

TEXT-BASED GAME

DESCRIPTION

A console-based Java application simulating a text-based adventure game where players navigate a dungeon, battle enemies like goblins, collect items such as swords and potions, manage inventory, and strive to reach the exit using text commands (e.g., "move", "fight"). The project replicates RPG mechanics for a single player, emphasizing immersive gameplay and strategic decision-making in a virtual environment.

PROBLEM STATEMENT

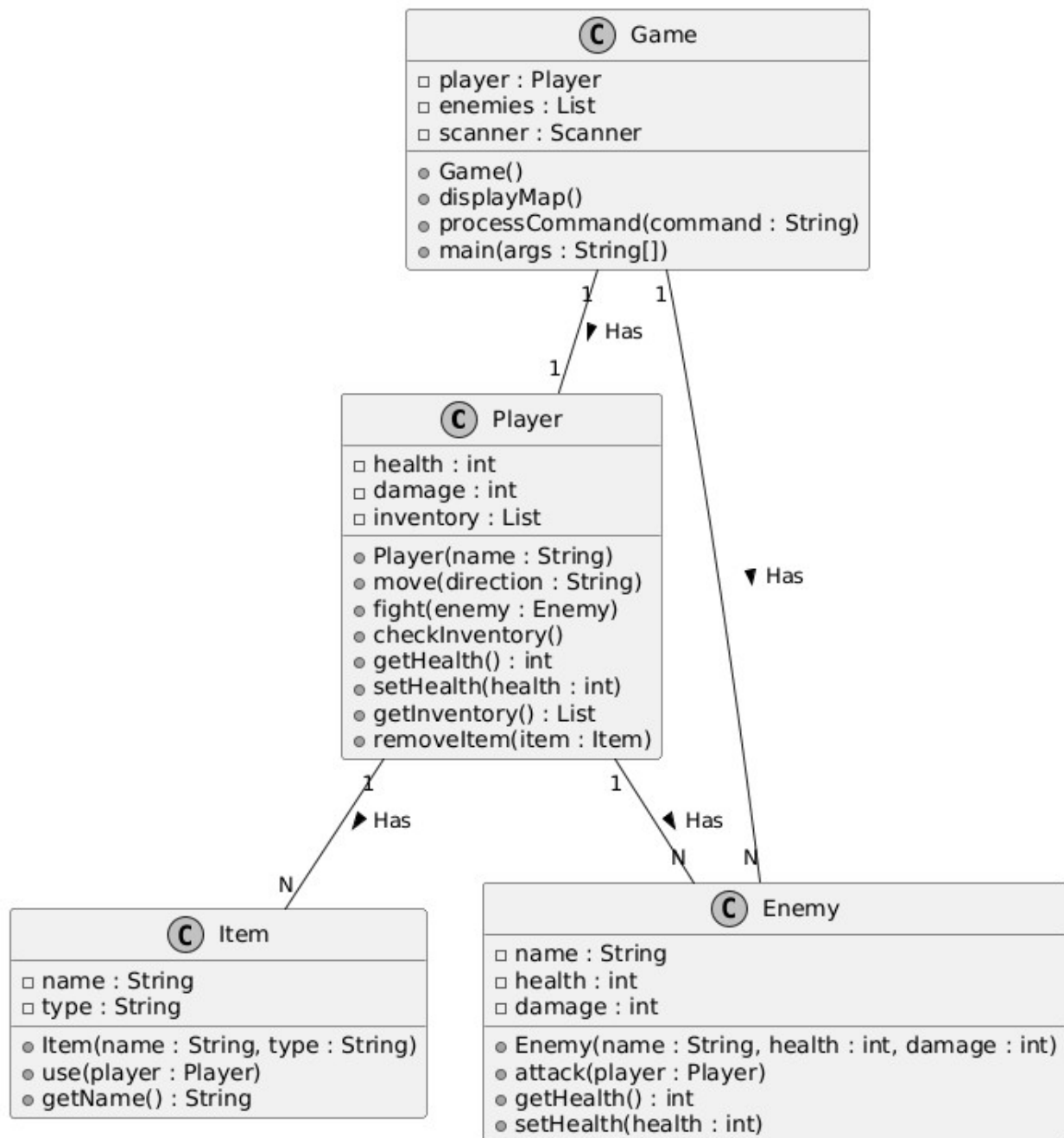
Traditional board games lack dynamic interaction and scalability for modern learning. This simulation explores game logic, player engagement, and OOP concepts, beginning with a console interface and offering potential GUI development. It practices OOP,

exception handling, and state management in a controlled setting, providing an educational yet entertaining platform to bridge theory and practical coding skills.

TARGET USERS

Casual players enjoying an interactive text-based RPG, exploring dungeons and collecting treasures without complex setups. Game Developers: Professionals or enthusiasts prototyping game systems, testing combat, inventory, and input mechanics before full-scale projects. Educational Users: Students or instructors leveraging the game to learn OOP principles, exception handling, and game design in a simulated, hands-on environment.

CLASS DIAGRAM



OOP CONCEPTS AND THEIR USES

FUNCTION	OOP CONCEPT	APPLICATION
Player(constructor)	Constructor,Encapsulation	Initialize private fields(health,damage)
Move()	Encapaulation	Update player position privately
Fight()	Encapsulation,Data hiding	Modify enemy health securely
Checkinventory()	Encapsulation	Access inventory list
Enemy(constructor)	constructor	Initialize enemy stats
Attack()	Encapsulation,Data Hiding	Reduce player health privately

Item(constructor)	Constructor	Set Item properties
Use()	Encapsulation,Data Hiding	Reduce Player health privately
displayMap()	Abstarction	Present simplified map interface
processCommand()	Encapsulation	Handle User input internally
Main()	Classes and Object	Create game objects