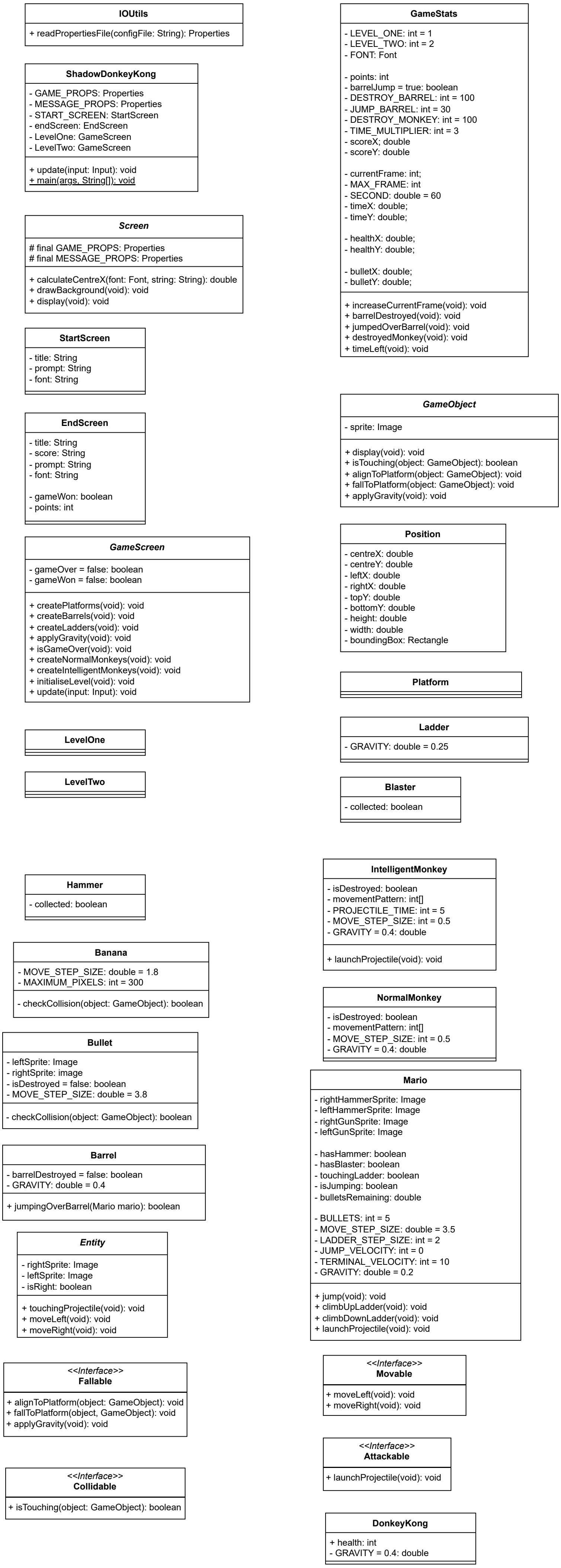


IOUtils

+ readPropertiesFile(configFile: String): Properties

ShadowDonkeyKong

- GAME_PROPS: Properties
- MESSAGE_PROPS: Properties
- START_SCREEN: StartScreen
- endScreen: EndScreen
- LevelOne: GameScreen
- LevelTwo: GameScreen

+ update(input: Input): void
+ main(args, String[]): void

Screen

# final GAME_PROPS: Properties
# final MESSAGE_PROPS: Properties

+ calculateCentreX(font: Font, string: String): double
+ drawBackground(void): void
+ display(void): void

StartScreen

- title: String
- prompt: String
- font: String

EndScreen

- title: String
- score: String
- prompt: String
- font: String

- gameWon: boolean
- points: int

GameScreen

- gameOver = false: boolean
- gameWon = false: boolean

+ createPlatforms(void): void
+ createBarrels(void): void
+ createLadders(void): void
+ applyGravity(void): void
+ isGameOver(void): void
+ createNormalMonkeys(void): void
+ createIntelligentMonkeys(void): void
+ initialiseLevel(void): void
+ update(input: Input): void

LevelOne

LevelTwo

Hammer

- collected: boolean

Banana

- MOVE_STEP_SIZE: double = 1.8
- MAXIMUM_PIXELS: int = 300

- checkCollision(object: GameObject): boolean

Bullet

- leftSprite: Image
- rightSprite: image
- isDestroyed = false: boolean
- MOVE_STEP_SIZE: double = 3.8

- checkCollision(object: GameObject): boolean

Barrel

- barrelDestroyed = false: boolean
- GRAVITY: double = 0.4

+ jumpingOverBarrel(Mario mario): boolean

Entity

- rightSprite: Image
- leftSprite: Image
- isRight: boolean

+ touchingProjectile(void): void
+ moveLeft(void): void
+ moveRight(void): void

<<Interface>>
Fallable

+ alignToPlatform(object: GameObject): void
+ fallToPlatform(object, GameObject): void
+ applyGravity(void): void

<<Interface>>
Collidable

+ isTouching(object: GameObject): boolean

GameStats

- LEVEL_ONE: int = 1
- LEVEL_TWO: int = 2
- FONT: Font

- points: int
- barrelJump = true: boolean
- DESTROY_BARREL: int = 100
- JUMP_BARREL: int = 30
- DESTROY_MONKEY: int = 100
- TIME_MULTIPLIER: int = 3
- scoreX; double
- scoreY: double

- currentFrame: int;
- MAX_FRAME: int
- SECOND: double = 60
- timeX: double;
- timeY: double;

- healthX: double;
- healthY: double;

