AI Game Title:- **"Enemy Escape"**

1. **Introduction** :

Enemy Escape is an interactive action-logic game where the player must avoid dynamic enemies while progressing through multiple levels.

The game uses Prolog-based decision logic, AI-driven enemy behaviors, and a fully responsive UI for mobile and desktop devices.

2. **System Overview** :

Enemy Escape uses a client–server structure with a very lightweight backend and a fully dynamic frontend.

I. **Backend** :

- Serve static game files from the public/ folder
- Expose APIs that interact with the Prolog engine, such as:
  - GET /get-speed → returns enemy speed based on level
  - GET /can-level-up → checks whether user score qualifies for level-up
- Load and execute Prolog rules on demand
- No heavy game logic is executed on the server
- Keeps server simple
- Makes game fast and scalable

II. **Frontend** :

The entire game logic is executed on the frontend using HTML, CSS, JavaScript, and Prolog integration.

- Complete UI Rendering
- Enemy AI & Movement
- Player Control System
- Timer & Difficulty Manager
- Level Manage
- Achievements System

- Local Data Storage (Browser)
- SPA Structure (Single Page Application)

3. Cross-Device Compatibility (Fully Responsive Design) :

One of the major strengths of this game is that it is designed to be **fully responsive**, meaning it adapts automatically to different screen types and sizes.

The game interface is friendly and optimized for:

◆ **Mobile Phones (Android/iOS)**

- Touch-friendly movement buttons
- Auto-scaling design
- Flexible background + animations
- Smooth performance

◆ **iPads & Tablets**

- Balanced UI layout
- Larger buttons
- Smooth enemy animations

◆ **Laptops & Desktop Computers**

- Full widescreen layout
- Keyboard arrow keys / WASD
- High-quality background & animations

4.Gameplay Theory :

- Player opens game → sees **Start Screen**
- Player clicks **Start Game**
- Player selects **Level (1, 2, 3, …)**
- Prolog decides **enemy speed & behavior** for that level
- Player controls character → avoids enemies
- Survival timer counts down
- Game ends if:
    - Player is touched by enemy
    - Time runs out
    - Player escapes the area

5.Enemy Logic (Prolog Rules):

Enemy Escape uses Prolog to control

- Enemy speed
- Enemy type per level
- Difficulty pattern

Example Prolog behavior:

- Level 1 → slow enemies
- Level 2 → faster enemies
- Level 3 → Bird enemies unlock
- Level 4 → UFO enemies unlock
- Level 5 → Dragon boss unlock

6.AI Decision Theory :

- Moves toward player
- Predicts player direction
- Adjusts speed per Prolog level rule

7.Timer System :

Each level has a survival timer:

- Level 1 → 30 seconds
- Level 2 → 25 seconds
- Level 3 → 20 seconds
- Level 4 → 15 seconds
- Level 5 → 10 seconds

8.Scoring System :

- Surviving
- Escaping quickly
- Avoiding damage
- Beating enemies (in battle mode)
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9.Word Journal :

- Enemy types unlocked
- Speed level
- Behaviors
- Weaknesses (future update)

10.Offline Behavior :

Enemy Escape works perfectly offline:

- Local game logic
- Prolog engine runs inside server
- No online APIs needed
- Progress & achievements stored locally

