WorldModel

-numRows: int
-numCols: int
-background: Background[][]
-occupancy: Entity[][]
-entities: Set<Entity>
+tryAddEntity()
-withinBounds(): boolean
+isOccupied(): boolean

+findNearest(): Optional<Entity>
+addEntity()
+moveEntity()
+removeEntity()
-removeEntityAt()

+getBackgroundImage(): Optional<PImage>
+setBackground()
+getOccupant(): Optional<Entity>
-getOccupancyCell(): Entity
-setOccupancyCell()
+getBackgroundCell(): Background
-setBackgroundCell()

TODO

VirtualWorld

+TIMER_ACTION_PERIOD: int   <<static>>
+VIEW_WIDTH: int   <<static>>
+VIEW_HEIGHT: int   <<static>>
+TILE_WIDTH: int   <<static>>
+TILE_HEIGHT: int   <<static>>
+WORLD_WIDTH_SCALE: int   <<static>>
+WORLD_HEIGHT_SCALE: int   <<static>>
+VIEW_COLS: int   <<static>>
+VIEW_ROWS: int   <<static>>
+WORLD_COLS: int   <<static>>
+WORLD_ROWS: int   <<static>>
+IMAGE_LIST_FILE_NAME: String   <<static>>
+DEFAULT_IMAGE_NAME: String   <<static>>
+DEFAULT_IMAGE_COLOR: int   <<static>>
+LOAD_FILE_NAME: String   <<static>>
+FAST_FLAG: String   <<static>>
+FASTER_FLAG: String   <<static>>
+FASTEST_FLAG: String   <<static>>
+FAST_SCALE: double   <<static>>
+FASTER_SCALE: double   <<static>>
+FASTEST_SCALE: double   <<static>>
+timeScale: double
+imageStore: ImageStore
+world: WorldModel
+view: WorldView
+scheduler: EventScheduler

+settings()
+setup()
+draw()
+mousePressed()
-mouseToPoint()
+keyPressed()
+createDefaultBackground()   <<static>>
+createImageColored()   <<static>>
+loadWorld()   <<static>>
+loadWorld()   <<static>>
+scheduleActions()   <<static>>
+parseCommandLine()   <<static>>
+main()   <<static>>

WorldView

-screen: PApplet
-world: WorldModel
-tileWidth: int
-tileHeight: int
-viewport: Viewport
+shiftView()
-drawBackground()
-drawEntities()
+drawViewport()

TODO

EventScheduler

-eventQueue: PriorityQueue<Event>
-pendingEvents: Map<Entity, List<Event>>
-currentTime: double

+updateOnTime()
-removePendingEvent()
+scheduleEvent
+unscheduleAllEvents()

Background

-id: String
-images: List<PImage>
-imageIndex: int

TODO

Entity

-kind: EntityKind
-id: String
-position: Point
-images: List<PImage>
-imageIndex: int
-resourceLimit: int
-resourceCount: int
-actionPeriod: int
-animationPeriod: int
-health: int
-healthLimit: int

+getKind()
+getId()
+getPosition
+setPosition
+getHealth()

+getAnimationPeriod(): int
+nextImage()
-nextPositionFairy()
-nextPositionDude()

+executeSaplingActivity()
+executeTreeActivity()
+executeFairyActivity()
+executeDudeNotFullActivity()
+executeDudeFullActivity()
+scheduleActions()

-transformNotFull(): boolean
-transformFull(): boolean
-transformPlant(): boolean
-transformTree(): boolean
-transformSapling(): boolean

+getCurrentImage(): PImage <<static>>

-moveToFairy()
-moveToNotFull()
-moveToFull()

<<enumeration>> EntityKind

HOUSE
DUDE_FULL
DUDE_NOT_FULL
OBSTACLE
FAIRY
STUMP
SAPLING
TREE

Point

+x: int
+y: int

+toString(): String
+equals(): boolean

Viewport

-row: int
-col: int
-numRows: int
-numCols: int

+viewportToWorld(): Point
+worldToViewport(): Point
+shift()
+contains(): boolean

Event

-action: Action
-time: long
-entity: Entity

TODO

Action

-kind: ActionKind
-entity: Entity
-world: WorldModel
-imageStore: ImageStore
-repeatCount: int

-executeAction()
-executeAnimationAction()
+executeActivityAction()

