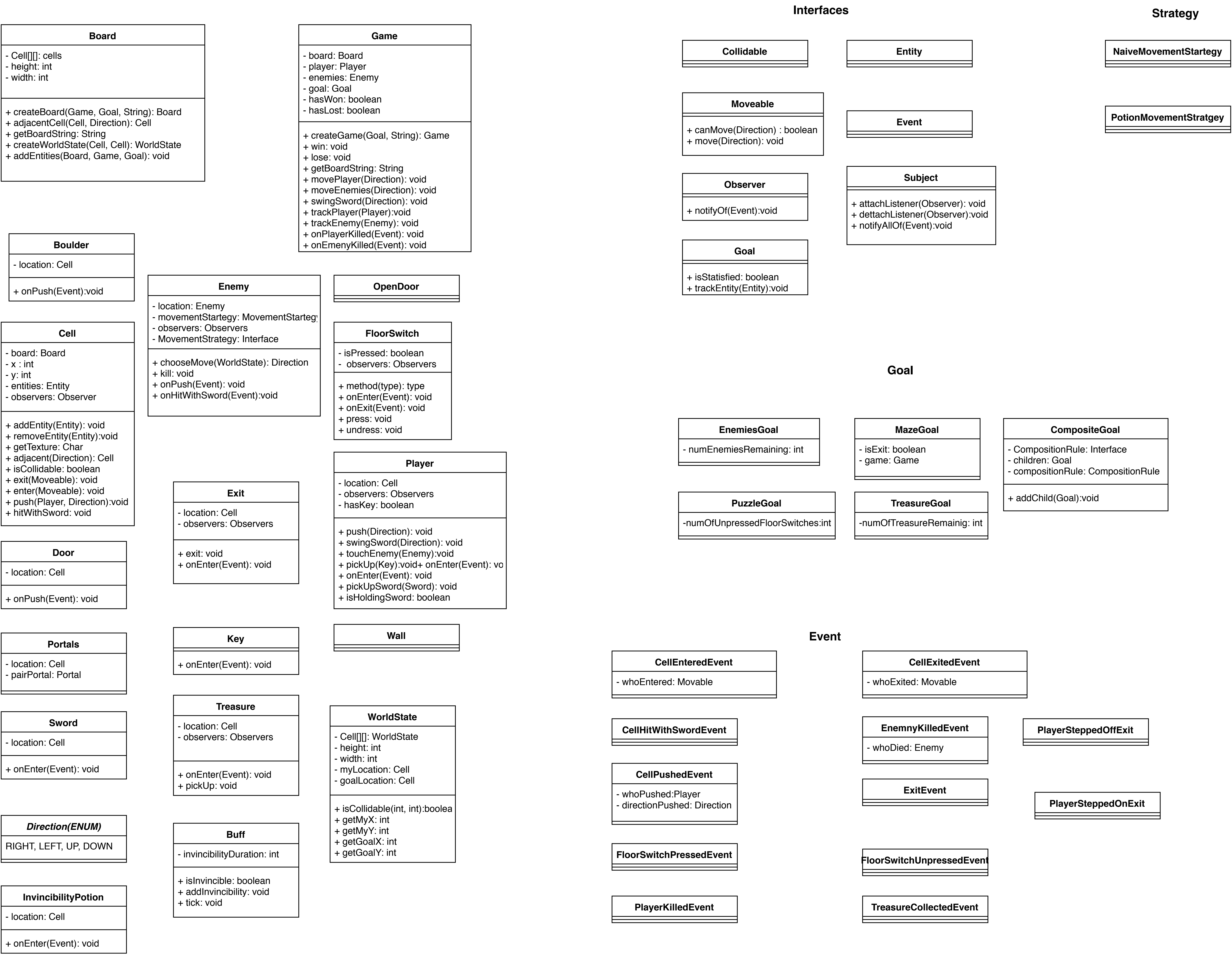


Board
- Cell[][]: cells
- height: int
- width: int

+ createBoard(Game, Goal, String): Board
+ adjacentCell(Cell, Direction): Cell
+ getBoardString: String
+ createWorldState(Cell, Cell): WorldState
+ addEntities(Board, Game, Goal): void

Game
- board: Board
- player: Player
- enemies: Enemy
- goal: Goal
- hasWon: boolean
- hasLost: boolean

