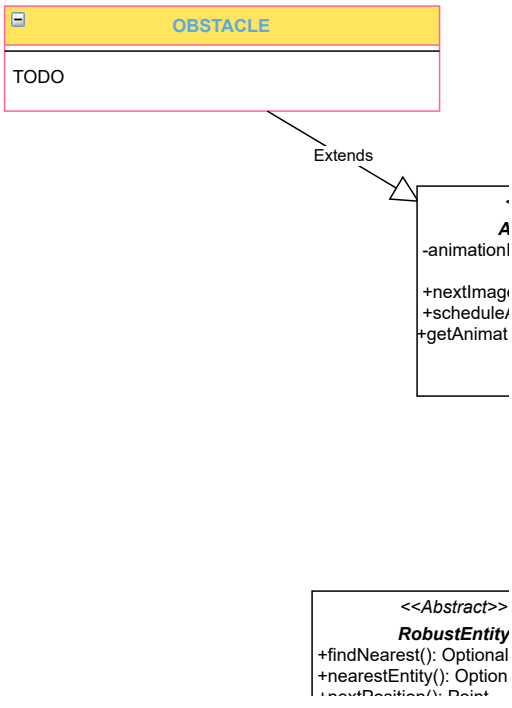
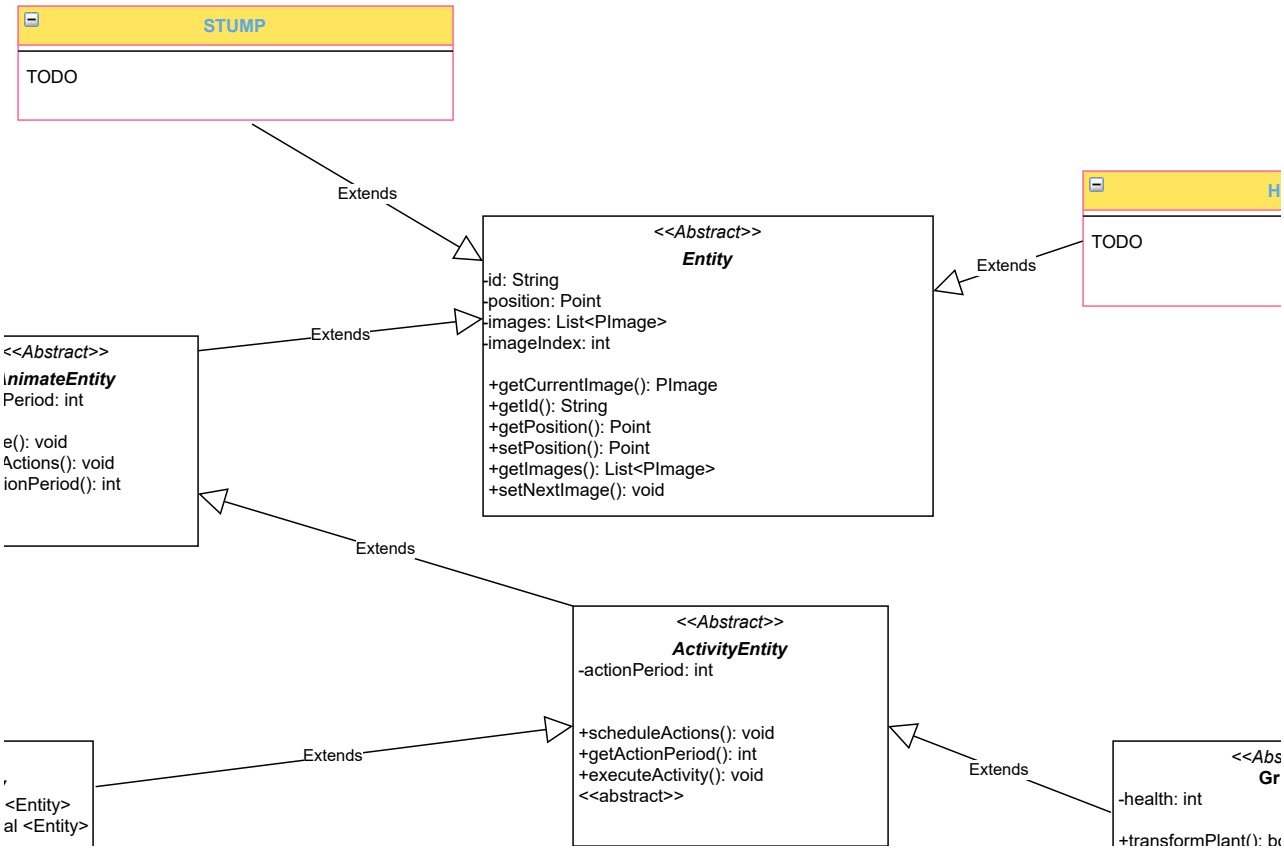
