Online Multiplayer Ludo Game

A Real-Time Web-Based Gaming Application

Presented by: [Your Name]

Technology Stack: React, Node.js, WebSockets / Firebase

Project Type: Web Application / Mini Project

Problem Statement

Traditional board games like Ludo require players to be physically present, limiting accessibility and engagement.

- Poor real-time synchronization
- Limited multiplayer features
- High latency and cheating issues

Problem:

There is a need for a **real-time, fair, and user-friendly online multiplayer Ludo game** that allows players to connect and play seamlessly from different locations.

Proposed Solution

We propose an **Online Multiplayer Ludo Game** that:

- Allows 2–4 players to play remotely
- Uses real-time synchronization for fair gameplay
- Supports room creation and joining via room codes
- Provides a smooth, interactive, and responsive user experience

The solution eliminates physical limitations while preserving the traditional Ludo experience.

Application Features

Online multiplayer

(2–4 players)

Create & Join Rooms

Private/public access

Real-time Actions

Dice roll & token movement

Classic Rules

Authentic Ludo experience

Turn-based Gameplay

Strategic sequencing

Game Mechanics

Safe zones, home paths, token capture

Winner Detection

Game completion screen

Market Research & Scope

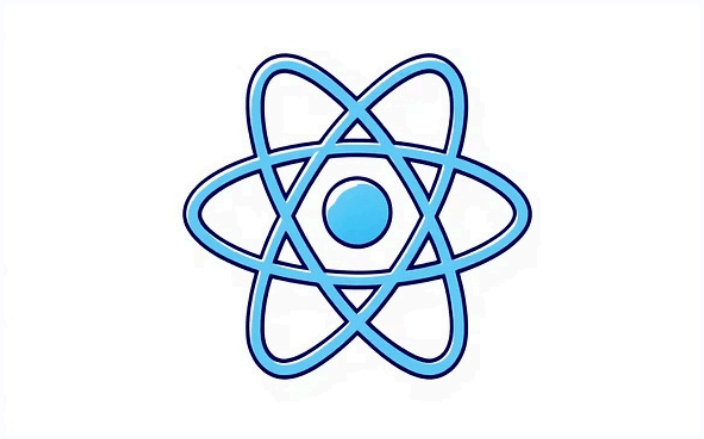
Market Research:

- Online casual gaming is growing rapidly worldwide
- Board games are popular among all age groups
- Multiplayer social games increase user engagement

Scope:

- Casual gamers
- Friends and families playing remotely
- Educational and mini-project use
- Future scalability to mobile apps and AI players

Technologies Used



1

Frontend:

React.js, HTML5, CSS3, JavaScript

2

Backend:

Node.js, WebSockets / Firebase / Supabase Realtime

3

Tools:

Git & GitHub, Gamma, VS Code

System Architecture

Client-Server

Robust architecture

Frontend Focus

UI & user interaction

Backend Management

Game state, turns, communication

WebSockets

Instant synchronization

Central Logic

Prevents cheating

Advantages of the System

- Play Anytime, Anywhere
- Real-time Multiplayer
- No Physical Board
- Secure & Fair Gameplay
- Responsive Design
- Scalable & Enhancible

Future Enhancements

AI-based Players

Voice/Text Chat

Mobile App Version

(Android/iOS)

Leaderboards & Ranking

Auth & Profiles

Cloud Deployment

Global access

Conclusion

The Online Multiplayer Ludo Game successfully modernizes a traditional board game by leveraging real-time web technologies.

Engaging Multiplayer

Interaction

Smooth Gameplay

Experience

High Scalability

and Flexibility

Conclusion:

This project demonstrates how classic games can be transformed into interactive digital experiences using modern web technologies.