+ createGame(Goal, String): Game
+ win: void
+ lose: void
+ getBoardString: String
+ movePlayer(Direction): void
+ moveEnemies(Direction): void
+ swingSword(Direction): void
+ trackPlayer(Player):void
+ trackEnemy(Enemy): void
+ onPlayerKilled(Event): void
+ onEmenyKilled(Event): void

Boulder
- location: Cell

+ onPush(Event):void

Enemy
- location: Enemy
- movementStartegy: MovementStartegy
- observers: Observers
- MovementStrategy: Interface

+ chooseMove(WorldState): Direction
+ kill: void
+ onPush(Event): void
+ onHitWithSword(Event):void

OpenDoor

Cell
- board: Board
- x : int
- y: int
- entities: Entity
- observers: Observer

+ addEntity(Entity): void
+ removeEntity(Entity):void
+ getTexture: Char
+ adjacent(Direction): Cell
+ isCollidable: boolean
+ exit(Moveable): void
+ enter(Moveable): void
+ push(Player, Direction):void
+ hitWithSword: void

FloorSwitch
- isPressed: boolean
- observers: Observers

+ method(type): type
+ onEnter(Event): void
+ onExit(Event): void
+ press: void
+ undress: void

Exit
- location: Cell
- observers: Observers

+ exit: void
+ onEnter(Event): void

Player
- location: Cell
- observers: Observers
- hasKey: boolean

+ push(Direction): void
+ swingSword(Direction): void
+ touchEnemy(Enemy):void
+ pickUp(Key):void+ onEnter(Event): vo
+ onEnter(Event): void
+ pickUpSword(Sword): void
+ isHoldingSword: boolean

Door
- location: Cell

+ onPush(Event): void

Key

+ onEnter(Event): void

Wall

Portals
- location: Cell
- pairPortal: Portal

Treasure
- location: Cell
- observers: Observers

+ onEnter(Event): void
+ pickUp: void

WorldState
- Cell[][]: WorldState
- height: int
- width: int
- myLocation: Cell
- goalLocation: Cell

+ isCollidable(int, int):boolea
+ getMyX: int
+ getMyY: int
+ getGoalX: int
+ getGoalY: int

Sword
- location: Cell

+ onEnter(Event): void

Direction(ENUM)

RIGHT, LEFT, UP, DOWN

Buff
- invincibilityDuration: int

+ isInvincible: boolean
+ addInvincibility: void
+ tick: void

InvincibilityPotion
- location: Cell

+ onEnter(Event): void

Interfaces

Collidable

Entity

Moveable

+ canMove(Direction) : boolean
+ move(Direction): void

Event

Observer

+ notifyOf(Event):void

Subject

+ attachListener(Observer): void
+ dettachListener(Observer):void
+ notifyAllOf(Event):void

Goal

+ isStatisfied: boolean
+ trackEntity(Entity):void

Strategy

NaiveMovementStartegy

PotionMovementStratgey

Goal

EnemiesGoal
- numEnemiesRemaining: int

MazeGoal
- isExit: boolean
- game: Game

CompositeGoal
- CompositionRule: Interface
- children: Goal
- compositionRule: CompositionRule

