



-background: Background[][] -occupancy: Entity[][] -entities: Set<Entity>

-PROPERTY KEY: int <<static>> -SAPLING_KEY: String <<static>> -SAPLING_HEALTH_LIMIT: int <<static>> -SAPLING_NUM_PROPERTIES: int <<static>> -SAPLING_ID: String <<static>>

WorldModel

-numRows: int -numCols: int

-SAPLING_COL: int <<static>> -SAPLING ROW: int <<static>> -SAPLING_HEALTH: int <<static>>

-BGND_KEY: String <<static>> -BGND_NUM_PROPERTIES: int <<static>> -BGND_ID: int <<static>>

-BGND_COL: int -BGND_ROW: int <<static>> <<static>>

-OBSTACLE_KEY: String <<static>> -OBSTACLE_NUM_PROPERTIES: int <<static>>

-OBSTACLE ID: int <<static>> -OBSTACLE COL: int <<static>> -OBSTACLE ROW: int <<static>>

-DUDE_KEY: String <<static>> -DUDE_NUM_PROPERTIES: int -DUDE_ID: String <<static>>

<<static>> -DUDE_COL: int <<static>> -DUDE_ROW: int <<static>> -DUDE LIMIT: int <<static>> <<static>>

-DUDE ACTION PERIOD: int -DUDE ANIMATION PERIOD: int <<static>>

-HOUSE KEY: String <<static>> -HOUSE_NUM_PROPERTIES: int <<static>> <<static>>

-HOUSE_ID: String -HOUSE_COL: int -HOUSE_ROW: int <<static>> <<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>>

DUDE_FULL DUDE_NOT_FULL

-id: String-position: Point-images: List<PImage>-imageIndex: int-resourceLimit: int-actionPeriod: int

-animationPeriod: int

TODO

+getAnimationPeriod(): int +nextImage() +executeDudeFullActivity() -transformFull(): boolean +nextPositionDude(): Point

+getCurrentImage(): PImage

+scheduleActions()
-moveToFull(): boolean
-nextPositionDude(): Point
+getId(): String

+getId(): String +getPosition(): Point +setPosition(): Point -id: String
-position: Point
-images: List<PImage>
-imageIndex: int
-resourceLimit: int
-resourceCount: int
-actionPeriod: int
-animationPeriod: int

TODO

+getCurrentImage(): PImage +getAnimationPeriod(): int +nextImage() +executeDudeNotFullActivity() -transformNotFull(): boolean +nextPositionDude(): Point +scheduleActions() -moveToNotFull(): boolean -nextPositionDude(): Point

+getId(): String +getPosition(): Point +setPosition(): Point -id: String-position: Point-images: List<PIm-imageIndex: int

-actionPeriod: int -animationPeriod:

TODO

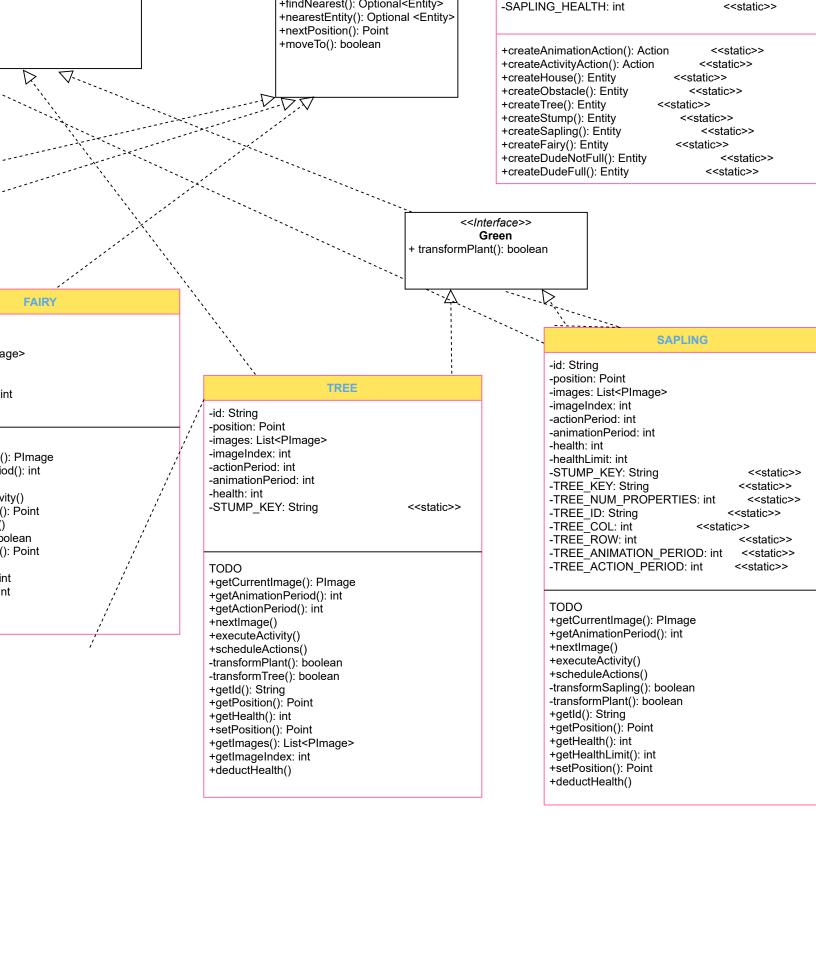
+getCurrentImage +getAnimationPer +nextImage()

