  
      **Fix:** Importing PNG logo in the editor on the left and select colors to change.

## **Phase-6: Functional & Performance Testing**

### **Objective:**

Ensure that the logo crafting works as expected

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| --- | --- | --- | --- | --- | --- |
| **Test Case ID** | **Category** | **Test Scenario** | **Expected Outcome** | **Status** | **Tester** |
| TC-001 | Functional Testing | Query "Best budget under ₹50 thousand" | Relevant budget should be displayed. | ✅ Passed | Tester 1 |
| 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 Stream lit Sharing | App should be accessible online. | ✅Passed | completed |

## **Final Submission**

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