The Legend of Python

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## **Chapter 1**

# **Hierarchical Index**

## 1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

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actor.spritesheet.SpriteSheet	34
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actor.boomerang.Boomerang	9
actor.boss.Boss	-11
actor.aquamentus.Aquamentus	7
actor.enemy.Enemy	14
actor.keese.Keese	24
actor.stalfos.Stalfos	36
actor.fireball.Fireball	17
actor.healthbar.Health_Bar	20
actor.item.ltem	22
actor.player.Player	29
actor.rupee.Rupee_Bar	32
actor.sword.Sword	42
collision.door.Door	13
collision.level.Level	27
collision wall Wall	44

2 Hierarchical Index

# Chapter 2

# **Class Index**

## 2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

actor.aquamentus.Aquamentus	
This class represents the Aquamentus Boss	7
actor.boomerang.Boomerang	
Boomerang Weapon Class The class holding the creation, behaviour, and collision effects of the	
player's boomerang weapon	9
actor.boss.Boss	
Superclass for representing a Boss	- 11
collision.door.Door	
Dungeon Door Class This class is used to place a door on one of four places of a dungeon room,	
to allow the player to walk through and traverse to other rooms within the dungeon	13
actor.enemy.Enemy	
Superclass for representing an Enemy	14
actor.fireball.Fireball	
This class represents the Fireball object	17
actor.healthbar.Health_Bar	
This class represents the HealthBar for the user controlled player character	20
actor.item.ltem	
Consumable Item Class This class is used for the creation of a random consumable item,	
spawned once an enemy has been defeated on their last position before despawn	22
actor.keese.Keese	
This class represents the Keese enemy	24
collision.level.Level	
Dungeon level background class Creates the background of a dungeon, can be modified in the	
future to change colour based on sprite sheet and new arg	27
collision.levelmanager.LevelManager	
Dungeon Level Creation Class Class used as a master constructor for every dungeon levels,	
getting pre-written data and loading it when the game starts and when a transition occurs	28
actor.player.Player	
Player Class A pygame sprite subclass for defining the creation of the game's playable character,	
as well as its interactions with both the user and other entities within the game	29
actor.rupee.Rupee_Bar	
This class represents the RupeeBar object	32
actor.spritesheet.SpriteSheet	
This class represents the SpriteSheet object, allowing sprites to be loaded and processed	34
actor.stalfos.Stalfos	
This class represents the Stalfos enemy	36

Class Index

actor.swo	ord.Sword	
	Player Sword Class Class for the creation and deletion of the sword sprite object, made when	
	the player attacks	42
collision.v	wall.Wall	
	This class represents the Wall class for collision for objects in the environment	44

# **Chapter 3**

# File Index

## 3.1 File List

Here is a list of all documented files with brief descriptions:

src/actor/aquamentus.py
Aquamentus Boss
src/actor/boomerang.py
Boomerang Weapon
src/actor/boss.py
Boss Template
src/actor/constants.py
Actor Constants
src/actor/enemy.py
Enemy Template
src/actor/fireball.py
Fireball object
src/actor/healthbar.py
HealthBar Class
src/actor/item.py
Consumable Items
src/actor/keese.py
Keese Enemy
src/actor/player.py
Playable Characer
src/actor/rupee.py
Rupee_Bar Class
src/actor/spritesheet.py
SpriteSheet Class
src/actor/stalfos.py
Stalfos Enemy
src/actor/sword.py
Player Sword
src/collision/door.py
Dungeon Door
src/collision/level.py
Dungeon Background
src/collision/levelmanager.py
Dungeon Level Master Creator
src/collision/wall.py
Wall Class

6 File Index

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Colour Constants	59
src/config/window.py	
Window Constants	59

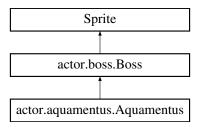
## **Chapter 4**

## **Class Documentation**

## 4.1 actor.aquamentus.Aquamentus Class Reference

This class represents the Aquamentus Boss.

Inheritance diagram for actor.aquamentus. Aquamentus:



## **Public Member Functions**

def \_\_init\_\_ (self, x, y)

Constructor for Aquamentus.

• def checkState (self)

Evaluates the state of the Aquamentus.

• def swapDirection (self)

Swaps Aquamentus' direction.

def attack (self)

Allows for Aquamentus to attack.

def bossLogic (self)

Controls Aquamentus logic.

## **Public Attributes**

- isAttacking
- attackStartFrame
- fireballs
- xSpeed
- · oldspeed
- maxHP
- HP
- dmg
- image
- obj
- · sprites
- spriteIndex
- hitCount
- isHit
- oldx
- oldy

## 4.1.1 Detailed Description

This class represents the Aquamentus Boss.

## 4.1.2 Constructor & Destructor Documentation

Constructor for Aquamentus.

Constructor takes two parameters, the x and y coordinates

## Parameters

	X coordinate of the starting postion of the Aquamentus
У	Y coordinate of the starting postion of the Aquamentus

## 4.1.3 Member Function Documentation

#### 4.1.3.1 attack()

```
\begin{tabular}{ll} \tt def actor.aquamentus.Aquamentus.attack ( \\ self ) \end{tabular}
```

Allows for Aquamentus to attack.

Spawns fireballs at Aquamenuts' mouth and sets their move speed

#### 4.1.3.2 bossLogic()

```
def actor.aquamentus.Aquamentus.bossLogic ( self \ ) \\
```

Controls Aquamentus logic.

Uses the states to control the Aquamentus

#### 4.1.3.3 checkState()

```
\label{eq:constraint} \mbox{def actor.aquamentus.Aquamentus.checkState (} \\ self \mbox{)}
```

Evaluates the state of the Aquamentus.

Evalautes if Aquamentus can stop, if it is in iframes, if it collides with something, and if it has died

## 4.1.3.4 swapDirection()

```
def actor.aquamentus.Aquamentus.swapDirection ( self )
```

Swaps Aquamentus' direction.

Multiplies the speed in the x direction by -1

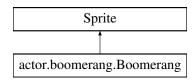
The documentation for this class was generated from the following file:

• src/actor/aquamentus.py

## 4.2 actor.boomerang.Boomerang Class Reference

Boomerang Weapon Class The class holding the creation, behaviour, and collision effects of the player's boomerang weapon.

Inheritance diagram for actor.boomerang.Boomerang:



#### **Public Member Functions**

def \_\_init\_\_ (self, x, y, direction, obj, player)

Boomerang constructor A sprite subclass constructor that takes an x and y position (the players), a direction for the boomerang's trajectory, a list of collidable objects, as well as the player object (to add to the collision list)

• def moveupdate (self)

Boomerang position updating function, updating position based on changing trajectory speed.