+executeFairyActi -nextPositionFairy

+scheduleActions -moveToFairy(): bo

-nextPositionFairy

+getId(): String +getPosition(): Po +setPosition(): Po



-actionPeriod: int TODO +getCurrentImage(): PImage +getAnimationPeriod(): int +nextImage() +getId(): String +getPosition(): Point +setPosition(): Point +getImages(): List<PImage> +getImageIndex: int +scheduleActions()

STUMP

-id: String

-position: Point -images: List<PImage>

-imageIndex: int

-STUMP_KEY: String

<<static>>

TODO

+getCurrentImage(): PImage

+nextImage() +getId(): String +getPosition(): Point +setPosition(): Point

HOUSE

-id: String -position: Point -images: List<PImage>

-imageIndex: int

TODO

+getCurrentImage(): PImage

+getId(): String +getPosition(): Point +setPosition(): Point

+getImages(): List<PImage>

+getImageIndex: int

```
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>>
                             <<static>>
+main()
```

TODO

-withinBounds(): boolean +isOccupied(): boolean +getOccupancyCell(): Entity -setBackgroundCell() -setBackground() +load() -processLine(): boolean -parseBackground(): boolean -parseSuplie(): boolean

-parseSapling(): boolean
-parseDude(): boolean
-parseFairy(): boolean
-parseTree(): boolean
-parseObstacle(): boolean
-parseHouse(): boolean
+findNearest(): Optional<Entity>
-getBackgroundCell(): Background

+getBackgroundImage(): Optional<PImage>

-setOccupancyCell()
-tryAddEntity()
+addEntity()
+moveEntity()
+removeEntity()
-removeEntityAt()

+getOccupant(): Optional<Entity>

+getNumRows(): int +getNumCols(): int +getEntities(): Set<Entity> +getTreeKey(): String +getSaplingKey(): String

WorldView

-screen: PApplet -world: WorldModel -tileWidth: int -tileHeight: int -viewport: Viewport

TODO

+shiftView() -drawBackground()

-drawEntities()

+drawViewport()