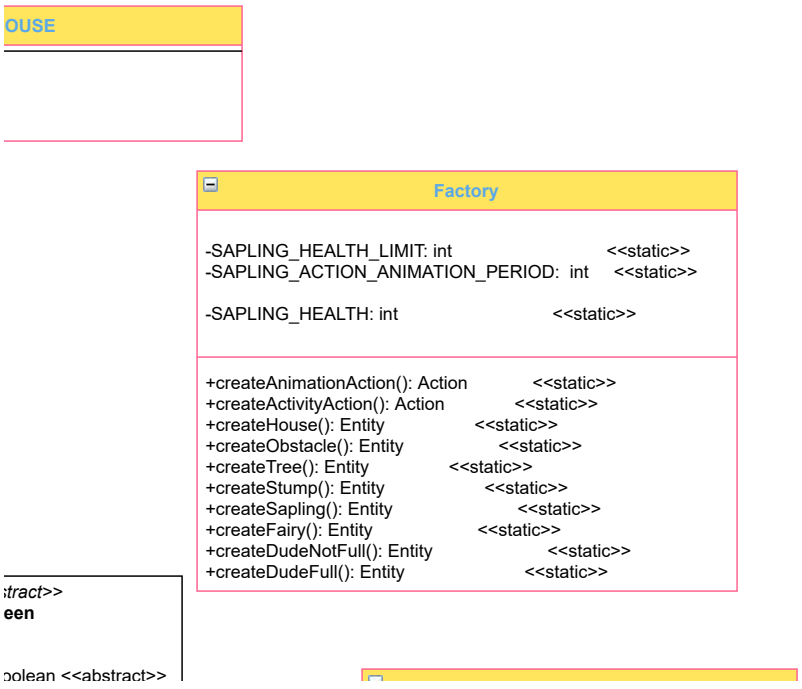
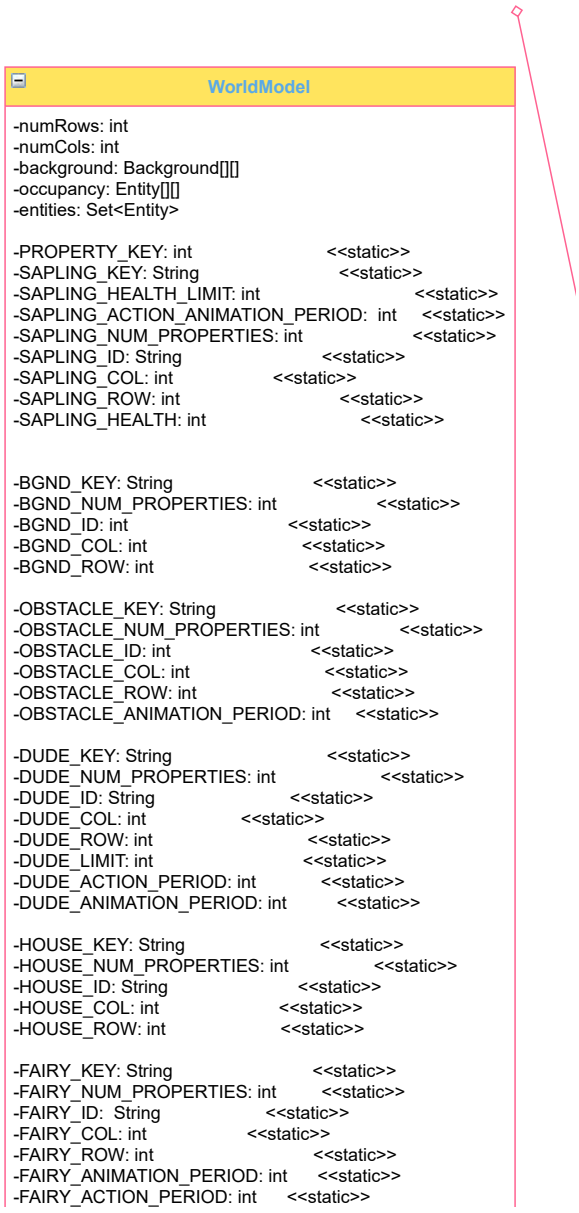