· def collisionupdate (self)

Boomerang collision updating function, constantly checking for collisions and acting accordingly.

· def update (self)

Boomerang updating function, repeatedly running moveupdate and collisionupdate.

· def collision (self)

Default collision function to satisfy other class collision calls to this object.

#### **Public Attributes**

image

Boomerang sprite image.

rect

Position of boomerang.

• dir

Initial travel direction of boomerang.

speed

Boomerang initial update speed.

obj

List of objects the boomerang could collide with.

killable

Boolean to tell when the boomerang should be deleted.

## 4.2.1 Detailed Description

Boomerang Weapon Class The class holding the creation, behaviour, and collision effects of the player's boomerang weapon.

## 4.2.2 Constructor & Destructor Documentation

Boomerang constructor A sprite subclass constructor that takes an x and y position (the players), a direction for the boomerang's trajectory, a list of collidable objects, as well as the player object (to add to the collision list)

#### **Parameters**

X	X coordinate of boomerang spawn
У	Y coordinate of boomerang spawn
direction	Direction of boomerang path
obj	List of objects to check for collision with the boomerang
player	Player object to also check collision for

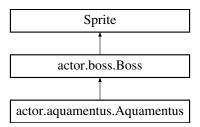
The documentation for this class was generated from the following file:

src/actor/boomerang.py

## 4.3 actor.boss.Boss Class Reference

Superclass for representing a Boss.

Inheritance diagram for actor.boss.Boss:



## **Public Member Functions**

• def \_\_init\_\_ (self, x, y)

Constructor for Boss.

def checkState (self)

Empty function for evaluating Boss state.

• def move (self)

Moves the Boss.

def bossLogic (self)

Empty function for logic of Boss.

• def update (self)

Update loop for a Boss.

• def hit (self, dir)

Hit dectetion for Boss.

## **Public Attributes**

- image
- rect
- id
- isHit
- stuncount
- maxHP
- HP
- dmg
- hitCount
- xSpeed
- ySpeed
- frameCounter

## 4.3.1 Detailed Description

Superclass for representing a Boss.

## 4.3.2 Constructor & Destructor Documentation

Constructor for Boss.

Constructor takes two parameters, the x and y coordinates

#### **Parameters**

```
X X coordinate of the starting postion of the BossY Coordinate of the starting postion of the Boss
```

## 4.3.3 Member Function Documentation

#### 4.3.3.1 hit()

```
def actor.boss.Boss.hit (

self,

dir )
```

Hit dectetion for Boss.

Handles health and iframes

Moves the Boss.

Adds the x speed and y speed to the x and y postion of the Boss

```
4.3.3.3 update()

def actor.boss.Boss.update (
```

self )

Update loop for a Boss.

Checks state, does the logic, and then moves Boss

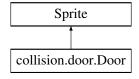
The documentation for this class was generated from the following file:

src/actor/boss.py

## 4.4 collision.door.Door Class Reference

Dungeon Door Class This class is used to place a door on one of four places of a dungeon room, to allow the player to walk through and traverse to other rooms within the dungeon.

Inheritance diagram for collision.door.Door:



## **Public Member Functions**

- def \_\_init\_\_ (self, direction)
   Door constructor, making a door on the specified side of the dungeon.
- def collision (self, i)

## **Public Attributes**

- image
- rect
- id
- state

```
DOOR STATE 0 = open 1 = locked 2 = blocked (objective door)
```

## 4.4.1 Detailed Description

Dungeon Door Class This class is used to place a door on one of four places of a dungeon room, to allow the player to walk through and traverse to other rooms within the dungeon.

## 4.4.2 Constructor & Destructor Documentation

Door constructor, making a door on the specified side of the dungeon.

#### **Parameters**

direction	Integer value of the wall the door will be on (direction from centre of room)
	1 ,

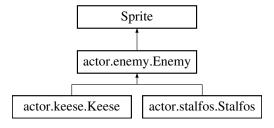
The documentation for this class was generated from the following file:

src/collision/door.py

## 4.5 actor.enemy.Enemy Class Reference

Superclass for representing an Enemy.

Inheritance diagram for actor.enemy.Enemy:



#### **Public Member Functions**

```
    def __init__ (self, x, y)
```

Constructor for Enemy.

def checkState (self)

Empty function for evaluating Enemy state.

• def move (self)

Moves the Enemy.

• def enemyLogic (self)

Empty function for logic of Enemy.

• def update (self)

Update loop for a Enemy.

• def hit (self, direc)

Hit dectetion for Enemy.

## **Public Attributes**

- image
- rect
- id
- · isHit
- · stuncount
- maxHP
- HP
- · dmg
- hitCount

This represents the buffer for the number of hits for the Enemy after being hit by player character.

• hitdir

Represents the direction Enemy is hit in by player character attack.

- xSpeed
- ySpeed
- frameCounter

## 4.5.1 Detailed Description

Superclass for representing an Enemy.

#### 4.5.2 Constructor & Destructor Documentation

Constructor for Enemy.

Constructor takes two parameters, the x and y coordinates

#### **Parameters**

	X coordinate of the starting postion of the Enemy
У	Y coordinate of the starting postion of the Enemy

## 4.5.3 Member Function Documentation

#### 4.5.3.1 hit()

Hit dectetion for Enemy.

Handles health, iframes and knockback direction

#### **Parameters**

```
direc Direction of the knockback
```

## 4.5.3.2 move()

```
\begin{tabular}{ll} $\operatorname{def}$ actor.enemy.Enemy.move ( \\ $\operatorname{\it self}$) \end{tabular}
```

Moves the Enemy.

Adds the x speed and y speed to the x and y postion of the Enemy

## 4.5.3.3 update()

```
\label{eq:constraint}  \mbox{def actor.enemy.Enemy.update (} \\ self \mbox{)}
```

Update loop for a Enemy.

Checks state, does the logic, and then moves Enemy

## 4.5.4 Member Data Documentation

#### 4.5.4.1 hitCount

```
actor.enemy.Enemy.hitCount
```

This represents the buffer for the number of hits for the Enemy after being hit by player character.

#### 4.5.4.2 hitdir

```
actor.enemy.Enemy.hitdir
```

Represents the direction **Enemy** is hit in by player character attack.

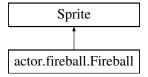
The documentation for this class was generated from the following file:

· src/actor/enemy.py

## 4.6 actor.fireball.Fireball Class Reference

This class represents the Fireball object.

Inheritance diagram for actor.fireball.Fireball:



#### **Public Member Functions**

- def \_\_init\_\_ (self, x, y, xSpeed, ySpeed)
  - Constructor for Fireball.
- def start (self, x, y, xs, ys)

Starts the Fireball's movement.

• def end (self)

Ends the Fireball's movement.

