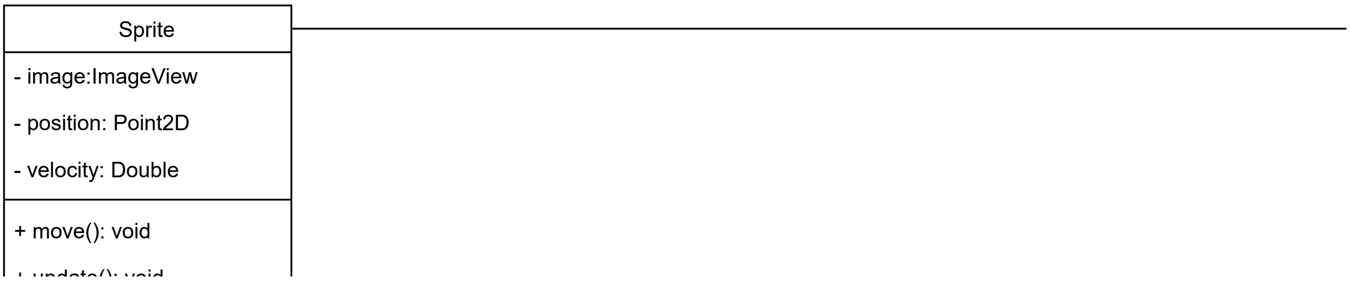
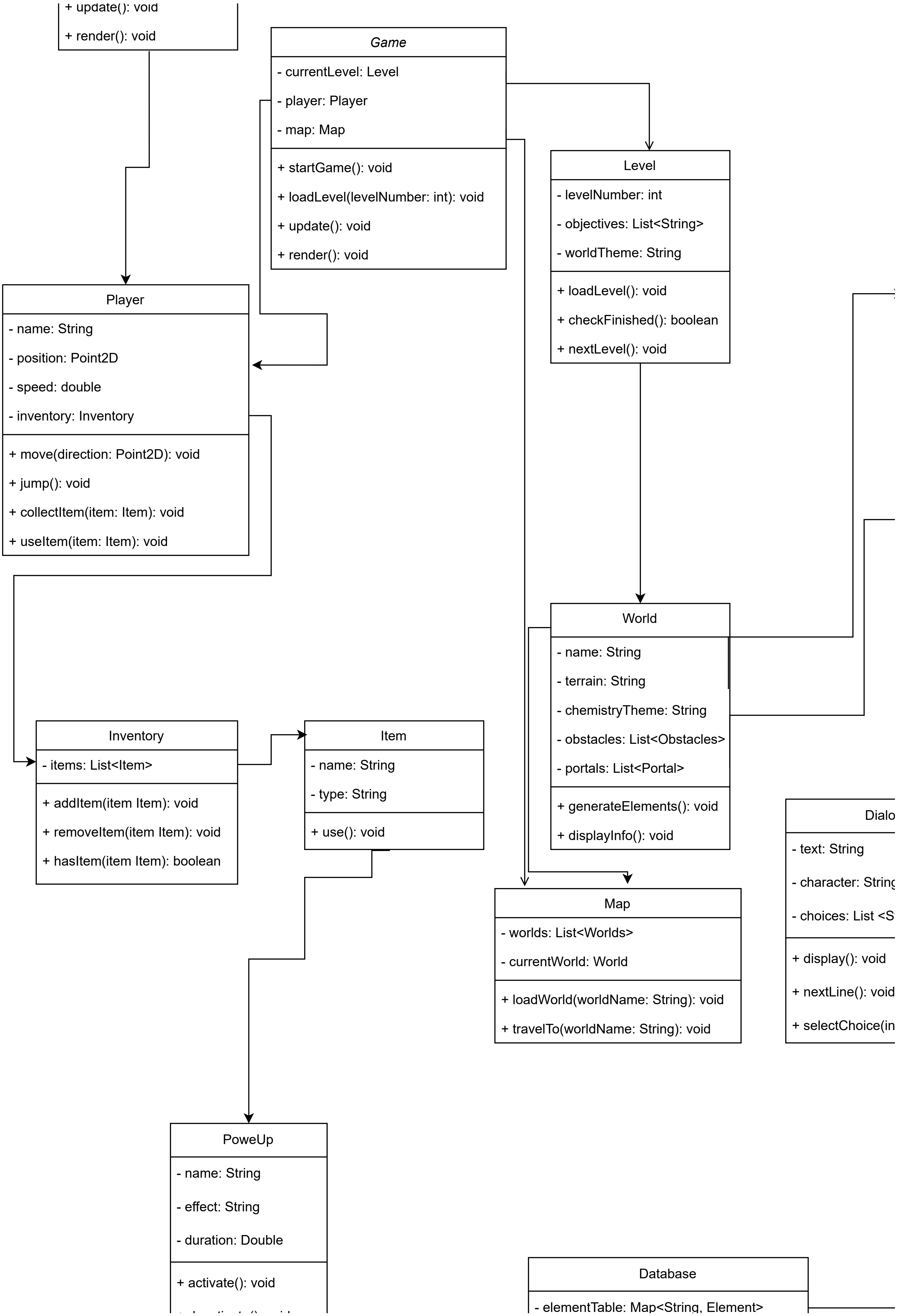
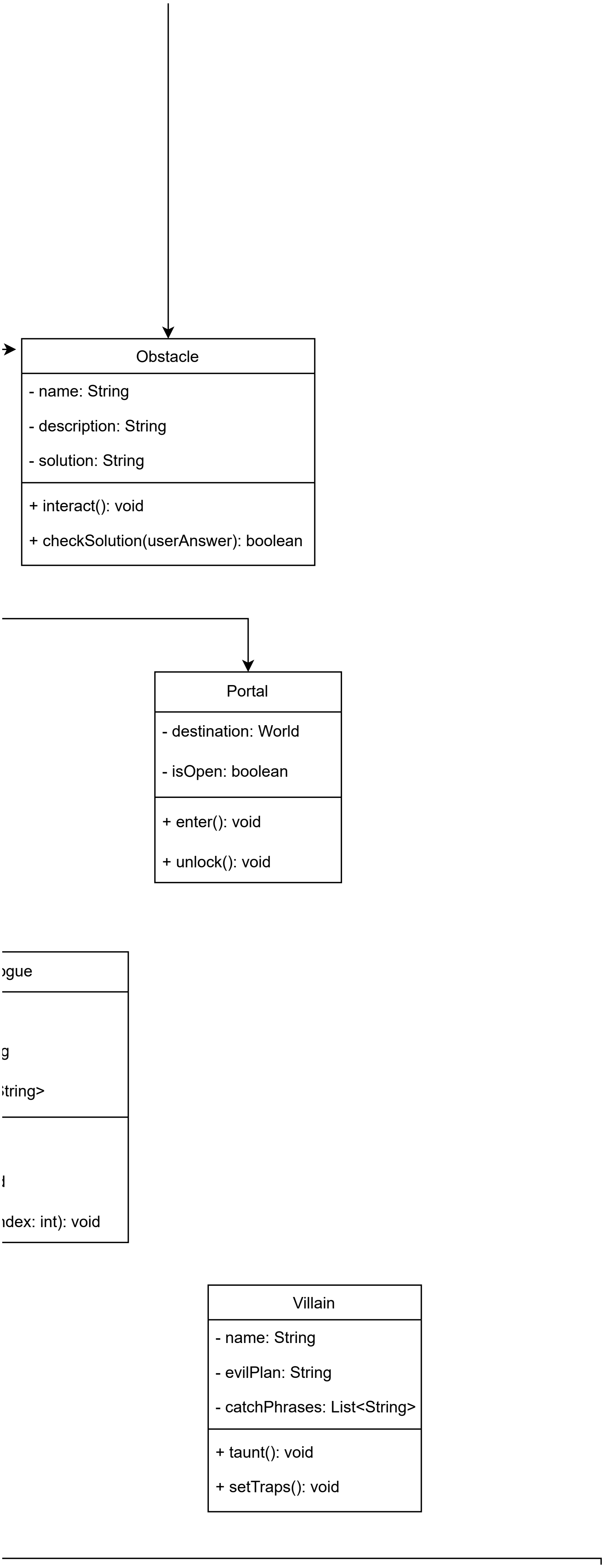
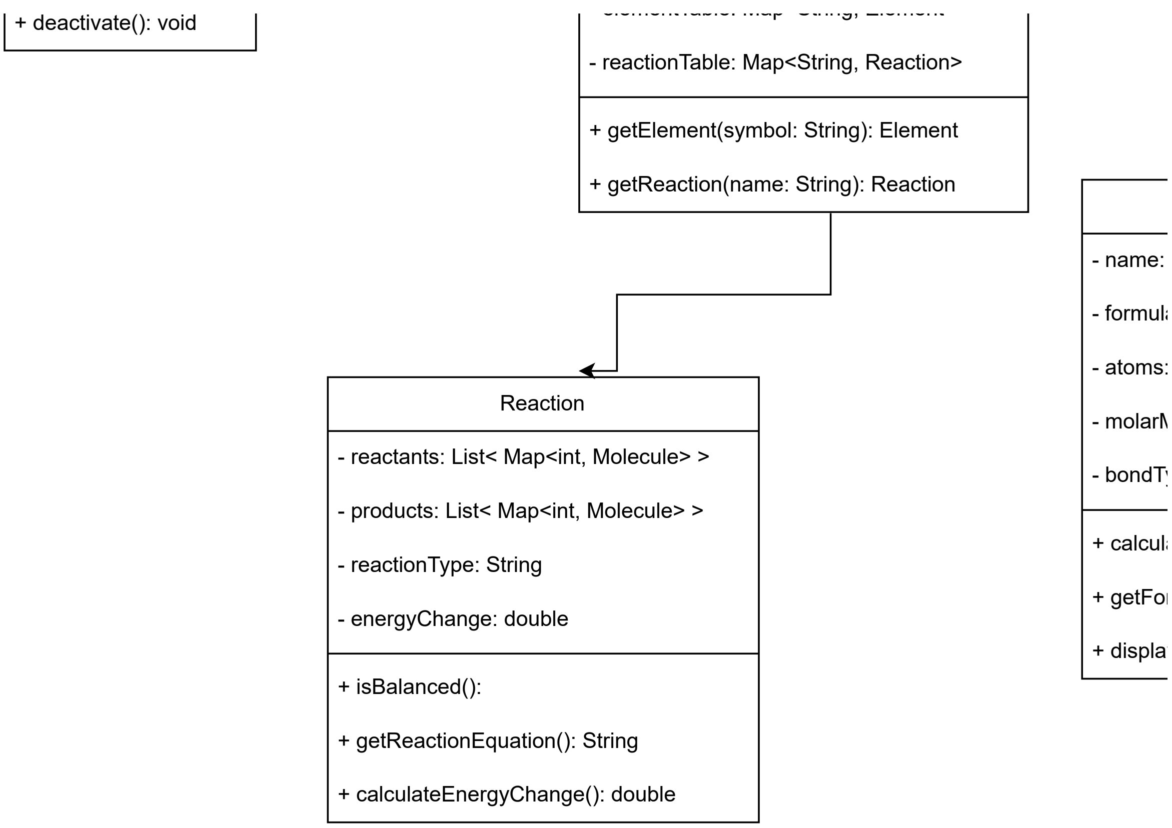
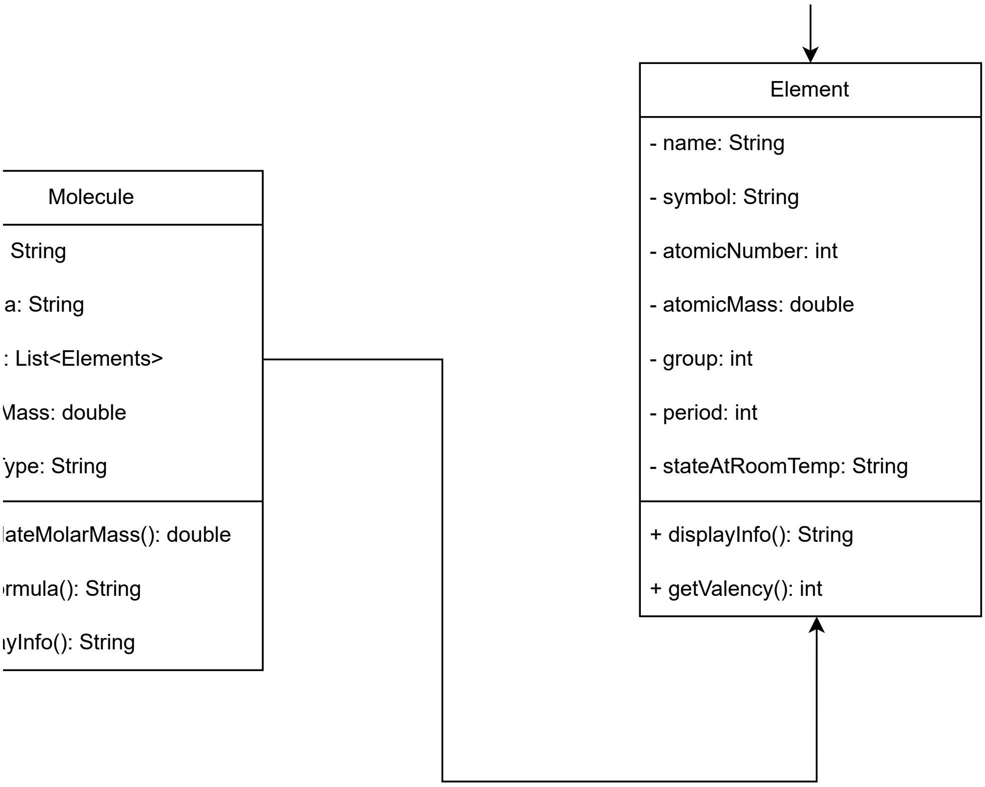

Sprite
- image:ImageView
- position: Point2D
- velocity: Double
+ move(): void
+ update(): void


+ update(): void
+ render(): void
Game
- currentLevel: Level
- player: Player
- map: Map
+ startGame(): void
+ loadLevel(levelNumber: int): void
+ update(): void
+ render(): void
Level
- levelNumber: int
- objectives: List<String>
- worldTheme: String
+ loadLevel(): void
+ checkFinished(): boolean
+ nextLevel(): void
Player
- name: String
