Manor of Mysteries

Group 16

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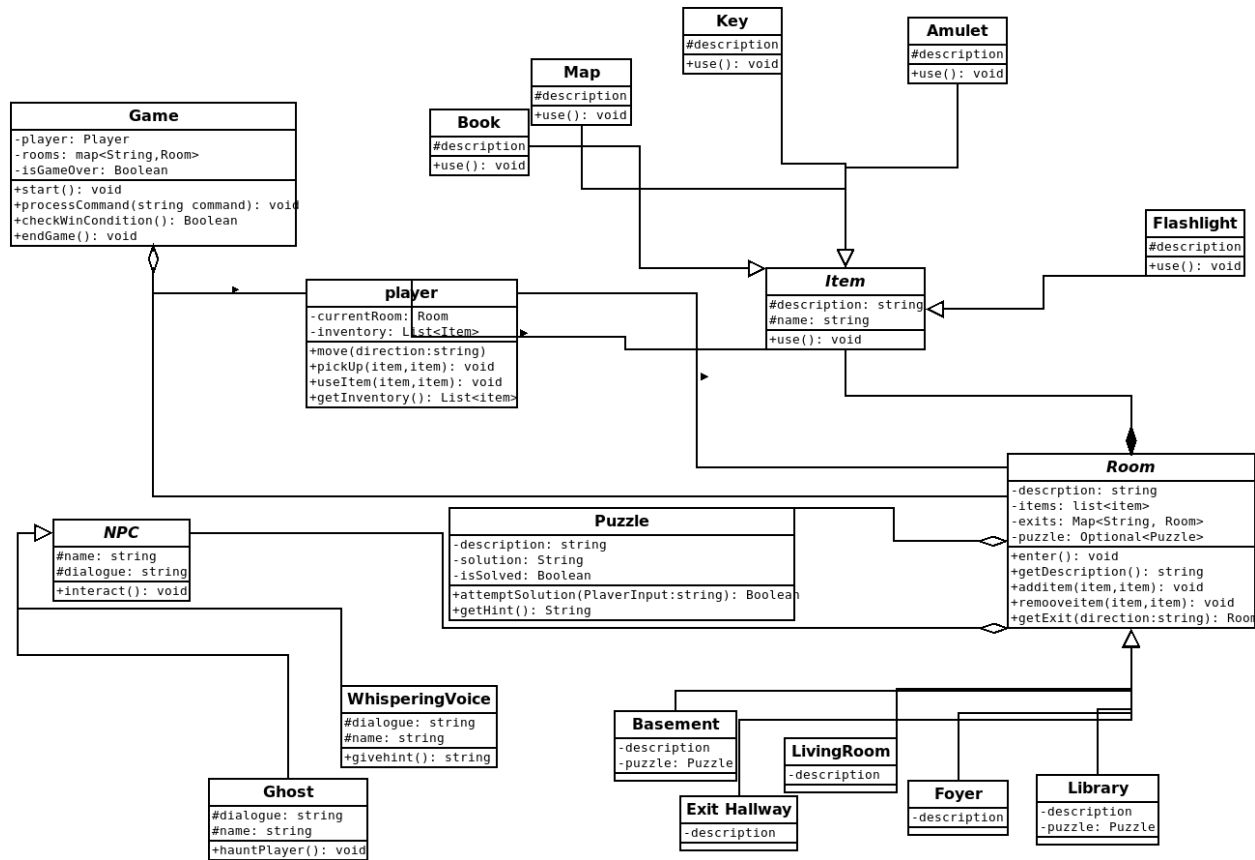**Chidalu Okeke**
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SOFTWARE DESIGN
DESIGN – CLASS DIAGRAMS

Key
#description
+use(): void

Amulet
#description
+use(): void

Map
#description
+use(): void

Book
#description
+use(): void

Flashlight
#description
+use(): void

Game
-player: Player
-rooms: map<String,Room>
-isGameOver: Boolean
+start(): void
+processCommand(string command): void
+checkWinCondition(): Boolean
+endGame(): void

player
-currentRoom: Room
-inventory: List<Item>
+move(direction:string)
+pickUp(item,item): void
+useItem(item,item): void
+getInventory(): List<item>

Item
#description: string
#name: string
+use(): void

Room
-descrption: string
-items: list<item>
-exits: Map<String, Room>
-puzzle: Optional<Puzzle>
+enter(): void
+getDescription(): string
+additem(item,item): void
+remooveitem(item,item): void
+getExit(direction:string): Room

NPC
#name: string
#dialogue: string
+interact(): void

Puzzle
-description: string
-solution: String
-isSolved: Boolean
+attemptSolution(PlaverInput:string): Boolean
+getHint(): String

WhisperingVoice
#dialogue: string
#name: string
+givehint(): string

Ghost
#dialogue: string
#name: string
+hauntPlayer(): void

Basement
-description
-puzzle: Puzzle

LivingRoom
-description

Exit Hallway
-description

Foyer
-description

Library
-description
-puzzle: Puzzle

CLASS DESCRIPTIONS

Class Name	Method Name	Description
Room	enter()	Called when player enters the room, triggers room-specific events
	getDescription()	Returns the detailed description of the room
	addItem()	Adds a specified item to the room's inventory
	removeItem()	Removes a specified item from the room's inventory
	getExit(string)	Returns the connected room in the specified direction
Item	use()	Base method for using an item, overridden by specific items
Flashlight	use()	Illuminates dark rooms, enabling better visibility
Key	use()	Unlocks specific doors when used on the correct lock
Amulet	use()	Provides protection against ghost encounters
Map	use()	Shows the layout of the mansion to aid navigation
Book	use()	Reveals hidden messages or clues within the book
Puzzle	attemptSolution(string)	Checks if player's input matches the puzzle solution
	getHint()	Provides a hint to help solve the puzzle
Player	move(string)	Moves player to a new room in specified direction
	pickUp(Item)	Adds an item to player's inventory
	useItem(Item)	Uses an item from player's inventory
	getInventory()	Returns list of items in player's possession
NPC	interact()	Base method for NPC interactions
Ghost	interact()	Initiates ghost encounter dialogue
	hauntPlayer()	Triggers game-ending ghost encounter if conditions met
WhisperingVoice	interact()	Initiates dialogue with the mysterious voice
	giveHint()	Provides helpful hint about current room or puzzle
Game	Start()	Initializes game state, rooms, items, and NPCs
	processCommand(string)	Handles and executes player commands
	checkWinCondition()	Verifies if player has met winning conditions
	endgame()	Terminates game and displays final outcome