+ addChild(Goal):void

PuzzleGoal

-numOfUnpressedFloorSwitches:int

TreasureGoal

-numOfTreasureRemainig: int

Event

CellEnteredEvent
- whoEntered: Movable

CellExitedEvent
- whoExited: Movable

CellHitWithSwordEvent

EnemnyKilledEvent
- whoDied: Enemy

PlayerSteppedOffExit

CellPushedEvent
- whoPushed:Player
- directionPushed: Direction

ExitEvent

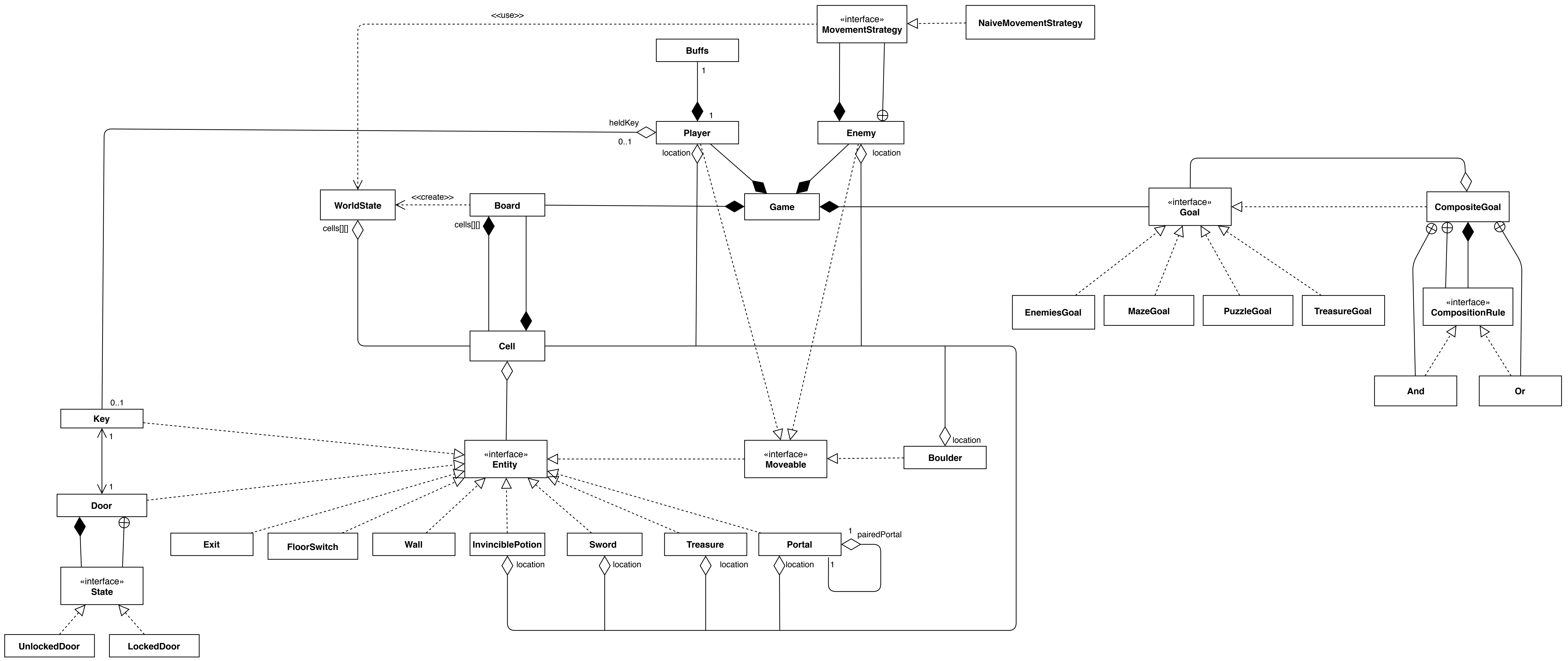
PlayerSteppedOnExit

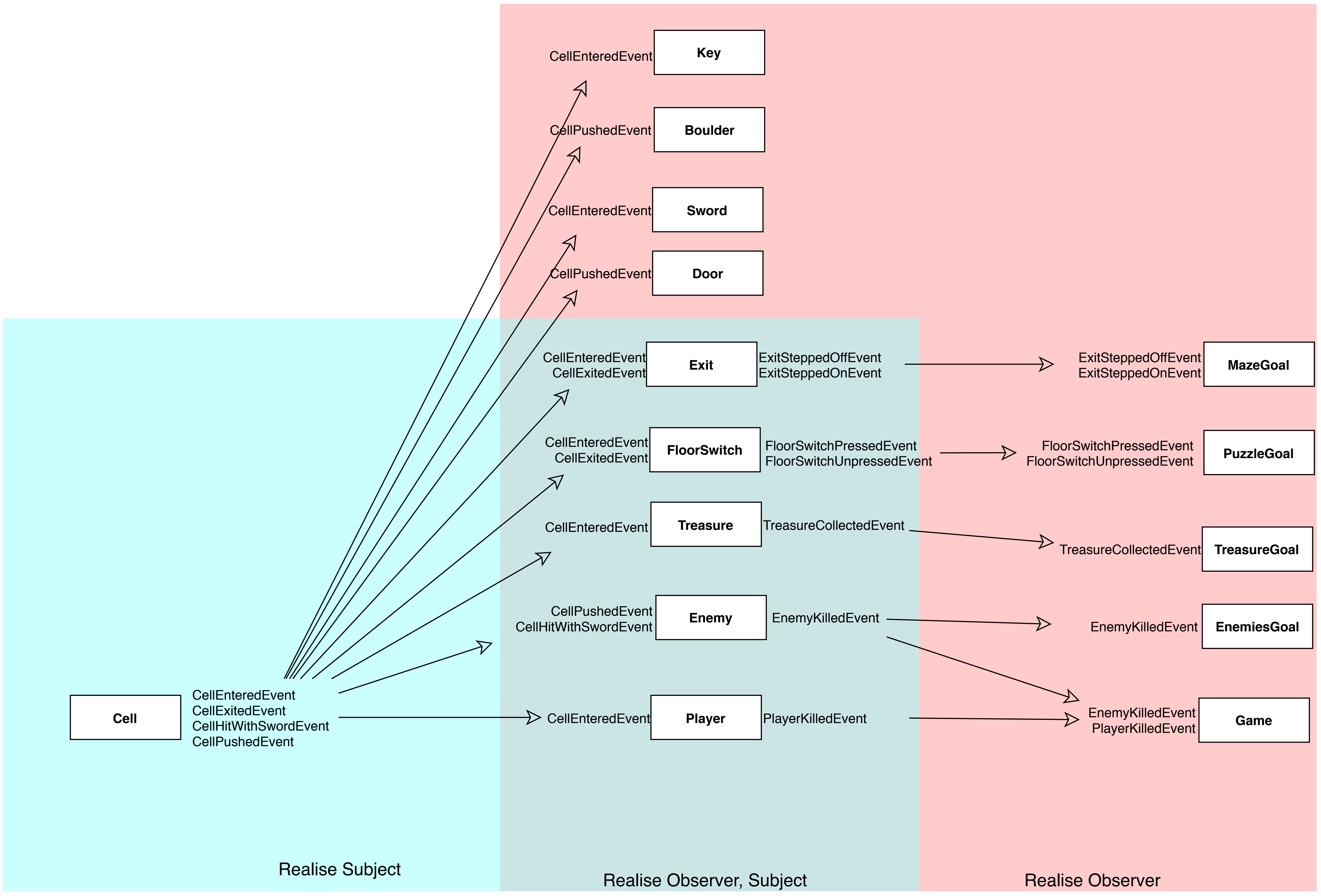
FloorSwitchPressedEvent

FloorSwitchUnpressedEvent

PlayerKilledEvent

TreasureCollectedEvent


<<use>>
«interface»
MovementStrategy
NaiveMovementStrategy
Buffs
1
1
heldKey
0..1
Player
Enemy
location
location
WorldState
<<create>>
Board
Game
«interface»
Goal
CompositeGoal
cells[][]
cells[][]
EnemiesGoal
MazeGoal
PuzzleGoal
TreasureGoal
«interface»
CompositionRule
And
Or
Cell
0..1
Key
1
1
Door
«interface»
Entity
«interface»
Moveable
location
Boulder
Exit