- position: Point2D
- speed: double
- inventory: Inventory
+ move(direction: Point2D): void
+ jump(): void
+ collectItem(item: Item): void
+ useItem(item: Item): void
World
- name: String
- terrain: String
- chemistryTheme: String
- obstacles: List<Obstacles>
- portals: List<Portal>
+ generateElements(): void
+ displayInfo(): void
Inventory
- items: List<Item>
+ addItem(item Item): void
+ removeItem(item Item): void
+ hasItem(item Item): boolean
Item
- name: String
- type: String
+ use(): void
Dialo
- text: String
- character: String
- choices: List <S
+ display(): void
+ nextLine(): void
+ selectChoice(in
Map
- worlds: List<Worlds>
- currentWorld: World
+ loadWorld(worldName: String): void
+ travelTo(worldName: String): void
PoweUp
- name: String
- effect: String
- duration: Double
+ activate(): void
Database
- elementTable: Map<String, Element>


Obstacle
- name: String
- description: String
- solution: String
+ interact(): void
+ checkSolution(userAnswer): boolean
Portal
- destination: World
- isOpen: boolean
+ enter(): void
+ unlock(): void
gue
g
tring>
dex: int): void
Villain
- name: String
- evilPlan: String
- catchPhrases: List<String>
+ taunt(): void
+ setTraps(): void


+ deactivate(): void
- reactionTable: Map<String, Reaction>
+ getElement(symbol: String): Element
+ getReaction(name: String): Reaction
Reaction
- reactants: List< Map<int, Molecule> >
- products: List< Map<int, Molecule> >
- reactionType: String
- energyChange: double
+ isBalanced():
+ getReactionEquation(): String
+ calculateEnergyChange(): double
- name:
- formul
- atoms:
- molarM
- bondTy
+ calcul
+ getFor
+ displa


Element
- name: String
- symbol: String
- atomicNumber: int
- atomicMass: double
- group: int
- period: int
- stateAtRoomTemp: String
+ displayInfo(): String
+ getValency(): int
Molecule
String
a: String
: List<Elements>
Mass: double
ype: String
lateMolarMass(): double
rmula(): String
yInfo(): String