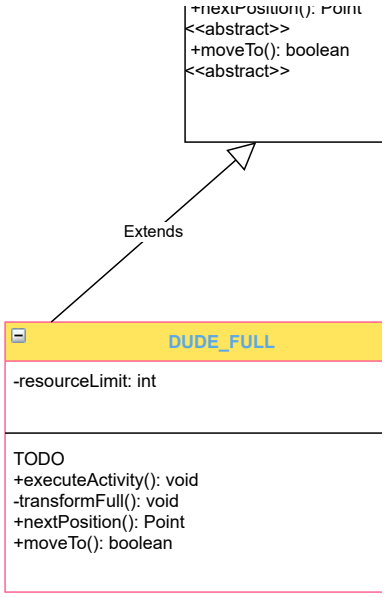
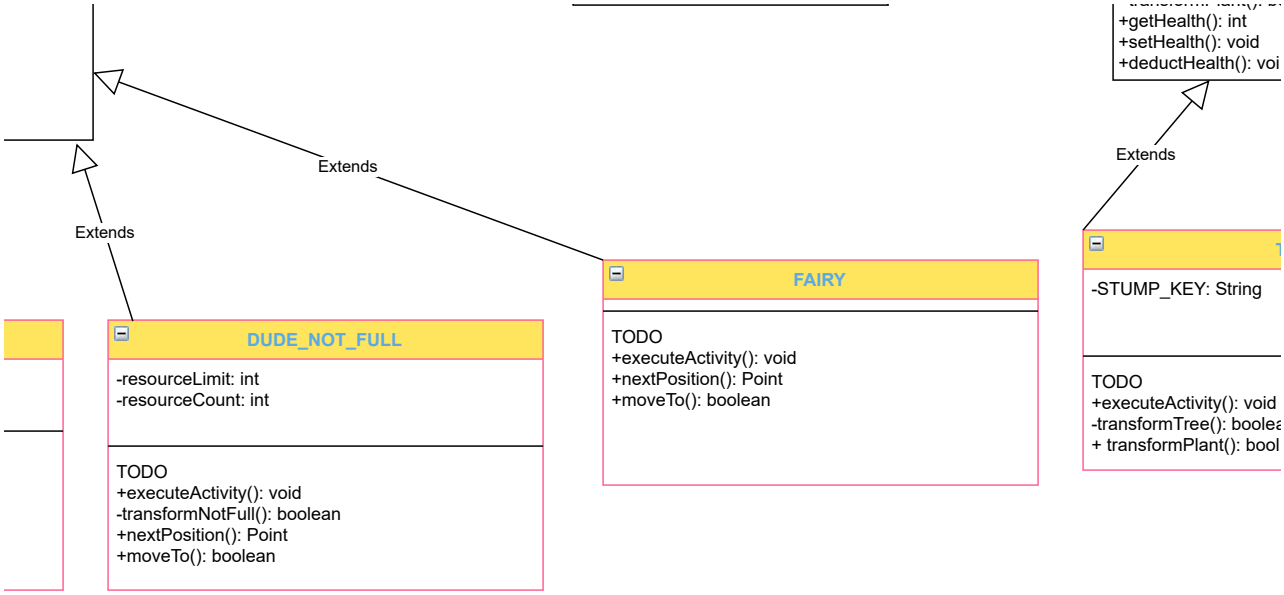