• def hit (self, dir)

Empty function for being hit by player.

def checkState (self)

Evaluates the state of the Fireball.

• def move (self)

Moves the Fireball.

• def logic (self)

Updates the Fireball sprite.

• def update (self)

Updates the Fireball every frame

## **Public Attributes**

- image
- rect
- id
- isHit
- dmg
- hitCount
- xSpeed
- ySpeed
- frameCounter
- obj
- sprites
- spriteIndex

## 4.6.1 Detailed Description

This class represents the Fireball object.

## 4.6.2 Constructor & Destructor Documentation

Constructor for Fireball.

Constructor takes four parameters, the x and y coordinates and the x and y speeds

## **Parameters**

X	X coordinate of the starting postion of the Fireball
У	Y coordinate of the starting postion of the Fireball
xSpeed	The speed in the x direction of the Fireball
ySpeed	The speed in the y direction of the Fireball

## 4.6.3 Member Function Documentation

#### 4.6.3.1 checkState()

```
def actor.fireball.Fireball.checkState ( self )
```

Evaluates the state of the Fireball.

Checks for collision with walls, doors, and players

#### 4.6.3.2 end()

```
\operatorname{def} actor.fireball.Fireball.end ( \operatorname{self} )
```

Ends the Fireball's movement.

Sets the x and y speed to 0 and places the Fireball of screen

#### 4.6.3.3 hit()

```
def actor.fireball.Fireball.hit ( self, dir )
```

Empty function for being hit by player.

Needs to exist for when player sword collides with Fireball

#### 4.6.3.4 logic()

```
def actor.fireball.Fireball.logic ( self )
```

Updates the Fireball sprite.

Swaps between the 2 sprites every 15 frames

#### 4.6.3.5 move()

```
\label{eq:constraint} \mbox{def actor.fireball.Fireball.move (} \\ self \mbox{)}
```

Moves the Fireball.

Adds the x speed and y speed to the x and y postion of the Fireball

## 4.6.3.6 start()

Starts the Fireball's movement.

Sets the x and y postions and x and y speeds for Fireball

#### **Parameters**

X	X coordinate of where the Fireball is placed
У	Y coordinate of where the Fireball is placed
XS	The speed in the x direction of the Fireball
ys	The speed in the y direction of the Fireball

## 4.6.3.7 update()

```
\begin{tabular}{ll} \tt def actor.fireball.Fireball.update ( \\ \tt self) \end{tabular}
```

Updates the Fireball every frame

Checks the state, applies the logic, and then moves the Fireball

The documentation for this class was generated from the following file:

· src/actor/fireball.py

## 4.7 actor.healthbar.Health\_Bar Class Reference

This class represents the HealthBar for the user controlled player character.

Inheritance diagram for actor.healthbar.Health\_Bar:



## **Public Member Functions**

- def \_\_init\_\_ (self, x, y)
   Constructor HealthBar class.
- def health (self, i)

Method to update the current sprite image for the healthbar.

## **Public Attributes**

image

This represents the sprite image for the Health\_Bar object.

h\_sprite\_sheet

This represents the spritesheet for the image for the Health\_Bar object, containing all sprites associated with the health bar.

rect

This represents rectangle for position for the sprite image of the Health\_Bar object.

## 4.7.1 Detailed Description

This class represents the HealthBar for the user controlled player character.

The HealthBar class uses the base class for visible game objects from Pygame library.

## 4.7.2 Constructor & Destructor Documentation

Constructor HealthBar class.

Constructor for class initializes the x and y location of the HealthBar object.

## **Parameters**

	X	this represents the x-coordinate at which the HealthBar object will be drawn.	
y this represents the y-coordinate at which the HealthBar object will be draw		this represents the y-coordinate at which the HealthBar object will be drawn.	Ì

## 4.7.3 Member Function Documentation

## 4.7.3.1 health()

```
def actor.healthbar.Health_Bar.health ( self, \\ i \ )
```

Method to update the current sprite image for the healthbar.

This method will allow the HealthBar to update as soon as the player character is damaged/receives health.

#### **Parameters**

i value represening the number of heart sprites to render to screen.

## 4.7.4 Member Data Documentation

## 4.7.4.1 h\_sprite\_sheet

```
actor.healthbar.Health_Bar.h_sprite_sheet
```

This represents the spritesheet for the image for the Health\_Bar object, containing all sprites associated with the health bar.

## 4.7.4.2 image

```
actor.healthbar.Health_Bar.image
```

This represents the sprite image for the Health\_Bar object.

#### 4.7.4.3 rect

```
actor.healthbar.Health_Bar.rect
```

This represents rectangle for position for the sprite image of the Health\_Bar object.

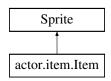
The documentation for this class was generated from the following file:

src/actor/healthbar.py

## 4.8 actor.item.ltem Class Reference

Consumable Item Class This class is used for the creation of a random consumable item, spawned once an enemy has been defeated on their last position before despawn.

Inheritance diagram for actor.item.Item:



## **Public Member Functions**

def \_\_init\_\_ (self, x, y, typ)

Item constructor A sprite subclass constructor which takes a pair of x-y coordinates, commonly those of the killed enemy, and an item type, in the form of a randomly generated integer from 0 to the # of possible items.

• def collision (self, p)

Collision handler for the player and the consumable item, depending on the item's type.

## **Public Attributes**

• image

Item sprite image.

· itemsprite

List of possible item sprite images.

rect

Item x and y position.

id

Collision ID (how other items tell what this item is)

type

Integer value to determine what kind of item this is (rupee, heart, etc)

## 4.8.1 Detailed Description

Consumable Item Class This class is used for the creation of a random consumable item, spawned once an enemy has been defeated on their last position before despawn.

#### 4.8.2 Constructor & Destructor Documentation

Item constructor A sprite subclass constructor which takes a pair of x-y coordinates, commonly those of the killed enemy, and an item type, in the form of a randomly generated integer from 0 to the # of possible items.

#### **Parameters**

Χ	X coordinate of the spawned item
у	Y coordinate of the spawned item
typ	Integer value to specify the type of consumable item

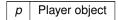
## 4.8.3 Member Function Documentation

#### 4.8.3.1 collision()

```
def actor.item.Item.collision ( self, \\ p \ )
```

Collision handler for the player and the consumable item, depending on the item's type.

#### **Parameters**



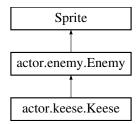
The documentation for this class was generated from the following file:

src/actor/item.py

## 4.9 actor.keese.Keese Class Reference

This class represents the Keese enemy.

Inheritance diagram for actor.keese.Keese:



## **Public Member Functions**

def \_\_init\_\_ (self, x, y)

Constructor for Keese.

def genRestLength (self)

Sets the Keese rest length.