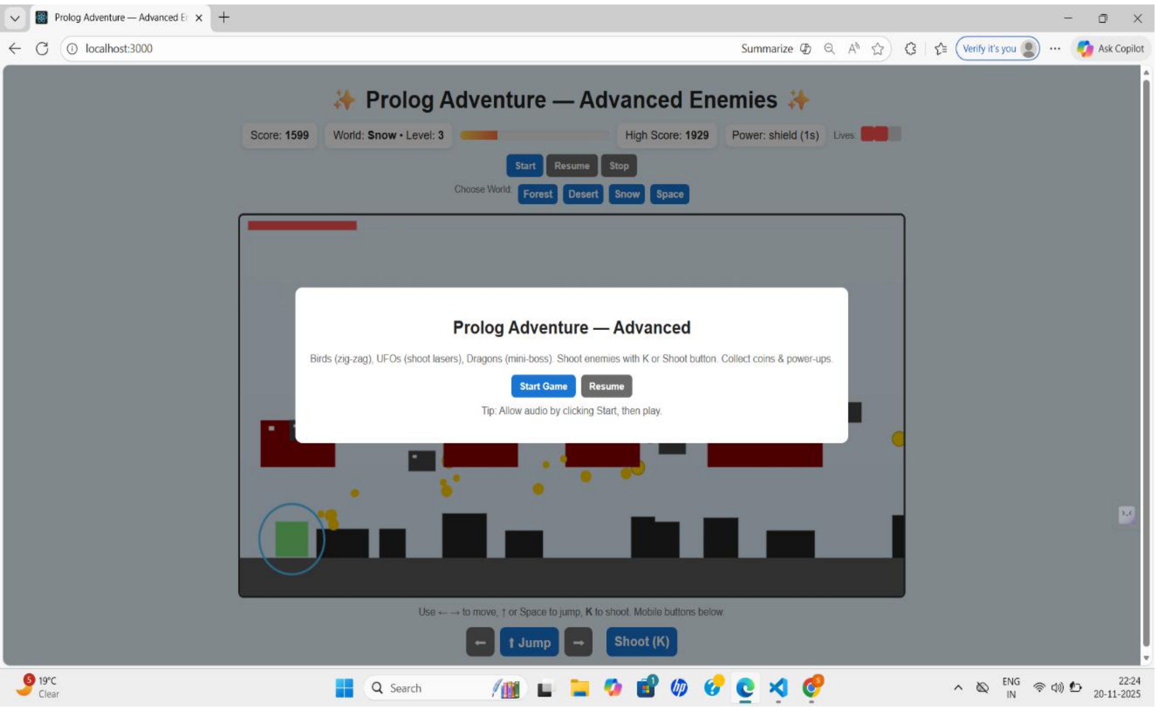
11.Data Persistence :

- Highest level unlocked
- Best time
- Enemy Journal
- Game mode

12.Future Enhancements :

- Multiplayer Mode
- Online Leaderboard
- Theme customization
- Smarter AI logic
- Boss battle levels
- Cloud save system

❖ Implementation Images / Screenshots :



✨ Prolog Adventure — Advanced Enemies ✨

Score: **1599** World: **Snow** • Level: **3** High Score: **1929** Power: shield (1s) Lives:

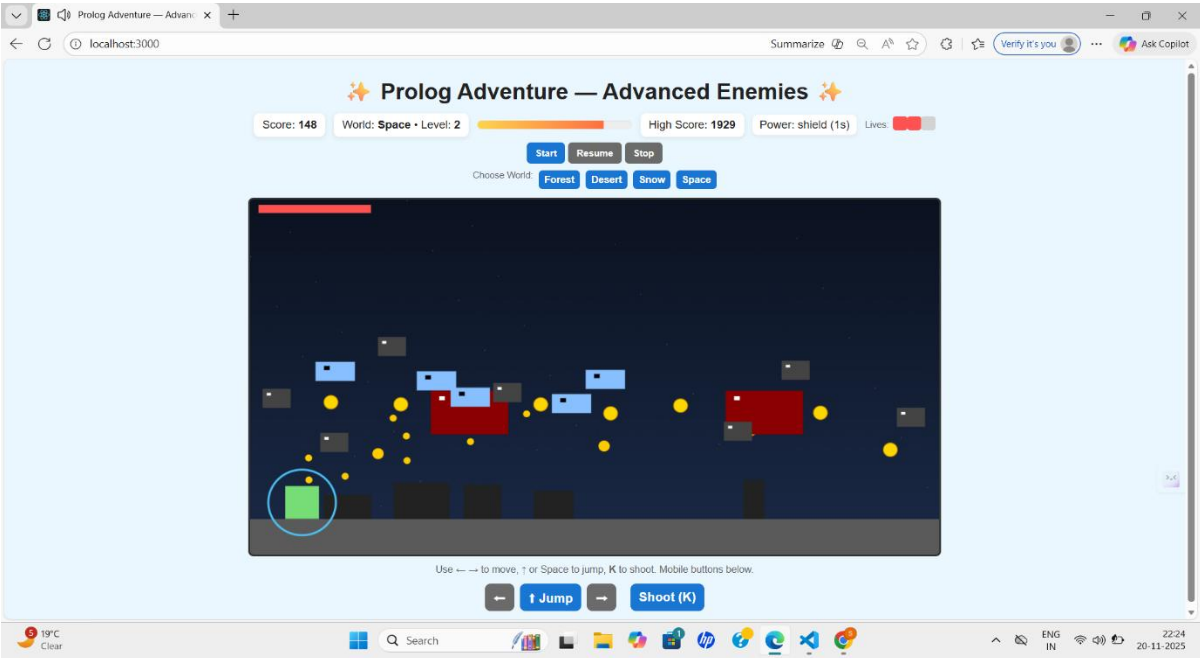
Prolog Adventure — Advanced

Birds (zig-zag), UFOs (shoot lasers), Dragons (mini-boss). Shoot enemies with K or Shoot button. Collect coins & power-ups.

Tip: Allow audio by clicking Start, then play.

Use ← → to move, ↑ or Space to jump, **K** to shoot. Mobile buttons below.

Fig.1.1:- Desktop / Laptop View of Enemy Escape



Prolog Adventure — Advanced Enemies

Score: 148

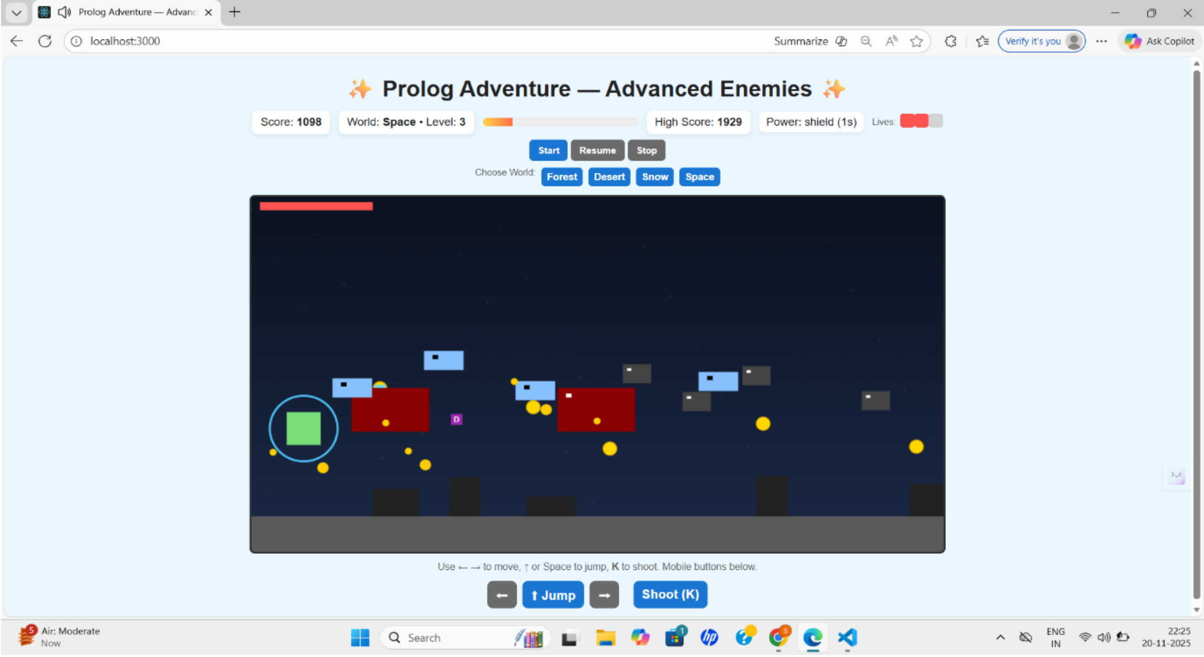
World: Space • Level: 2

High Score: 1929

Power: shield (1s)

Use ← → to move, ↑ or Space to jump, K to shoot. Mobile buttons below.