OBSTACLE
TODO
Extends
-animationI
+nextImag
+schedule
+getAnimat
<<Abstract>>
RobustEntity
+findNearest(): Optional
+nearestEntity(): Option

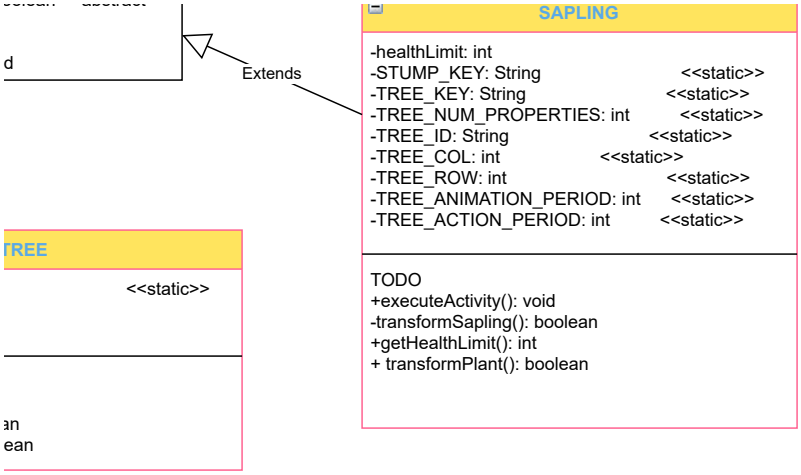

STUMP
TODO
Extends
<<Abstract>>
Entity
-id: String
-position: Point
-images: List<PImage>
-imageIndex: int
+getCurrentImage(): PImage
+getId(): String
+getPosition(): Point
+setPosition(): Point
+getImages(): List<PImage>
+setNextImage(): void
Extends
TODO
Extends
<<Abstract>>
nimateEntity
Period: int
e(): void
Actions(): void
ionPeriod(): int
Extends
<<Abstract>>
ActivityEntity
-actionPeriod: int
+scheduleActions(): void
+getActionPeriod(): int
+executeActivity(): void
<<abstract>>
Extends
<Entity>
al <Entity>
Extends
-health: int
+transformPlant(): bo


OUSE
Factory
-SAPLING_HEALTH_LIMIT: int <<static>>
-SAPLING_ACTION_ANIMATION_PERIOD: int <<static>>
-SAPLING_HEALTH: int <<static>>
+createAnimationAction(): Action <<static>>
+createActivityAction(): Action <<static>>
+createHouse(): Entity <<static>>
+createObstacle(): Entity <<static>>
+createTree(): Entity <<static>>
+createStump(): Entity <<static>>
+createSapling(): Entity <<static>>
+createFairy(): Entity <<static>>
+createDudeNotFull(): Entity <<static>>
+createDudeFull(): Entity <<static>>
tract>>
een
oolean <<abstract>>