• def genTravelPoint (self)

Creates a new travel point for Keese.

def switchSprite (self)

Iterates through the sprite list.

def stop (self)

Stops the Keese.

• def setMoveSpeed (self)

Sets the Keese x and y movement speed.

def checkState (self)

Evaluates the state of the Keese.

• def enemyLogic (self)

Controls Keese logic.

## **Public Attributes**

- isMoving
- canStop
- isResting
- travelPoint
- restTime
- restStartFrame
- flyStartFrame
- spriteIndex
- maxHP
- HP
- dmg
- image
- sprites
- xSpeed
- ySpeed
- hitCount
- isHit

## 4.9.1 Detailed Description

This class represents the Keese enemy.

## 4.9.2 Constructor & Destructor Documentation

Constructor for Keese.

Constructor takes two parameters, the x and y coordinates

## Parameters

Χ	X coordinate of the starting postion of the Keese
у	Y coordinate of the starting postion of the Keese

## 4.9.3 Member Function Documentation

#### 4.9.3.1 checkState()

```
\begin{tabular}{ll} def & actor.keese.Keese.checkState ( \\ & self ) \end{tabular}
```

Evaluates the state of the Keese.

Evalautes if the Keese if moving, if it can stop, if it is in iframes, and if it has died

## 4.9.3.2 enemyLogic()

```
\begin{tabular}{ll} \tt def actor.keese.Keese.enemyLogic ( \\ self ) \end{tabular}
```

Controls Keese logic.

Uses the states to control the Keese

#### 4.9.3.3 genRestLength()

```
\begin{tabular}{ll} $\operatorname{def actor.keese.Keese.genRestLength} & ( \\ & self \end{tabular} \label{eq:self}
```

Sets the Keese rest length.

Generates a random number between [1,2] inclusive as the rest time between movements and sets the rest start frame to the current frame

## 4.9.3.4 genTravelPoint()

```
\begin{tabular}{ll} \tt def actor.keese.Keese.genTravelPoint ( \\ & self ) \end{tabular}
```

Creates a new travel point for Keese.

Generate a random point to move to between 0 and the width - 30 of the screen for the x coordinate and between 0 and the height - 30 of the screen for the y coordinate

#### 4.9.3.5 setMoveSpeed()

```
\begin{tabular}{ll} \tt def & \tt actor.keese.Keese.setMoveSpeed & \\ & & \tt self ) \end{tabular}
```

Sets the Keese x and y movement speed.

Compares the two lengths of travel (x and y) and sets the speed in which ever direction is longer to the max speed and the other to a scalar multiple of the max speed based on the ratio of the two lengths

#### 4.9.3.6 stop()

```
\begin{tabular}{ll} $\operatorname{def actor.keese.Keese.stop} & ( \\ & self \end{tabular} ) \label{eq:self}
```

Stops the Keese.

Sets the Keese speed in the x direction and the y direction to zero

#### 4.9.3.7 switchSprite()

```
\begin{tabular}{ll} \tt def actor.keese.Keese.switchSprite ( \\ self ) \end{tabular}
```

Iterates through the sprite list.

Swaps between the two sprites that are avalible for the keese

The documentation for this class was generated from the following file:

· src/actor/keese.py

# 4.10 collision.level.Level Class Reference

Dungeon level background class Creates the background of a dungeon, can be modified in the future to change colour based on sprite sheet and new arg.

Inheritance diagram for collision.level.Level:



#### **Public Member Functions**

• def \_\_init\_\_ (self)

Background initializer Initialize a background to constantly be printed as game background.

# **Public Attributes**

- image
- · dungeon\_sprite
- rect

# 4.10.1 Detailed Description

Dungeon level background class Creates the background of a dungeon, can be modified in the future to change colour based on sprite sheet and new arg.

The documentation for this class was generated from the following file:

· src/collision/level.py

# 4.11 collision.levelmanager.LevelManager Class Reference

Dungeon Level Creation Class Class used as a master constructor for every dungeon levels, getting pre-written data and loading it when the game starts and when a transition occurs.

#### **Public Member Functions**

- · def \_\_init\_\_ (self, spritelist, collidlist, updatelist)
- def make (self, x, y)
- def transition (self, xchange, ychange)

Dungeon level transition function, used to go to an adjacent level, clear all current data, and load new room data.

#### **Public Attributes**

- sl
- · cl
- ul
- x
- у
- level

# 4.11.1 Detailed Description

Dungeon Level Creation Class Class used as a master constructor for every dungeon levels, getting pre-written data and loading it when the game starts and when a transition occurs.

### 4.11.2 Member Function Documentation

#### 4.11.2.1 transition()

Dungeon level transition function, used to go to an adjacent level, clear all current data, and load new room data.

#### **Parameters**

*j* Value to add to the current index to get to new room

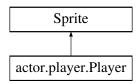
The documentation for this class was generated from the following file:

src/collision/levelmanager.py

# 4.12 actor.player.Player Class Reference

Player Class A pygame sprite subclass for defining the creation of the game's playable character, as well as its interactions with both the user and other entities within the game.

Inheritance diagram for actor.player.Player:



#### **Public Member Functions**

• def \_\_init\_\_ (self, x, y, hbar)

Player constructor The constructor for the player object, used within the initialization of the game.

def movechar (self)

Function to move the player in a specified direction.

• def move (self, d, b)

Function to store which movement buttons are being pressed and let go of by the user.

· def attack (self)

Function to react to the user pressing the attack button, putting the player into an attack animation and spawning a sword for the duration.

· def useitem (self)

Function to react to the user pressing the use item button, putting the player into an attack animation and spawning a boomerang for the duration.

• def moveupdate (self)

UPDATE LOOP FUNCTIONS.

· def attackupdate (self)

Update function for attack and boomerang conditions, as well as handing user collision with enemies (damage taken) Checks sword collision on enemies, and checks the timeout on both the sword and boomerang attack animations, telling the player when they can move again.

def collisionupdate (self)

Update function to check collisions between the player and any specified collidable objects, and call their respective collision events.

• def update (self)

Player master update function, running all update functions repeatedly.

#### **Public Attributes**

· image

Player sprite image.

id

Collision ID (To tell other objects what this object is)

· leveltrans

Boolean value to tell the game when the player has left the room, and a room transition is needed.

rect

Player x and y position.

walkLeft

Animation sprites for player walking left.

walkRight

Animation sprites for player walking right.

walkUp

Animation sprites for player walking up.

walkDown

Animation sprites for player walking down.

· attacksprite

Animation sprites for player attacking.

obj

List of objects that the player can collide with.

hbar

Health bar corresponding to the player's health.

· totalhp

Player's maximum HP amount.

hp

Player's current HP amount (starts at max)

• rupes

Player's rupee counter.

keys

Player's key counter.

moveable

Boolean allowing and stoping the player from moving.

