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:

Playful AI: Interesting games opponents and advisors

Team Name:

CATASTUCKY

Team Members:

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Phase-1: Brainstorming & Ideation

Objective:

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

Key Points:

- 1. **Problem Statement:** Interesting games opponents and advisors
- 2. Proposed Solution: Making Board Games More Interesting

Dynamic Game Boards

Use modular or changeable boards (e.g., Catan-style tiles) so that no two games are the same.

Introduce interactive digital overlays (via AR apps) for extra effects.

Al-Generated Challenges & Events

Implement an AI system that creates random in-game events based on player choices.

Example: In Monopoly, AI could introduce unexpected scenarios like "Stock Market Crash" or "Real Estate Boom."

Real-Time Player Adaptation

Al or an advisory system could analyze how players are playing and suggest difficulty changes.

Example: If a player is winning too easily, the AI could introduce handicaps or tougher opponents.

Hybrid Physical-Digital Gameplay

Integrate companion apps that track player progress, generate unique quests, or even keep track of game stats.

Example: A chess AI that analyzes past moves and suggests alternative strategies

3.Target Users: Players (Casual & Competitive)More engaging gameplay with dynamic challenges. Fairer matches with Al-adjusted difficulty. Personalized experiences through adaptive storytelling. 2. Board Game Designers & DevelopersInnovative features that make their gamesstand out. Al-powered testing to balance rules and mechanics. Increased replayability, attracting more players.

4.Expected Outcome:

Enhanced Player Experience

More Engaging Gameplay – Al-generated challenges, adaptive difficulty, and dynamic boards make games more exciting.

Personalized Strategy Help – Al advisors provide real-time hints and move suggestions based on player skill.

Fair & Balanced Matches – Al can analyze game patterns and adjust rules to ensure fairness.

Phase-2: Requirement Analysis

Objective:

Define technical and functional requirements.

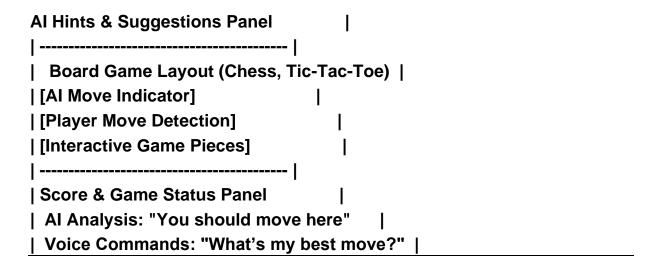
Key Points:

- 1. **Technical Requirements:** Hardware, Software and Al Frameworks
- 2. **Functional Requirements:** Dynamic Game Boards, Player Move Detection, Game Rules Enforcement.
- 3. **Constraints & Challenges:** Processing power and hardware limitations,Al Training data and Learning,Internet and cloud dependence.

Phase-3: Project Design

Objective:

• Create the architecture and user flow.



Phase-4: Project Planning (Agile Methodologies)

Objective:

Break down the tasks using Agile methodologies.

BUILDING AND SUBMITTTHE SOLUTION: ALL TEAM MEMBERS

Phase-5: Project Development

Objective:

Code the project and integrated components.

Key Points

Technology Stack Used: JavaScript,HTML,Django

Phase-6: Functional & Performance Testing

Objective:

• Ensure the project works as expected.

Key Points:

- 1. **Test Cases Executed:** (List the scenarios tested)
- 2. Bug Fixes & Improvements: (Mention fixes made)
- 3. **Final Validation:** (Does the project meet the initial requirements?)
- 4. **Deployment (if applicable):** (Hosting details or final demo link)

Final Submission

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