

Sketchy Super Mario Bros.

1

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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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nl.arjanfrans.mario.graphics.CharacterAnimation	20
nl.arjanfrans.mario.graphics.GoombaAnimation	34
nl.arjanfrans.mario.graphics.MarioAnimation	50
nl.arjanfrans.mario.debug.D	23
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nl.arjanfrans.mario.model.Tile	81

Chapter 2

Class Index

2.1 Class List

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

nl.arjanfrans.mario.actions.ActorActions	
Inherited class Actions	7
nl.arjanfrans.mario.audio.Audio	
This is a class that implements the audio in the game	8
nl.arjanfrans.mario.model.Brick	
This class is the class meant to model the bricks in the game	10
nl.arjanfrans.mario.model.brick.BrickPiece	
This class is the class meant to model the pieces of the bricks in the game	14
nl.arjanfrans.mario.model.brick.BrickShatter	
This class is the class meant to model the shattering of the bricks in the game	17
nl.arjanfrans.mario.graphics.CharacterAnimation	
This is an abstract class that will be implemented to handle the animations of various characters in the game	20
nl.arjanfrans.mario.model.Creature	
This class is the class model to represent any moving actor that is interactive, and not Mario	21
nl.arjanfrans.mario.debug.D	
Debug class	23
nl.arjanfrans.mario.desktop.DesktopLauncher	
This class is the main method allowing the game to initialize and launch	24
nl.arjanfrans.mario.model.Flag	
This flag represents the flag pole at the end of the stage that completes if Mario interacts with it	25
nl.arjanfrans.mario.model.Goomba	
Goomba represents the Goomba enemies from the original Mario game	30
nl.arjanfrans.mario.graphics.GoombaAnimation	
This is a class that implements the abstract class, CharacterAnimation , specifically for the animation of the Goomba character	34
nl.arjanfrans.mario.model.Item	
Represents any item in game	37
nl.arjanfrans.mario.model.Mario	
Represents the playable character in the game	38
nl.arjanfrans.mario.actions.MarioActions	
Inherited class Actions	46
nl.arjanfrans.mario.graphics.MarioAnimation	
This is a class that implements the abstract class, CharacterAnimation , specifically for the animation of Mario	50

nl.arjanfrans.mario.MarioGame	
The class meant to render the game	54
nl.arjanfrans.mario.input.MarioInput	
Inherited class that overrides mario input methods	55
nl.arjanfrans.mario.actions.MoveableActions	
Inherited class Actions	57
nl.arjanfrans.mario.model.MovingActor	
Represents a moving actor in the game	59
nl.arjanfrans.mario.model.Mushroom	
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nl.arjanfrans.mario.view.ParallaxBackground	
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The class meant to retrieve a layer from a ParallaxBackground	73
nl.arjanfrans.mario.model.StaticActor	
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nl.arjanfrans.mario.model.Super	
Inherited class that overrides Mushroom methods that represents mario in super state	78
nl.arjanfrans.mario.model.Tile	
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nl.arjanfrans.mario.graphics.Tiles	
This is a class meant to deal with the tiles that make up the graphics of the game	82
nl.arjanfrans.mario.model.World	
Represents world	84
nl.arjanfrans.mario.view.WorldRenderer	
Render of world	91

Chapter 3

File Index

3.1 File List

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

core/src/nl/arjanfrans/mario/actions/ ActorActions.java	95
core/src/nl/arjanfrans/mario/actions/ MarioActions.java	95
core/src/nl/arjanfrans/mario/actions/ MoveableActions.java	96
core/src/nl/arjanfrans/mario/debug/ D.java	96
core/src/nl/arjanfrans/mario/input/ MarioInput.java	96
core/src/nl/arjanfrans/mario/model/ Creature.java	96
core/src/nl/arjanfrans/mario/model/ Flag.java	96
core/src/nl/arjanfrans/mario/model/ Goomba.java	97
core/src/nl/arjanfrans/mario/model/ Item.java	97
core/src/nl/arjanfrans/mario/model/ Mario.java	97
core/src/nl/arjanfrans/mario/model/ Mushroom.java	97
core/src/nl/arjanfrans/mario/model/ StaticActor.java	97
core/src/nl/arjanfrans/mario/model/ Super.java	97
core/src/nl/arjanfrans/mario/model/ World.java	98
core/src/nl/arjanfrans/mario/view/ WorldRenderer.java	98
desktop/src/nl/arjanfrans/mario/desktop/ DesktopLauncher.java	98