· attackbool

Boolean to tell whether the player is attacking or not.

attackcount

Attack counter, to control how long the attack lasts.

· attacksword

Holder for a sword object when attacking.

· item

Holder for a boomerang object when using item.

itembool

Boolean to tell whether the player is using their boomerang or not.

oldx

Player's x value one frame ago.

oldy

Player's y value one frame ago.

· dirbool

Boolean array to tell which directional buttons are pressed or not (starting left going clockwise, dirbool[0] is left, dirbool[1] is up, etc)

• dir

Current direction the player is facing.

· hit

Boolean on whether the player was recently hit.

hitcount

How long a hit counts for on the player (how long until self.hit turns off)

# 4.12.1 Detailed Description

Player Class A pygame sprite subclass for defining the creation of the game's playable character, as well as its interactions with both the user and other entities within the game.

#### 4.12.2 Constructor & Destructor Documentation

Player constructor The constructor for the player object, used within the initialization of the game.

The only arguments passed are an initial x and y position, as well as heads-up-display (HUD) elements. param x Initial player x coordinate param y Initial player y coordinate param hbar HUD health bar, showing the current health of the player

### 4.12.3 Member Function Documentation

#### 4.12.3.1 attackupdate()

```
{\tt def} actor.player.Player.attackupdate ( {\tt self} )
```

Update function for attack and boomerang conditions, as well as handing user collision with enemies (damage taken) Checks sword collision on enemies, and checks the timeout on both the sword and boomerang attack animations, telling the player when they can move again.

Also updates the player and reacts accordingly to recieving damage.

### 4.12.3.2 move()

Function to store which movement buttons are being pressed and let go of by the user.

#### **Parameters**

- d Direction related to the button pressed (integer value from 0 to 3, starting from the left and going clockwise)
- b Boolean value on whether the button is pressed or not

### 4.12.3.3 moveupdate()

```
\begin{tabular}{ll} def & actor.player.Player.moveupdate ( \\ & self ) \end{tabular}
```

#### UPDATE LOOP FUNCTIONS.

Update function for player movement and according sprite animation

#### 4.12.4 Member Data Documentation

#### 4.12.4.1 attacksword

```
actor.player.Player.attacksword
```

Holder for a sword object when attacking.

Sprite function to delete a sprite object and all relations of the object in the project.

#### 4.12.4.2 dir

```
actor.player.Player.dir
```

Current direction the player is facing.

Render Appropriate Sprites According to movement.

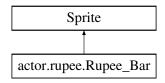
The documentation for this class was generated from the following file:

src/actor/player.py

# 4.13 actor.rupee.Rupee\_Bar Class Reference

This class represents the RupeeBar object.

Inheritance diagram for actor.rupee.Rupee\_Bar:



# **Public Member Functions**

def \_\_init\_\_ (self, x, y)
 Constructor for the RupeeBar object.

# **Public Attributes**

• image

This represents the sprite image of the Rupee\_Bar object.

rect

This represents rectangle for collision and position for the sprite image of the Rupee\_Bar object.

# 4.13.1 Detailed Description

This class represents the RupeeBar object.

The Rupee class uses the Pygame library and SpriteSheet module to create an image for the

#### 4.13.2 Constructor & Destructor Documentation

Constructor for the RupeeBar object.

Constructor for class initializes the x and y location of the RupeeBar object.

#### **Parameters**

X	this represents the x-coordinate at which the RupeeBar object will be drawn.
У	this represents the y-coordinate at which the RupeehBar object will be drawn.

# 4.13.3 Member Data Documentation

# 4.13.3.1 image

```
actor.rupee.Rupee_Bar.image
```

This represents the sprite image of the Rupee\_Bar object.

#### 4.13.3.2 rect

```
actor.rupee.Rupee_Bar.rect
```

This represents rectangle for collision and position for the sprite image of the Rupee\_Bar object.

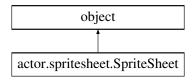
The documentation for this class was generated from the following file:

src/actor/rupee.py

# 4.14 actor.spritesheet.SpriteSheet Class Reference

This class represents the SpriteSheet object, allowing sprites to be loaded and processed.

Inheritance diagram for actor.spritesheet.SpriteSheet:



#### **Public Member Functions**

- def \_\_init\_\_ (self, file\_name)
  - Constructor for the SpriteSheet class.
- def get\_image (self, x, y, width, height)

Accessor to return an image splice from the loaded SpriteSheet.

def get\_imageNT (self, x, y, width, height)

Accessor to return an image splice from the loaded SpriteSheet, WITHOUT removing the image background.

#### **Public Attributes**

· sprite\_sheet

This represents the current spritesheet loaded from the specific file\_name path.

#### 4.14.1 Detailed Description

This class represents the SpriteSheet object, allowing sprites to be loaded and processed.

The SpriteSheet class uses the Pygame library to load images and change the transperancy on those images.

#### 4.14.2 Constructor & Destructor Documentation

Constructor for the SpriteSheet class.

This constructor initializes an image file using the Pygame library.

#### **Parameters**

file_name	This is the string representing the path to the image file.
-----------	---

#### 4.14.3 Member Function Documentation

# 4.14.3.1 get\_image()

Accessor to return an image splice from the loaded SpriteSheet.

This accessor returns an image splice based on the x,y location and the height and width of the image.

#### Parameters

x The x-coordinate for starting point of the splice on the S	
У	The y-coordinate for starting point of the splice on the SpriteSheet.
width The width of the splice on the SpriteSheet.	
height	The height of the splice on the SpriteSheet.

#### Returns

image This returns the newly spliced image after removing the image background transparency.

#### 4.14.3.2 get\_imageNT()

Accessor to return an image splice from the loaded SpriteSheet, WITHOUT removing the image background.

This accessor returns an image splice based on the x,y location and the height and width of the image.

#### **Parameters**

X	The x-coordinate for starting point of the splice on the SpriteSho	
У	The y-coordinate for starting point of the splice on the SpriteSheet.	
width The width of the splice on the SpriteSheet.		
height	The height of the splice on the SpriteSheet.	

#### Returns

image This returns the newly spliced image WITHOUT removing the image background transparency.

#### 4.14.4 Member Data Documentation

#### 4.14.4.1 sprite\_sheet

```
actor.spritesheet.SpriteSheet.sprite_sheet
```

This represents the current spritesheet loaded from the specific file\_name path.

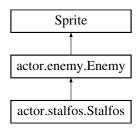
The documentation for this class was generated from the following file:

src/actor/spritesheet.py

# 4.15 actor.stalfos.Stalfos Class Reference

This class represents the Stalfos enemy.