ActionKind

ACTIVITY
ANIMATION

EventComparator

+eventQueue: PriorityQueue<Event>
+pendingEvents: Map<Entity, List<Event>>
+timeScale: double

ImageStore

-images: Map<String, List<PImage>>
-defaultImages: List<PImage>
+getImageList(): List<PImage>
+loadImages()

TODO

Functions

+rand: Random   <<static>>

+COLOR_MASK: int   <<static>>
+KEYED_IMAGE_MIN: int   <<static>
+KEYED_RED_IDX: int   <<static>>
+KEYED_GREEN_IDX: int   <<static>
+KEYED_BLUE_IDX: int   <<static>>

+PROPERTY_KEY: int   <<static>>

+PATH_KEYS: List<String>   <<static>>

+SAPLING_KEY: String   <<static>
+SAPLING_HEALTH_LIMIT: int
+ SAPLING_ACTION_ANIMATION_PERIOD: int
+SAPLING_NUM_PROPERTIES: int
+SAPLING_ID: String   <<static>>
+SAPLING_COL: int   <<static>>
+SAPLING_ROW: int   <<static>
+SAPLING_HEALTH: int   <<stati

+BGND_KEY: String   <<static>>
+BGND_NUM_PROPERTIES: int   <<sta
+BGND_ID: int   <<static>>
+BGND_COL: int   <<static>>
+BGND_ROW: int   <<static>>

+OBSTACLE_KEY: String   <<static>>
+OBSTACLE_NUM_PROPERTIES: int   <
+OBSTACLE_ID: int   <<static>>
+OBSTACLE_COL: int   <<static>>
+OBSTACLE_ROW: int   <<static>>
+OBSTACLE_ANIMATION_PERIOD: int   <<static

+DUDE_KEY: String   <<static>>
+DUDE_NUM_PROPERTIES: int   <<st
+DUDE_ID: String   <<static>>
+DUDE_COL: int   <<static>>
+DUDE_ROW: int   <<static>>
+DUDE_LIMIT: int   <<static>>
+DUDE_ACTION_PERIOD: int   <<static>>
+DUDE_ANIMATION_PERIOD: int   <<static>

+HOUSE_KEY: String   <<static>>
+HOUSE_NUM_PROPERTIES: int   <<sta
+HOUSE_ID: String   <<static>>
+HOUSE_COL: int   <<static>>
+HOUSE_ROW: int   <<static>>

+FAIRY_KEY: String   <<static>>
+FAIRY_NUM_PROPERTIES: int   <<static>>
+ FAIRY_ID: String   <<static>>
+FAIRY_COL: int   <<static>>
+FAIRY_ROW: int   <<static>>
+FAIRY_ANIMATION_PERIOD: int   <<static>>
+FAIRY_ACTION_PERIOD: int   <<static>>

TODO

+TREE_KEY: String   <<static>>
+TREE_NUM_PROPERTIES: int   <<st
+TREE_ID: String   <<static>>
+TREE_COL: int   <<static>>
+TREE_ROW: int   <<static>>
+TREE_ANIMATION_PERIOD: int   <<static>>
+TREE_ACTION_PERIOD: int   <<static>>
+SAPLING_HEALTH: int   <<stati

+createHouse(): Entity   <<static>>
+createObstacle(): Entity   <<static>>
+createTree(): Entity   <<static>>
+createStump(): Entity   <<static>>
+createSapling(): Entity   <<static>>
+createFairy(): Entity   <<static>>
+createDudeNotFull(): Entity   <<static
+createDudeFull(): Entity   <<static>>
+createAnimationAction(): Action   <<static>>
+createActivityAction(): Action   <<static>>

+parseBackground(): boolean   <<static>>
+parseSapling(): boolean   <<static>>
+parseDude(): boolean   <<static>>
+parseFairy(): boolean   <<static>>
+parseTree(): boolean   <<static>>
+parseObstacle(): boolean   <<static>>
+parseHouse(): boolean   <<static>>

+clamp()   <<static>>
+load()   <<static>>
+processImageLine(): boolean   <<stati
+getImages(): List<PImage>   <<static>>
+setAlpha()   <<static>>
+getNumFromRange: int   <<static>>
+nearestEntity(): Optional<Entity>   <<static>>
+adjacent(): boolean   <<static>>