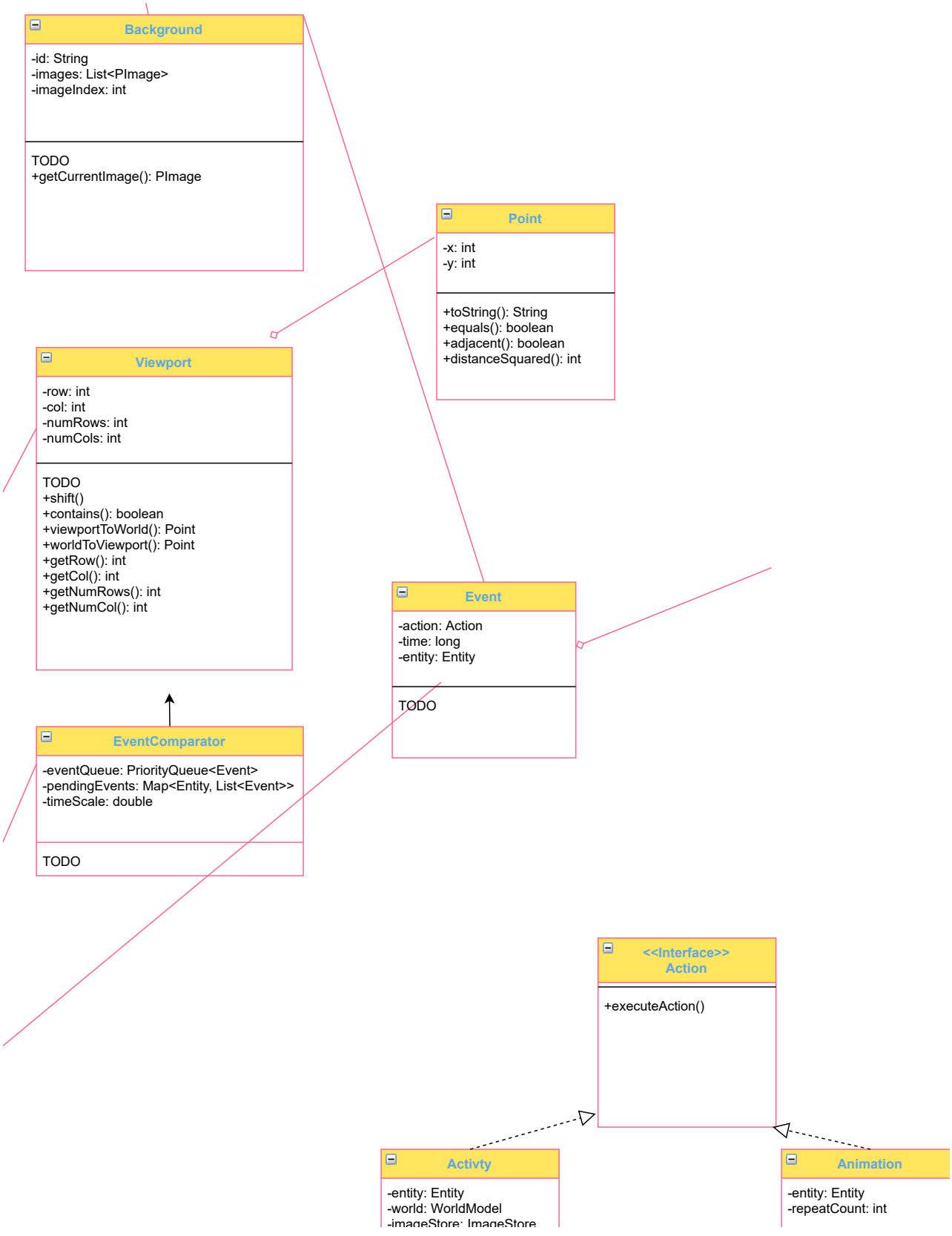

WorldModel
-numRows: int
-numCols: int
-background: Background[][]
-occupancy: Entity[][]
-entities: Set<Entity>
-PROPERTY_KEY: int <<static>>
-SAPLING_KEY: String <<static>>
-SAPLING_HEALTH_LIMIT: int <<static>>
-SAPLING_ACTION_ANIMATION_PERIOD: int <<static>>
-SAPLING_NUM_PROPERTIES: int <<static>>
-SAPLING_ID: String <<static>>
-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 <<static>>
-BGND_ROW: int <<static>>
-OBSTACLE_KEY: String <<static>>
-OBSTACLE_NUM_PROPERTIES: int <<static>>
-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 <<static>>
-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 <<static>>
-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>>