Inheritance diagram for actor.stalfos.Stalfos:



#### **Public Member Functions**

def \_\_init\_\_ (self, x, y)

Constructor for Stalfos.

def checkState (self)

Evaluates the state of the Stalfos.

def enemyLogic (self)

Controls Stalfos logic.

def genTravelPath (self)

Creates a new travel point for Stalfos.

def setWalkSpeed (self)

Sets the walk speed of the Stalfos.

• def stop (self)

Stops the Stalfos.

#### **Public Attributes**

· isMoving

Call superclass constructor.

previousDirection

Movement value for previous direction of movement for Stalfos state.

· direction

Movement value for current direction of movement for Stalfos state.

· walkFrames

Number representing the frames walked by Staflos in movement state.

· walkStartFrame

Movement value for starting frame for Stalfos in movement state.

oldx

This represents the previous x-location of Stalfos in movement/stationary state.

oldy

This represents the previous y-location of Stalfos in movement/stationary state.

obj

This represents the list of objects Stalfos can collide with, in movement/stationary state.

maxHP

Set Stalfos health to maximum health.

HP

Current Stalfos health.

dmg

The current damage value that the Stalfos object has received from player character.

· image

Load the sprite sheet.

· sprites

Creates a list of sprites list for Stalfos.

spriteIndex

Index for the current index in the sprite list for Stalfos.

- hitdir
- · hitCount
- isHit

Represents the current state if  ${\it Stalfos}$  has collided with player character attack.

xSpeed

The current x-directional speed for Stalfos in movement/stationary state.

ySpeed

The current y-directional speed for Stalfos in movement/stationary state.

# 4.15.1 Detailed Description

This class represents the Stalfos enemy.

#### 4.15.2 Constructor & Destructor Documentation

Constructor for Stalfos.

Constructor takes two parameters, the x and y coordinates

#### **Parameters**

	X	X coordinate of the starting postion of the Keese
ĺ	У	Y coordinate of the starting postion of the Keese

### 4.15.3 Member Function Documentation

#### 4.15.3.1 checkState()

```
\begin{tabular}{ll} def actor.stalfos.Stalfos.checkState ( \\ self ) \end{tabular}
```

Evaluates the state of the Stalfos.

Evalautes if the Stalfos if moving, if it can stop, if it is in iframes, if it collides with something, and if it has died

# 4.15.3.2 enemyLogic()

```
\label{eq:constalfos.Stalfos.enemyLogic} \mbox{ (} \\ self \mbox{ )}
```

Controls Stalfos logic.

Uses the states to control the Stalfos

#### 4.15.3.3 genTravelPath()

```
\label{eq:constalfos.stalfos.genTravelPath} \mbox{ (} \\ self \mbox{ )}
```

Creates a new travel point for Stalfos.

Generates a direction to walk and the distance to move

#### 4.15.3.4 setWalkSpeed()

```
\label{eq:constalfos.setWalkSpeed} \mbox{ (} \\ self \mbox{ )}
```

Sets the walk speed of the Stalfos.

Sets speed based on the direction

#### 4.15.3.5 stop()

```
\begin{tabular}{ll} \tt def actor.stalfos.Stalfos.stop ( \\ & self ) \end{tabular}
```

Stops the Stalfos.

Sets the Stalfos speed in the x direction and the y direction to zero

# 4.15.4 Member Data Documentation

# 4.15.4.1 direction

```
actor.stalfos.Stalfos.direction
```

Movement value for current direction of movement for Stalfos state.

#### 4.15.4.2 dmg

```
actor.stalfos.Stalfos.dmg
```

The current damage value that the Stalfos object has received from player character.

# 4.15.4.3 HP

actor.stalfos.Stalfos.HP

Current Stalfos health.

# 4.15.4.4 image

actor.stalfos.Stalfos.image

Load the sprite sheet.

This represents the sprite image for the Stalfos object.

# 4.15.4.5 isHit

actor.stalfos.Stalfos.isHit

Represents the current state if Stalfos has collided with player character attack.

# 4.15.4.6 isMoving

actor.stalfos.Stalfos.isMoving

Call superclass constructor.

Check for movement.

Boolean values for keeping track of the Stalfos state.

# 4.15.4.7 maxHP

actor.stalfos.Stalfos.maxHP

Set Stalfos health to maximum health.

# 4.15.4.8 obj

actor.stalfos.Stalfos.obj

This represents the list of objects Stalfos can collide with, in movement/stationary state.

#### 4.15.4.9 oldx

```
actor.stalfos.Stalfos.oldx
```

This represents the previous x-location of Stalfos in movement/stationary state.

#### 4.15.4.10 oldy

```
actor.stalfos.Stalfos.oldy
```

This represents the previous y-location of Stalfos in movement/stationary state.

#### 4.15.4.11 previousDirection

```
actor.stalfos.Stalfos.previousDirection
```

Movement value for previous direction of movement for Stalfos state.

# 4.15.4.12 spriteIndex

```
\verb"actor.stalfos.Stalfos.spriteIndex"
```

Index for the current index in the sprite list for Stalfos.

# 4.15.4.13 sprites

```
actor.stalfos.Stalfos.sprites
```

Creates a list of sprites list for Stalfos.

### 4.15.4.14 walkFrames

```
actor.stalfos.Stalfos.walkFrames
```

Number representing the frames walked by Staflos in movement state.

#### 4.15.4.15 walkStartFrame

```
actor.stalfos.Stalfos.walkStartFrame
```

Movement value for starting frame for Stalfos in movement state.

#### 4.15.4.16 xSpeed

```
actor.stalfos.Stalfos.xSpeed
```

The current x-directional speed for Stalfos in movement/stationary state.

# 4.15.4.17 ySpeed

```
actor.stalfos.Stalfos.ySpeed
```

The current y-directional speed for Stalfos in movement/stationary state.

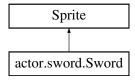
The documentation for this class was generated from the following file:

· src/actor/stalfos.py

# 4.16 actor.sword.Sword Class Reference

Player Sword Class Class for the creation and deletion of the sword sprite object, made when the player attacks.

Inheritance diagram for actor.sword.Sword:



#### **Public Member Functions**

def \_\_init\_\_ (self, x, y, direction)

Sword constructor, taking an x and y coordinate, and the direction for the sword to be pointing (player direction)

#### **Public Attributes**

• sprite

Array of all possible sword directions (following usual directional standards, 0-3, starting at left going clockwise)

image

Sprite image of the sword.

rect

X and Y position of the sword.

# 4.16.1 Detailed Description

Player Sword Class Class for the creation and deletion of the sword sprite object, made when the player attacks.