FloorSwitch
Wall
InvinciblePotion
Sword
Treasure
Portal
1
pairedPortal
location
location
location
location
1
«interface»
State
UnlockedDoor
LockedDoor


CellEnteredEvent
Key
CellPushedEvent
Boulder
CellEnteredEvent
Sword
CellPushedEvent
Door
CellEnteredEvent
CellExitedEvent
Exit
ExitSteppedOffEvent
ExitSteppedOnEvent
ExitSteppedOffEvent
ExitSteppedOnEvent
MazeGoal
CellEnteredEvent
CellExitedEvent
FloorSwitch
FloorSwitchPressedEvent
FloorSwitchUnpressedEvent
FloorSwitchPressedEvent
FloorSwitchUnpressedEvent
PuzzleGoal
CellEnteredEvent
Treasure
TreasureCollectedEvent
TreasureCollectedEvent
TreasureGoal
CellPushedEvent
CellHitWithSwordEvent
Enemy
EnemyKilledEvent
EnemyKilledEvent
EnemiesGoal
Cell
CellEnteredEvent
CellExitedEvent
CellHitWithSwordEvent
CellPushedEvent
CellEnteredEvent
Player
PlayerKilledEvent
EnemyKilledEvent
PlayerKilledEvent
Game
Realise Subject
Realise Observer, Subject
Realise Observer