Fig.1.2:- Desktop / Laptop View of Levels in Game



Prolog Adventure — Advanced Enemies

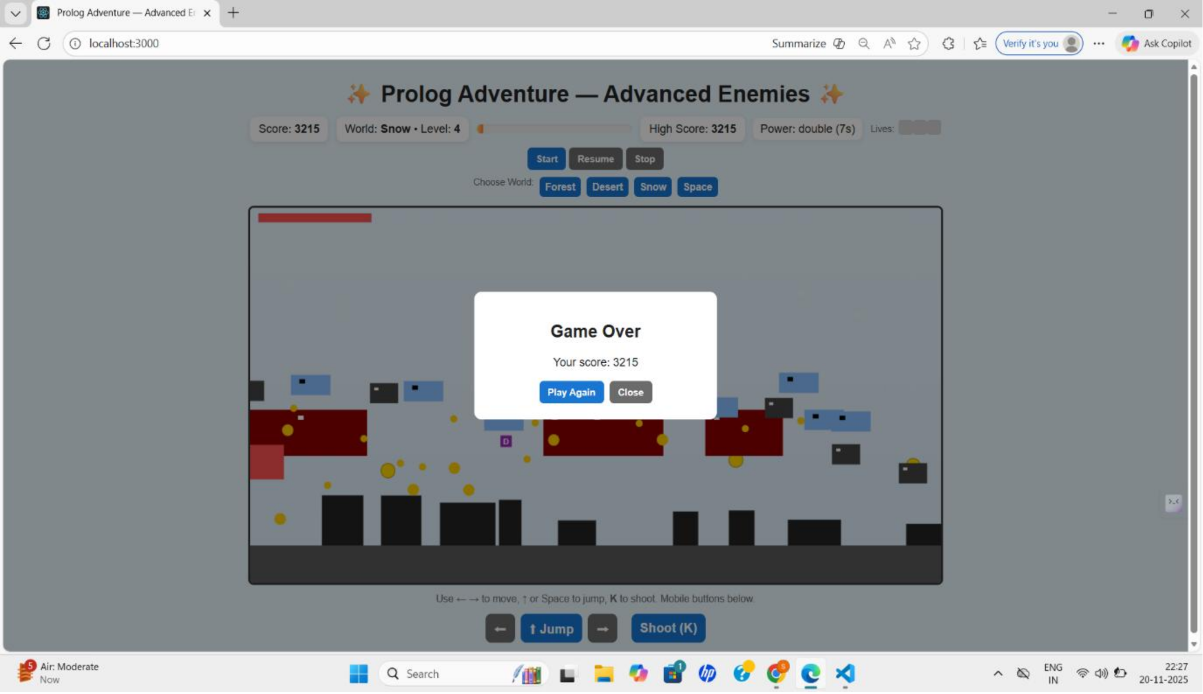
Score: 1098

World: Space • Level: 3

High Score: 1929

Power: shield (1s)

Use ← → to move, ↑ or Space to jump, K to shoot. Mobile buttons below.



Prolog Adventure — Advanced Enemies

Score: 3215 | World: Snow • Level: 4 | High Score: 3215 | Power: double (7s) | Lives:

Game Over

Your score: 3215

Use ← → to move, ↑ or Space to jump, K to shoot. Mobile buttons below.

Conclusion :

The Prolog Adventure Game is a fast, interactive, and intelligently designed web-based game that blends Prolog-driven logic with modern frontend technology. With a lightweight Node.js backend and a fully dynamic browser-based engine, the game delivers smooth performance across mobiles, tablets, laptops, and desktops. Its AI-driven enemy behavior, level-based difficulty, achievement system, and mobile-responsive controls create an engaging and accessible experience for all players. Overall, this project demonstrates the power of combining logical reasoning with real-time gameplay to build a smart, responsive, and immersive gaming experience.