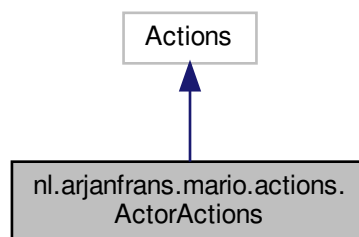
Chapter 4

Class Documentation

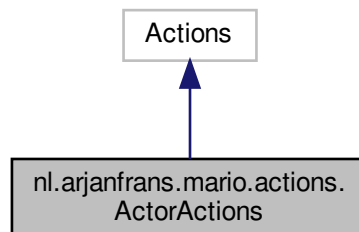
4.1 nl.arjanfrans.mario.actions.ActorActions Class Reference

Inherited class Actions.

Inheritance diagram for nl.arjanfrans.mario.actions.ActorActions:



Collaboration diagram for nl.arjanfrans.mario.actions.ActorActions:



Classes

- class **removeActor**
Inherited class Action.

4.1.1 Detailed Description

Inherited class Actions.

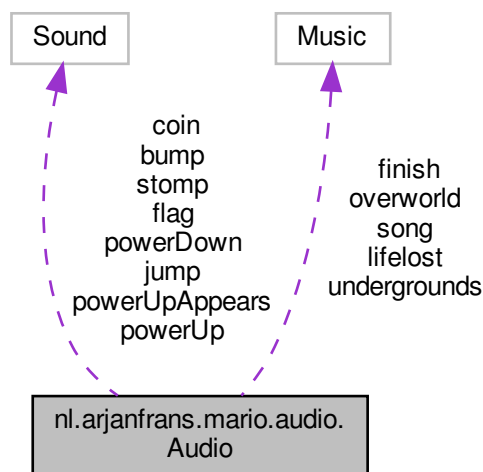
The documentation for this class was generated from the following file:

- `core/src/nl/arjanfrans/mario/actions/ActorActions.java`

4.2 nl.arjanfrans.mario.audio.Audio Class Reference

This is a class that implements the audio in the game.

Collaboration diagram for nl.arjanfrans.mario.audio.Audio:



Static Public Member Functions

- static void `playSong` (String name, boolean looping)
A method meant to play a song on loop depending on the state of the game.
- static Music `getSong` ()
A method meant to play a song on loop depending on the state of the game.
- static void `stopSong` ()
A method meant to stop the current song instance variable from playing.
- static void `dispose` ()
A method meant to dispose of all the music files.

Static Public Attributes

- static Sound **jump** = Gdx.audio.newSound(Gdx.files.internal("data/audio/sfx/sounds/jump-small.wav"))
- static Sound **stomp** = Gdx.audio.newSound(Gdx.files.internal("data/audio/sfx/sounds/stomp.wav"))
- static Sound **bump** = Gdx.audio.newSound(Gdx.files.internal("data/audio/sfx/sounds/bump.wav"))
- static Sound **flag** = Gdx.audio.newSound(Gdx.files.internal("data/audio/sfx/sounds/flagpole.wav"))
- static Sound **powerDown** = Gdx.audio.newSound(Gdx.files.internal("data/audio/sfx/sounds/pipeandpowerdown.↵
wav"))
- static Sound **powerUp** = Gdx.audio.newSound(Gdx.files.internal("data/audio/sfx/sounds/powerup.wav"))
- static Sound **powerUpAppears** = Gdx.audio.newSound(Gdx.files.internal("data/audio/sfx/sounds/powerup↵
_appears.wav"))
- static Sound **coin** = Gdx.audio.newSound(Gdx.files.internal("data/audio/sfx/sounds/coin.wav"))
- static String **currentSong** = ""

Static Private Attributes

- static Music **overworld** = Gdx.audio.newMusic(Gdx.files.internal("data/audio/soundtracks/Overworld.ogg"))
- static Music **undergrounds** = Gdx.audio.newMusic(Gdx.files.internal("data/audio/soundtracks/Undergrounds.↵
ogg"))
- static Music **lifelost** = Gdx.audio.newMusic(Gdx.files.internal("data/audio/soundtracks/Life Lost.ogg"))
- static Music **finish** = Gdx.audio.newMusic(Gdx.files.internal("data/audio/soundtracks/Course Clear.ogg"))
- static Music **song**

4.2.1 Detailed Description

This is a class that implements the audio in the game.