- bulletX: double;
- bulletY: double;

+ increaseCurrentFrame(void): void
+ barrelDestroyed(void): void
+ jumpedOverBarrel(void): void
+ destroyedMonkey(void): void
+ timeLeft(void): void

GameObject

- sprite: Image

+ display(void): void
+ isTouching(object: GameObject): boolean
+ alignToPlatform(object: GameObject): void
+ fallToPlatform(object: GameObject): void
+ applyGravity(void): void

Position

- centreX: double
- centreY: double
- leftX: double
- rightX: double
- topY: double
- bottomY: double
- height: double
- width: double
- boundingBox: Rectangle

Platform

Ladder

- GRAVITY: double = 0.25

Blaster

- collected: boolean

IntelligentMonkey

- isDestroyed: boolean
- movementPattern: int[]
- PROJECTILE_TIME: int = 5
- MOVE_STEP_SIZE: int = 0.5
- GRAVITY = 0.4: double

+ launchProjectile(void): void

NormalMonkey

- isDestroyed: boolean
- movementPattern: int[]
- MOVE_STEP_SIZE: int = 0.5
- GRAVITY = 0.4: double

Mario

- rightHammerSprite: Image
- leftHammerSprite: Image
- rightGunSprite: Image
- leftGunSprite: Image

- hasHammer: boolean
- hasBlaster: boolean
- touchingLadder: boolean
- isJumping: boolean
- bulletsRemaining: double

- BULLETS: int = 5
- MOVE_STEP_SIZE: double = 3.5
- LADDER_STEP_SIZE: int = 2
- JUMP_VELOCITY: int = 0
- TERMINAL_VELOCITY: int = 10
- GRAVITY: double = 0.2

+ jump(void): void
+ climbUpLadder(void): void
+ climbDownLadder(void): void
+ launchProjectile(void): void

<<Interface>>
Movable

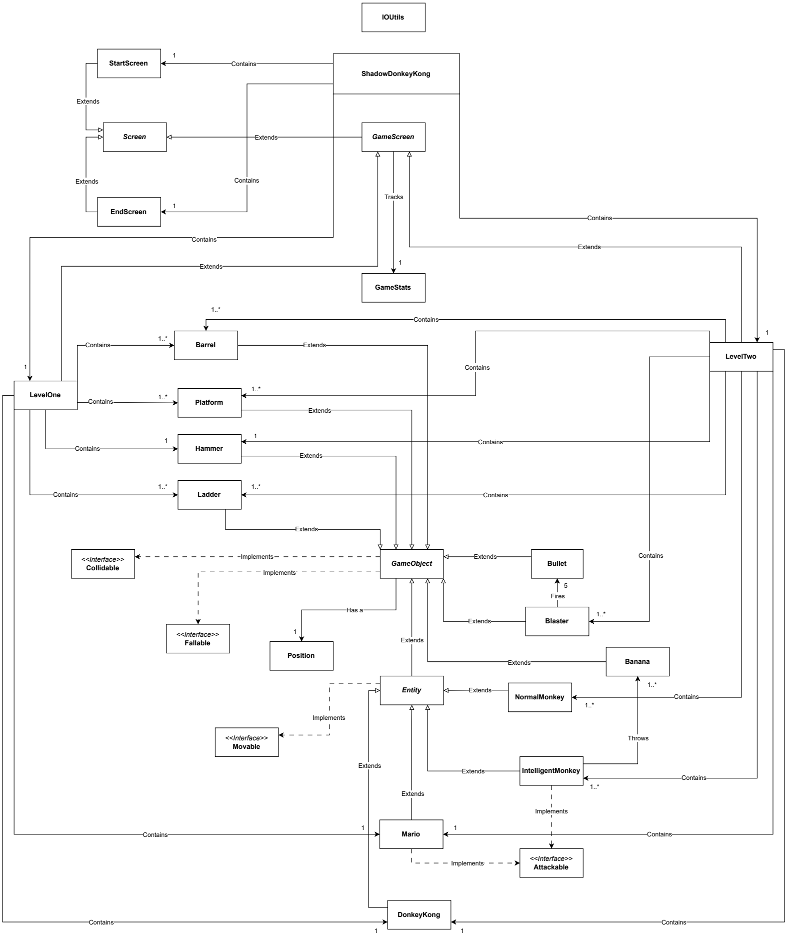
+ moveLeft(void): void
+ moveRight(void): void

<<Interface>>
Attackable

+ launchProjectile(void): void

DonkeyKong

+ health: int
- GRAVITY = 0.4: double


IOUtils
StartScreen
1
Contains
ShadowDonkeyKong
Extends
Screen
Extends
GameScreen
Extends
Contains
Tracks
EndScreen
1
Contains
Contains
Extends
Extends
1
GameStats
1..*
Contains
1
LevelTwo
1..*
Contains
Barrel
Extends
Contains
1
LevelOne
Contains
1..*
Platform
1..*
Extends
1
Contains
Hammer
1
Extends
Contains
1..*
Ladder
1..*
Contains
Extends
<<Interface>>
Collidable
Implements
GameObject
Extends
Bullet
Implements
Contains
5
Fires
<<Interface>>
Fallable
Has a
Extends
Blaster
1..*
1
Position
Extends
Extends
Banana
1..*
Entity
Extends
NormalMonkey
Contains
1..*
Implements
<<Interface>>
Movable
Throws
Extends
Extends
IntelligentMonkey
Contains
1..*
Extends
Implements
1
Mario
1
Contains
Contains
Implements
<<Interface>>
Attackable
DonkeyKong
Contains
Contains
1
1