

Project Proposal

Name: [Your Name]

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Git Repository: [GitHub Link]

Vision

The goal of this project is to create a text-based console poker game where a single human player competes against 2 or 3 AI opponents. The game will feature three difficulty levels (Beginner, Normal, Expert), providing different levels of assistance and AI sophistication to enhance both learning and challenge.

Components

- Card & Deck Classes: Handles card creation, shuffling, and dealing.
- Player Class: Stores player information, including hand, chips, and decisions.
- PokerAI Class: Implements AI strategies for different difficulty levels.
- GameManager: Manages game rounds, betting, and determines winners.

Tech Stack

- Java: Core programming language.
- Object-Oriented Programming (OOP): Used for game structure.
- Algorithms & Logic: AI decision-making, probability calculations.
- Data Structures: Arrays, Lists, HashMaps for managing cards and players.

Expected Result

- A fully functional console-based poker game with:
 - A playable poker game with AI opponents.
 - Three difficulty levels affecting AI decisions and player assistance.
 - AI strategies, including bluffing and adapting to player behavior.
 - A user-friendly text interface guiding the player through the game.

Concepts from Class and Beyond

- Core Java Concepts: Loops, Functions, Conditionals, Data Types.
- Object-Oriented Programming: Classes, Inheritance, Encapsulation.
- Algorithms: Probability calculations, AI decision-making.
- Game Theory: AI opponent behavior (bluffing, adapting to player strategies).