DEVELOPMENT PROCESS DESCRIPTION

**INTRODUCTION**

Here is good example how the game can be implemented on **TypeScript** with using **PixiJS**.

I was focus on requirements execution using by clean code practices.

Also, I provided insights into my design decisions and programming knowledge.

1. Describe your OOP and SOLID knowledge

**OOP and SOLID Principles:**

**Encapsulation:** Entities (Hero, Animal, Yard) are encapsulated in their classes with specific responsibilities and properties.

**Single Responsibility Principle (SRP):** Each class handles only their logic: Animal for animal behavior, Main Hero for player behavior and control.

**Open-Closed Principle (OCP):** Was added new features, like different animal behaviors, which would not be modify existing classes but will extend them.

**Liskov Substitution Principle (LSP):** All entities behave consistently as Entity.

**Dependency Inversion Principle (DIP):** High-level modules like Game rely on abstractions.

2. Describe your Patters and Best Practices knowledge

**Patterns and Best Practices:**

**Game Loop:** Centralized update loop ensures cohesive updates across all entities.

**Separation of Concerns:** Rendering, game logic, data and input handling are separated.

**Using Events:** Uses PixiJS pointer events for smooth interaction and moving.

3. Describe your Code Style and Architectural knowledge

**Code Style and Architecture:**

Clean code, modular structure and separation of logic for reusability and more readability.

Constants defined for easy tweaking (dimensions, speeds, ets.).

Clear variable and function names enhance maintainability in future.

4. Game Framework building skills

**Game Framework Skills:**

Using PixiJS for efficient 2D rendering and game development.

Also was integrated Core Game mechanics, collision detection, AI behavior and spawning logic.

**RESOLUTION**

This implementation satisfies all planned requirements while according to modern software design principles.

Let me know if you wood like further refinements or explanations!

Thanks.