4.2.2 Member Function Documentation

4.2.2.1 getSong()

```
static Music nl.arjanfrans.mario.audio.Audio.getSong ( ) [static]
```

A method meant to play a song on loop depending on the state of the game.

Returns

a Music object, the current value of the global song variable.

4.2.2.2 playSong()

```
static void nl.arjanfrans.mario.audio.Audio.playSong (
    String name,
    boolean looping ) [static]
```

A method meant to play a song on loop depending on the state of the game.

Public Member Functions

- [Brick](#) ([World](#) world, float x, float y, String color, boolean bonus, boolean destructable)
Constructor method.
- void [act](#) (float delta)
This method updates the actor based on time.
- void [draw](#) (Batch batch, float parentAlpha)
This method updates the actor based on time.
- void [hit](#) (int mario_level)
This method models the behaviour when the brick has been hit.
- float [getX](#) ()
This method gets the x coordinate of the brick.
- float [getY](#) ()
This method gets the y coordinate of the brick.
- Array< Actor > [getItems](#) ()
This method gets items located inside the brick.
- Actor [popItem](#) ()
This method pops the top item located inside the brick.
- void [addItem](#) (Actor item)
This method adds an item to the array of items located inside the brick.

Private Member Functions

- void [shatter](#) ()
Shatters the brick into pieces.

Private Attributes

- TextureRegion **texture**
- TextureRegion **empty_texture**
- float **stateTime**
- int **hitcount** = 0
- int **maxhits** = 1
- boolean **destructable**
- Array< Actor > **items**
- boolean **bonus**
- [BrickShatter](#) **shatter**

Static Private Attributes

- static Animation **bonus_animation**

Additional Inherited Members

4.3.1 Detailed Description

This class is the class meant to model the bricks in the game.

4.3.2 Constructor & Destructor Documentation

4.3.2.1 Brick()

```
nl.arjanfrans.mario.model.Brick.Brick (
    World world,
    float x,
    float y,
    String color,
    boolean bonus,
    boolean destructable )
```

Constructor method.

Method which initializes an instance of [Brick](#).

Parameters

<i>world</i>	- World object which defines which game instance the brick exists in.
<i>x</i>	- The initial x coordinate for the brick.
<i>y</i>	- The initial y coordinate for the creature.
<i>color</i>	- a string representing the brick's color.
<i>bonus</i>	- a boolean indicating the existence of a bonus
<i>destructable</i>	- a boolean indicating the ability to destroy a brick

Returns

An instance of [Brick](#)

4.3.3 Member Function Documentation

4.3.3.1 act()

```
void nl.arjanfrans.mario.model.Brick.act (
    float delta )
```

This method updates the actor based on time.

Parameters

<i>delta</i>	- Time in seconds since the last frame.
--------------	---

4.3.3.2 addItem()

```
void nl.arjanfrans.mario.model.Brick.addItem (
    Actor item )
```

This method adds an item to the array of items located inside the brick.

Parameters

<i>item</i>	- an Actor object.
-------------	--------------------

4.3.3.3 draw()

```
void nl.arjanfrans.mario.model.Brick.draw (
    Batch batch,
    float parentAlpha )
```

This method updates the actor based on time.

Parameters

<i>parentAlpha</i>	- The parent alpha, to be multiplied with this actor's alpha, allowing the parent's alpha to affect all children.
<i>batch</i>	- an object used to draw 2D rectangles that reference a texture (region).

4.3.3.4 getItems()

```
Array<Actor> nl.arjanfrans.mario.model.Brick.getItems ( )
```

This method gets items located inside the brick.

Returns

an array of Actor objects.

