Door

+ Door(int, int)
+ playerCollision(Player)

Treasure

+ Treasure(int, int)
+ playerCollision(Player)

Wall

+ Wall(int, int)

Loads

Sword

+ Sword(int, int)
+ playerCollision(Player)

DungeonApplication

+ start(Stage)
+ main(String[])

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Calls

1

Exit

+ Exit(int, int)
+ playerCollision(Player)

Portal

+ Portal(int, int)
+ playerCollision(Player)

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Entity

- observers: ArrayList<Observer>
- name: String
- type: String
- activated: boolean
- x: IntegerProperty
- y: IntegerProperty

+ Entity(int, int, String, String)
+ x(): IntegerProperty
+ y(): IntegerProperty
+ getName(): String
+ getType(): String
+ playerCollision(Player)
+ setName(String)
+ move(String)
+ activate():
+ deactivate():
+ isObstacle(): boolean
+ isDoor(): boolean
+ isActivated(): boolean
+ chooseGoalCheckers()
+ checkGoals()

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DungeonLoader

- json: JSONObject

+ DungeonLoader(String)
+ load(): Dungeon
+ loadEntity(Dungeon, JSONObject)
+ onLoad(Entity)
+ onLoad(Wall)
+ onLoad(Sword)
+ onLoad(Exit)
+ onLoad(Treasure)
+ onLoad(Door)
+ onLoad(Key)
+ onLoad(Potion)
+ onLoad(Portal)
+ onLoad(FloorSwitch)
+ onLoad(Boulder)
+ onLoad(Enemy)

FloorSwitch

+ FloorSwitch(int, int)
+ playerCollision(Player)

Potion

+ Potion(int, int)
+ playerCollision(Player)

Key

+ Key(int, int)
+ playerCollision(Player)

Boulder

+ Boulder(int, int)

Enemy

+ Enemy(int, int)
+ playerCollision(Player)

Player

- dungeon: Dungeon
- direction: String
- sword: int
- treasure: int
- key: boolean
- isInvincible: boolean

+ Player(Dungeon, int, int)
+ moveUp()
+ moveDown()
+ moveLeft()
+ moveRight()
+ faceUp()
+ faceLeft()
+ faceDown()
+ faceRight()
+ attack()
+ openDoor(int, int)
+ push()

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**<<interface>>
Subject**

+ registerObserver(Observer)
+ removeObserver(Observer)
+ notifyObservers()
+ getX(): int
+ getY(): int

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**<<interface>>
GoalChecker**

+ check(Dungeon, Pllayer)

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Exists because of

**<<interface>>
Observer**

+ update(Subject);

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CheckEnemies

CheckSwitches

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Goal

- subgoals: List<GoalChecker>

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Loads

Dungeon

DungeonControllerLoader

- playerImage: Image
- wallImage: Image
- swordImage: Image
- exitImage: Image
- treasureImage: Image
- doorImage: Image
- keyImage: Image
- potionImage: Image
- portalImage: Image
- switchImage: Image
- boulderImage: Image
- enemyImage: Image

+ DungeonControllerLoader(String)
+ onLoad(Entity, ImageView)
+ trackPosition(Entity, Node)
+ loadController(): DungeonController

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Responds to changes in

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DungeonController

+ DungeonController(Dungeon, List<ImageView>)
+ initialize()
+ handKeyPress(KeyEvent)
+ obstaclePresent(int, int): boolean

+ teleport()
+ obtainSword()
+ obtainTreasure()
+ obtainKey()
+ obtainPotion()
+ hasSword(): boolean
+ hasKey(): boolean
+ getDirection(): String
+ getTreasure(): int
+ isInvincible(): boolean

CheckTreasure

CheckExit

+ Goal()
+ addSubgoal()
+ removeSubgoal()

- width: int
- height: int
- entities: List<Entity>

+ Dungeon(int, int)
+ getWidth(): int
+ getHeight(): int
+ getPlayer(): Player
+ getEntities(): List<Entity>
+ setPlayer(Player)
+ addEntity(Entity)
+ removeEntity(Entity)
+ entityInteraction(int, int)
+ updateSwitches()
+ entitiesHere(int, int): List<Entity>

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