#### 4.16.2 Constructor & Destructor Documentation

Sword constructor, taking an x and y coordinate, and the direction for the sword to be pointing (player direction)

#### **Parameters**

X	Sword's x coordinate
У	Sword's y coordinate
direction	Sword's direction (integer from 0 to 3, starting left, going clockwise)

# 4.16.3 Member Data Documentation

#### 4.16.3.1 image

```
actor.sword.Sword.image
```

Sprite image of the sword.

Below is for testing self.image = pygame.Surface([26, 14]) self.image.fill((200, 0, 0))

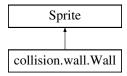
The documentation for this class was generated from the following file:

src/actor/sword.py

#### 4.17 collision.wall.Wall Class Reference

This class represents the Wall class for collision for objects in the environment.

Inheritance diagram for collision.wall.Wall:



#### **Public Member Functions**

```
    def __init__ (self, x, y, w, h, sprite)
    Constructor for the Wall class.
```

• def collision (self, i)

This method checks for collision with the Wall object and other sprite object.

#### **Public Attributes**

• image

This represents the sprite image for Wall object.

rect

This represents rectangle for position for the sprite image of the Wall object.

id

This represents the ID for the Wall object, ised for collision in main.py.

# 4.17.1 Detailed Description

This class represents the Wall class for collision for objects in the environment.

The Wall class uses the base class for visible game objects from Pygame library.

#### 4.17.2 Constructor & Destructor Documentation

Constructor for the Wall class.

Constructor for Wall class initializes a Wall object based on the x/y location and the width/height of the wall, and the sprite the collision for the wall will be created upon.

#### **Parameters**

X	This represents the x-location for the Wall object to be created.
У	This represents the y-location for the Wall object to be created.
W	This represents the width of the Wall object when created.
h	This represents the height of the Wall object when created.
sprite	This represents the sprite that the collison for a Wall will be present upon at all times.

#### 4.17.3 Member Function Documentation

#### 4.17.3.1 collision()

```
def collision.wall.Wall.collision ( self, \\ i \ )
```

This method checks for collision with the Wall object and other sprite object.

The collision will be checked with the Wall and other sprite object as the object collides with the wall.

#### **Parameters**

*i* This is the sprite object that is passed into the method, and checks if the object is colliding with the Wall object, reseting the sprite objects location accordingly.

#### 4.17.4 Member Data Documentation

#### 4.17.4.1 id

```
collision.wall.Wall.id
```

This represents the ID for the Wall object, ised for collision in main.py.

### 4.17.4.2 image

```
collision.wall.Wall.image
```

This represents the sprite image for Wall object.

# 4.17.4.3 rect

collision.wall.Wall.rect

This represents rectangle for position for the sprite image of the Wall object.

The documentation for this class was generated from the following file:

• src/collision/wall.py

# **Chapter 5**

# **File Documentation**

# 5.1 src/actor/aquamentus.py File Reference

Aquamentus Boss

#### Classes

class actor.aquamentus.Aquamentus
 This class represents the Aquamentus Boss.

# **Functions**

• def actor.aquamentus.populateSprites ()

Creates the sprite list for Aquamentus.

# **Variables**

• string actor.aquamentus.SPRITE\_MAP = 'src/actor/sprites/aquamentus.png'

# 5.1.1 Detailed Description

Aquamentus Boss

**Author** 

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 8 2018

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# 5.1.2 Function Documentation

#### 5.1.2.1 populateSprites()

```
def actor.aquamentus.populateSprites ( )
```

Creates the sprite list for Aquamentus.

Iterates through a sprite sheet to pull images for the sprite array

Returns

sprites Array if the sprites that represent the Aquamentus

# 5.2 src/actor/boomerang.py File Reference

Boomerang Weapon

#### Classes

· class actor.boomerang.Boomerang

Boomerang Weapon Class The class holding the creation, behaviour, and collision effects of the player's boomerang weapon.

#### 5.2.1 Detailed Description

Boomerang Weapon

**Author** 

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 6 2018

# 5.3 src/actor/boss.py File Reference

Boss Template

### Classes

· class actor.boss.Boss

Superclass for representing a Boss.

#### 5.3.1 Detailed Description

**Boss Template** 

**Author** 

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

# 5.4 src/actor/constants.py File Reference

**Actor Constants** 

#### **Variables**

• tuple actor.constants.BLACK = (0,0,0)

Defines the colour black.

• tuple actor.constants.WHITE = (255, 255, 255)

Defines the colour white.

• tuple actor.constants.PURPLE = (255, 50, 255)

Defines the colour purple.

• tuple actor.constants.RED = (255, 50, 50)

Defines the colour red.

• int actor.constants.PLAYER\_WIDTH = 15

Defines the player's width.

int actor.constants.PLAYER\_HEIGHT = 15

Defines the player's height.

• int actor.constants.PLAYER SPEED = 3

Defines the player's speed.

int actor.constants.PLAYER\_MAX\_HP = 3

Defines the player's max hp.

• int actor.constants.HIT SPEED = 12

Defines the speed of the knock back applied per frame.

int actor.constants.HIT\_TIME = 5

Defines the number of frames hit speed is applied for.

• int actor.constants.HIT IFRAME = 30

Defines the number of iframes.

int actor.constants.ATK\_WIDTH = 15

Defines the width of the attack hitbox.

• int actor.constants.ATK\_HEIGHT = 15

Defines the height of the attack hitbox.

int actor.constants.ATK\_LENGTH = 10

Defines the number of frames the hit stays out for.

• int actor.constants.ATK\_BUFFER = 20

Defines the number of frames before the next attack can start.

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• int actor.constants.BOOM\_SPEED = 9

Defines the bommerang speed.

• float actor.constants.BOOM RETURN = 0.3

Defines the acceleration in the opposite direction of the bommerang's travel path.

int actor.constants.GLOBAL\_FRAME\_BUFFER = 12

Coordinate Divisor that determines range in which next sprite should render.

int actor.constants.KEESE MAX HP = 1

Defines the keese's max hp.

• float actor.constants.KEESE\_DMG = 0.5

Defines the keese's damage.

int actor.constants.KEESE\_MAX\_SPEED = 2

Defines the keese's max speed.

int actor.constants.KEESE\_MIN\_SPEED = 1

Defines the keese's min speed.

int actor.constants.ACCEPTABLE\_RADIUS = 20

Defines the keese's minimum magnitude from its determined travel point before stopping.

int actor.constants.KEESE MAGNITUDE MIN = 200

Defines the keese's minimum magnitude for selecting its next travel point.

• int actor.constants.STALFOS\_MAX\_HP = 2

Defines the stalfos' max hp.

• int actor.constants.STALFOS\_DMG = 1

Defines the stalfos' damage.

• int actor.constants.STALFOS SPEED = 1

Defines the stalfos' speed.

• int actor.constants.STALFOS\_HIT\_SPEED = 10

Defines the stalfos' speed during knockback.