+getViewport(): Viewport

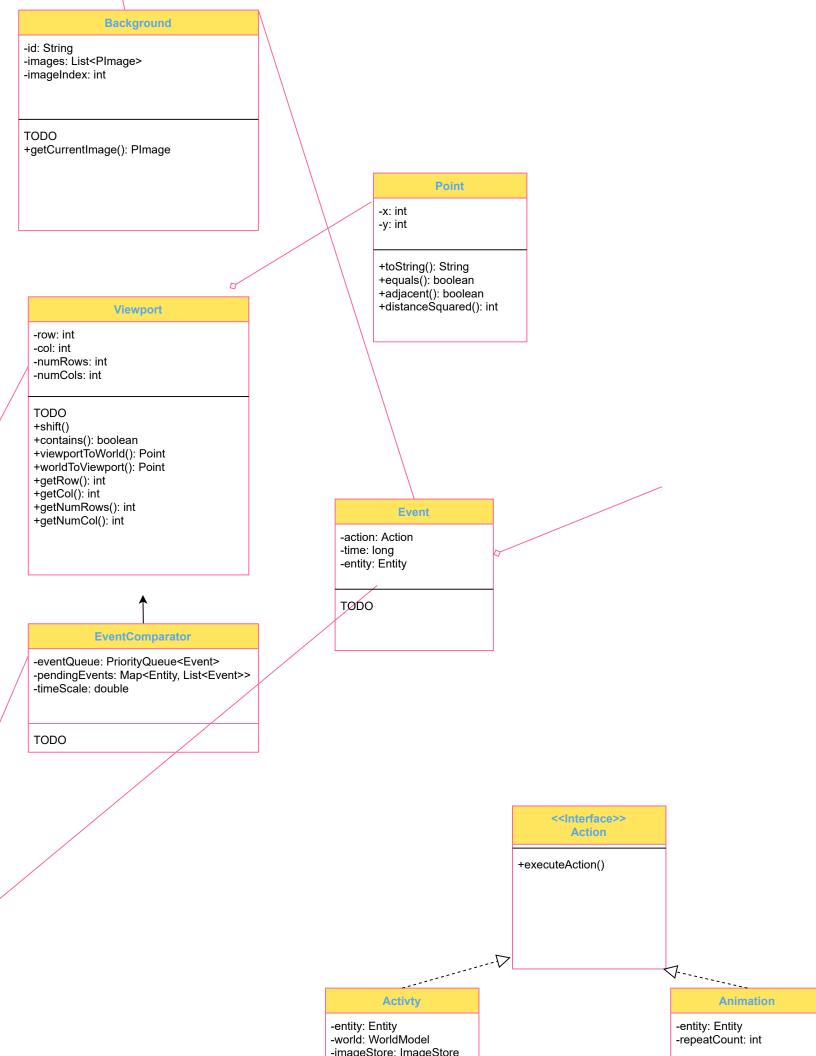
EventScheduler

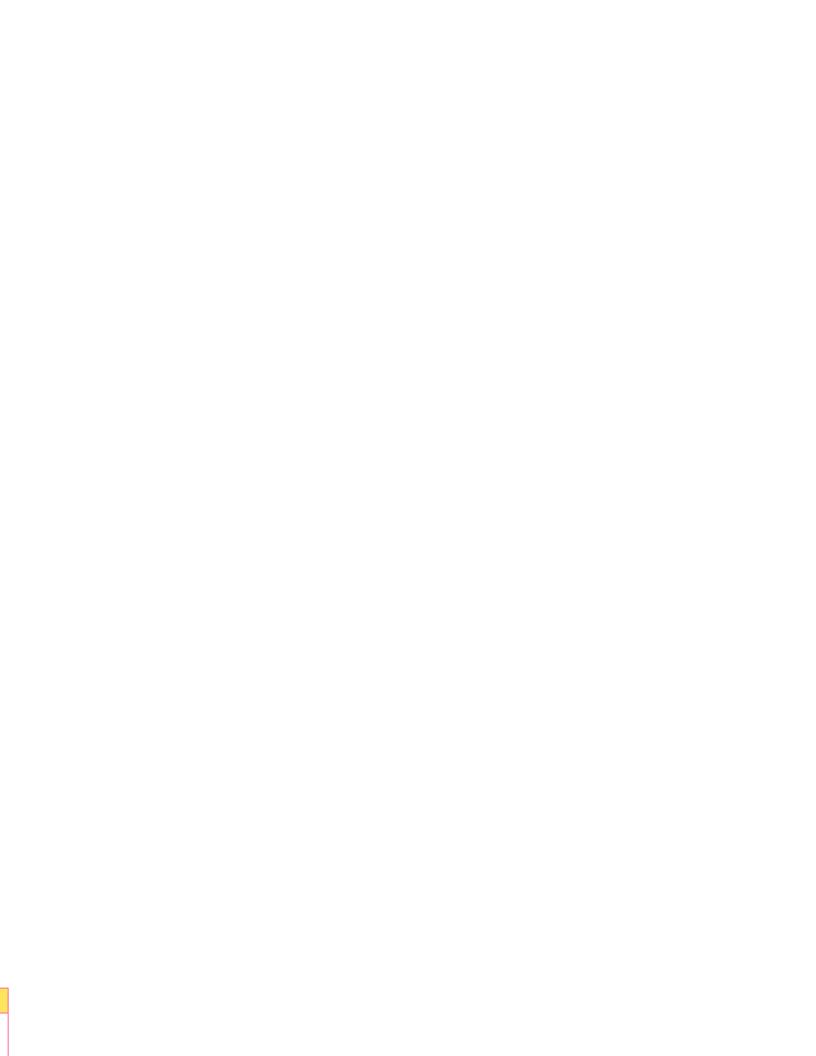
-eventQueue: PriorityQueue<Event>
-pendingEvents: Map<Entity, List<Event>>

-timeScale: double

TODO

+scheduleEvent()





· unscributionil vents() -removePendingEvent() +updateOnTime()

TODO

ImageStore

-images: Map<String, List<PImage>> -defaultImages: List<PImage>

-KEYED_IMAGE_MIN: int <<static>> -KEYED_RED_IDX: int <<static>>

-KEYED_GREEN_IDX: int <<static>:

-KEYED_BLUE_IDX: int <<static>>

TODO

+getImageList(): List<PImage>

+loadImages()
-processImageLine()

-getImages(): List<PImage> <<static>>

Functions

-rand: Random <<static>>

-COLOR_MASK: int <<static>>

-PATH_KEYS: List<String> <<static>>

+getNumFromRange: int <<static>>

+setAlpha() <<static>>

+clamp() <<static>>

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	TODO +executeAction() -executeActivityAction()	_	TODO +executeAction() -executeAnimationAction()