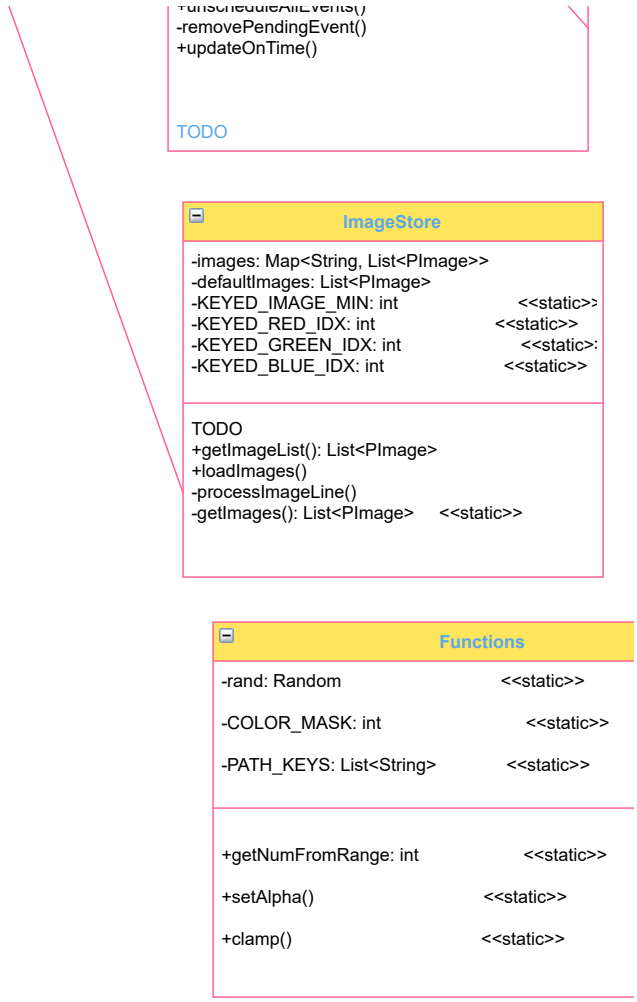

+nextPosition(): Point
<<abstract>>
+moveTo(): boolean
<<abstract>>
Extends
DUDE_FULL
-resourceLimit: int
TODO
+executeActivity(): void
-transformFull(): void
+nextPosition(): Point
+moveTo(): boolean

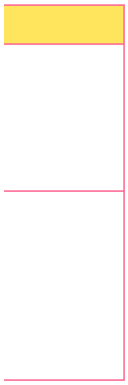

+getHealth(): int
+setHealth(): void
+deductHealth(): voi
Extends
Extends
Extends
FAIRY
TODO
+executeActivity(): void
+nextPosition(): Point
+moveTo(): boolean
-STUMP_KEY: String
TODO
+executeActivity(): void
-transformTree(): boolea
+ transformPlant(): bool
DUDE_NOT_FULL
-resourceLimit: int
-resourceCount: int
TODO
+executeActivity(): void
-transformNotFull(): boolean
+nextPosition(): Point
+moveTo(): boolean


d
Extends
SAPLING
-healthLimit: int
-STUMP_KEY: String <<static>>
-TREE_KEY: String <<static>>
-TREE_NUM_PROPERTIES: int <<static>>
-TREE_ID: String <<static>>
-TREE_COL: int <<static>>
-TREE_ROW: int <<static>>
-TREE_ANIMATION_PERIOD: int <<static>>
-TREE_ACTION_PERIOD: int <<static>>
TODO
+executeActivity(): void
-transformSapling(): boolean
+getHealthLimit(): int
+ transformPlant(): boolean
TREE
<<static>>
an
ean

-TREE_KEY: String <<static>>
-TREE_NUM_PROPERTIES: int <<static>>
-TREE_ID: String <<static>>
-TREE_COL: int <<static>>
-TREE_ROW: int <<static>>
-TREE_ANIMATION_PERIOD: int <<static>>
-TREE_ACTION_PERIOD: int <<static>>
TODO
-withinBounds(): boolean
+isOccupied(): boolean
+getOccupancyCell(): Entity
-setBackgroundCell()
-setBackground()
+load()
-processLine(): boolean
-parseBackground(): 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
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
TODO
+shiftView()
-drawBackground()
-drawEntities()
+drawViewport()
+getViewport(): Viewport
EventScheduler
-eventQueue: PriorityQueue<Event>
-pendingEvents: Map<Entity, List<Event>>
-timeScale: double
TODO
+scheduleEvent()


Background
-id: String
-images: List<PImage>
-imageIndex: int
TODO
+getCurrentImage(): PImage
Point
-x: int
-y: int
+toString(): String
+equals(): boolean
+adjacent(): boolean
+distanceSquared(): int
Viewport
-row: int
-col: int
-numRows: int
-numCols: int
TODO
+shift()
+contains(): boolean
+viewportToWorld(): Point
+worldToViewport(): Point
+getRow(): int
+getCol(): int
+getNumRows(): int
+getNumCol(): int
Event
-action: Action
-time: long
-entity: Entity
TODO
EventComparator
-eventQueue: PriorityQueue<Event>
-pendingEvents: Map<Entity, List<Event>>
-timeScale: double
TODO
<<Interface>>
Action
+executeAction()
Activty
-entity: Entity
-world: WorldModel
-imageStore: ImageStore
Animation
-entity: Entity
-repeatCount: int


-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>>



TODO
+executeAction()
-executeActivityAction()

TODO
+executeAction()
-executeAnimationAction()