• int actor.constants.ENEMY STUNCOUNT = 30

Length of frames an enemy will be stunned for when hit by a boomerang.

• int actor.constants.AQUAMENTUS MAX HP = 10

Defines the aquamentus' max hp.

int actor.constants.AQUAMENTUS\_DMG = 2

Defines the aquamentus' damage.

• int actor.constants.AQUAMENTUS SPEED = 1

Defines the aquamentus' speed.

• int actor.constants.FIREBALL\_DMG = 1

Defines the fireballs damage.

#### 5.4.1 Detailed Description

**Actor Constants** 

**Author** 

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

# 5.5 src/actor/enemy.py File Reference

**Enemy Template** 

# **Classes**

· class actor.enemy.Enemy

Superclass for representing an Enemy.

# 5.5.1 Detailed Description

**Enemy Template** 

**Author** 

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

# 5.6 src/actor/fireball.py File Reference

Fireball object

#### Classes

· class actor.fireball.Fireball

This class represents the Fireball object.

# **Functions**

• def actor.fireball.populateSprites ()

Creates the sprite list for Fireball.

#### **Variables**

• string actor.fireball.SPRITE\_MAP = 'src/actor/sprites/fireball.png'

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# 5.6.1 Detailed Description

Fireball object

**Author** 

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

#### 5.6.2 Function Documentation

#### 5.6.2.1 populateSprites()

```
def actor.fireball.populateSprites ( )
```

Creates the sprite list for Fireball.

Iterates through a sprite sheet to pull images for the sprite array

Returns

sprites Array if the sprites that represent the Fireball

# 5.7 src/actor/healthbar.py File Reference

HealthBar Class

#### **Classes**

• class actor.healthbar.Health\_Bar

This class represents the HealthBar for the user controlled player character.

# 5.7.1 Detailed Description

HealthBar Class

Author

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

# 5.8 src/actor/item.py File Reference

Consumable Items

#### Classes

· class actor.item.Item

Consumable Item Class This class is used for the creation of a random consumable item, spawned once an enemy has been defeated on their last position before despawn.

# 5.8.1 Detailed Description

Consumable Items

**Author** 

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 6 2018

# 5.9 src/actor/keese.py File Reference

Keese Enemy

# **Classes**

· class actor.keese.Keese

This class represents the Keese enemy.

#### **Functions**

• def actor.keese.populateSprites ()

Creates the sprite list for Keese.

# **Variables**

• string actor.keese.SPRITE\_MAP = 'src/actor/sprites/keese.png'

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# 5.9.1 Detailed Description

Keese Enemy

**Author** 

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

# 5.9.2 Function Documentation

#### 5.9.2.1 populateSprites()

```
def actor.keese.populateSprites ( )
```

Creates the sprite list for Keese.

Iterates through a sprite sheet to pull images for the sprite array

Returns

sprites Array if the sprites that represent the Keese

# 5.10 src/actor/player.py File Reference

Playable Characer

#### **Classes**

· class actor.player.Player

Player Class A pygame sprite subclass for defining the creation of the game's playable character, as well as its interactions with both the user and other entities within the game.

# 5.10.1 Detailed Description

Playable Characer

**Author** 

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 6 2018

# 5.11 src/actor/rupee.py File Reference

Rupee\_Bar Class

#### Classes

· class actor.rupee.Rupee\_Bar

This class represents the RupeeBar object.

# 5.11.1 Detailed Description

Rupee\_Bar Class

**Author** 

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

# 5.12 src/actor/spritesheet.py File Reference

SpriteSheet Class

#### Classes

• class actor.spritesheet.SpriteSheet

This class represents the SpriteSheet object, allowing sprites to be loaded and processed.

# 5.12.1 Detailed Description

SpriteSheet Class

**Author** 

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

# 5.13 src/actor/stalfos.py File Reference

Stalfos Enemy

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# Classes

· class actor.stalfos.Stalfos

This class represents the Stalfos enemy.

#### **Functions**

• def actor.stalfos.populateSprites ()

Creates the sprite list for Stalfos.

#### **Variables**

• string actor.stalfos.SPRITE\_MAP = 'src/actor/sprites/stalfos.png'

# 5.13.1 Detailed Description

Stalfos Enemy

Author

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

#### 5.13.2 Function Documentation

```
5.13.2.1 populateSprites()
```

```
def actor.stalfos.populateSprites ( )
```

Creates the sprite list for Stalfos.

Iterates through a sprite sheet to pull images for the sprite array

#### Returns

sprites Array if the sprites that represent the Stalfos

# 5.14 src/actor/sword.py File Reference

Player Sword

#### Classes

· class actor.sword.Sword

Player Sword Class Class for the creation and deletion of the sword sprite object, made when the player attacks.

# 5.14.1 Detailed Description

Player Sword

Author

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 8 2018

# 5.15 src/collision/door.py File Reference

**Dungeon Door** 

#### Classes

· class collision.door.Door

Dungeon Door Class This class is used to place a door on one of four places of a dungeon room, to allow the player to walk through and traverse to other rooms within the dungeon.

# 5.15.1 Detailed Description

**Dungeon Door** 

**Author** 

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

# 5.16 src/collision/level.py File Reference

**Dungeon Background** 

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#### Classes

· class collision.level.Level

Dungeon level background class Creates the background of a dungeon, can be modified in the future to change colour based on sprite sheet and new arg.

# 5.16.1 Detailed Description

**Dungeon Background** 

Author

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

# 5.17 src/collision/levelmanager.py File Reference

**Dungeon Level Master Creator** 

#### Classes

• class collision.levelmanager.LevelManager

Dungeon Level Creation Class Class used as a master constructor for every dungeon levels, getting pre-written data and loading it when the game starts and when a transition occurs.

### 5.17.1 Detailed Description

**Dungeon Level Master Creator** 

**Author** 

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

# 5.18 src/collision/wall.py File Reference

Wall Class

#### Classes

· class collision.wall.Wall

This class represents the Wall class for collision for objects in the environment.

# 5.18.1 Detailed Description

Wall Class

Author

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

# 5.19 src/config/colour.py File Reference

Colour Constants

#### **Variables**

• tuple config.colour.WHITE = (255, 255, 255)

Defines the colour white.

# 5.19.1 Detailed Description

Colour Constants

Author

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

# 5.20 src/config/window.py File Reference

Window Constants

File Documentation

# **Variables**

• int config.window.Y\_OFFSET = 56

Y offset for HUD.

• int config.window.Wwidth = 480

Width of the window.

• int config.window.Wheight = 320 + Y\_OFFSET

Height of the window.

# 5.20.1 Detailed Description

**Window Constants** 

**Author** 

Giacomo Loparco, Bilal Jaffry, Lucas Zacharewicz

Date

November 7 2018

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