4.3.3.5 getX()

```
float nl.arjanfrans.mario.model.Brick.getX ( )
```

This method gets the x coordinate of the brick.

Returns

a float representing the y coordinate.

4.3.3.6 getY()

```
float nl.arjanfrans.mario.model.Brick.getY ( )
```

This method gets the y coordinate of the brick.

Returns

a float representing the y coordinate.

4.3.3.7 hit()

```
void nl.arjanfrans.mario.model.Brick.hit (
    int mario_level )
```

This method models the behaviour when the brick has been hit.

Parameters

<i>mario_level</i>	- an integer indicating the size of Mario .
--------------------	---

4.3.3.8 popItem()

```
Actor nl.arjanfrans.mario.model.Brick.popItem ( )
```

This method pops the top item located inside the brick.

Returns

an Actor object.

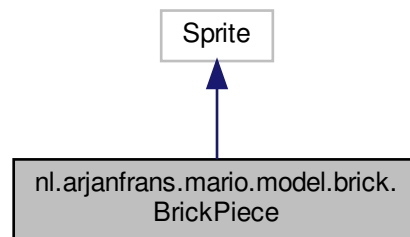
The documentation for this class was generated from the following file:

- core/src/nl/arjanfrans/mario/model/Brick.java

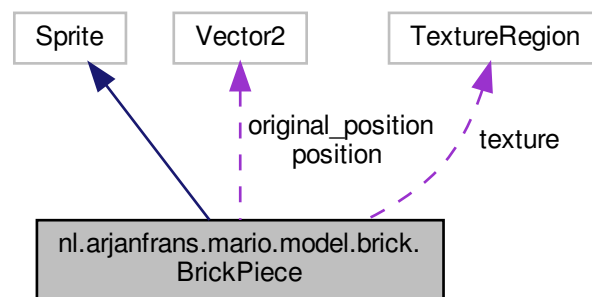
4.4 nl.arjanfrans.mario.model.brick.BrickPiece Class Reference

This class is the class meant to model the pieces of the bricks in the game.

Inheritance diagram for nl.arjanfrans.mario.model.brick.BrickPiece:



Collaboration diagram for nl.arjanfrans.mario.model.brick.BrickPiece:



Public Member Functions

- [BrickPiece](#) (float x, float y, int direction)
Constructor method for [BrickPiece](#).
- void [draw](#) (Batch batch)
This is the method meant to draw a [BrickPiece](#).

Private Attributes

- TextureRegion **texture** = [Tiles.getTile8](#)("brick_piece")
- Vector2 **position**
- Vector2 **original_position**
- float **angle** = 0
- float **speed** = 0.25f
- float **length** = 0.4f
- int **direction**
- int **rotation** = 0

Static Private Attributes

- static final float **SIZE** = 0.5f

4.4.1 Detailed Description

This class is the class meant to model the pieces of the bricks in the game.

4.4.2 Constructor & Destructor Documentation

4.4.2.1 BrickPiece()

```
nl.arjanfrans.mario.model.brick.BrickPiece.BrickPiece (
    float x,
    float y,
    int direction )
```

Constructor method for [BrickPiece](#).

Parameters

<i>x</i>	- x coordinate of the brick piece
<i>y</i>	- y coordinate of the brick piece
<i>direction</i>	- The direction/position the brick piece

Returns

an instance of [BrickPiece](#)

4.4.3 Member Function Documentation

4.4.3.1 draw()

```
void nl.arjanfrans.mario.model.brick.BrickPiece.draw (
    Batch batch )
```

This is the method meant to draw a [BrickPiece](#).

Parameters

<i>batch</i>	- an object used to draw 2D rectangles that reference a texture (region).
--------------	---

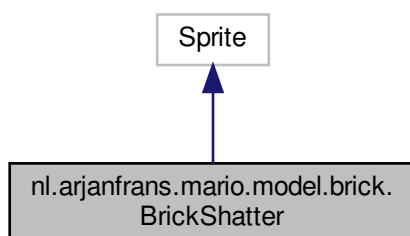
The documentation for this class was generated from the following file:

- core/src/nl/arjanfrans/mario/model/brick/BrickPiece.java

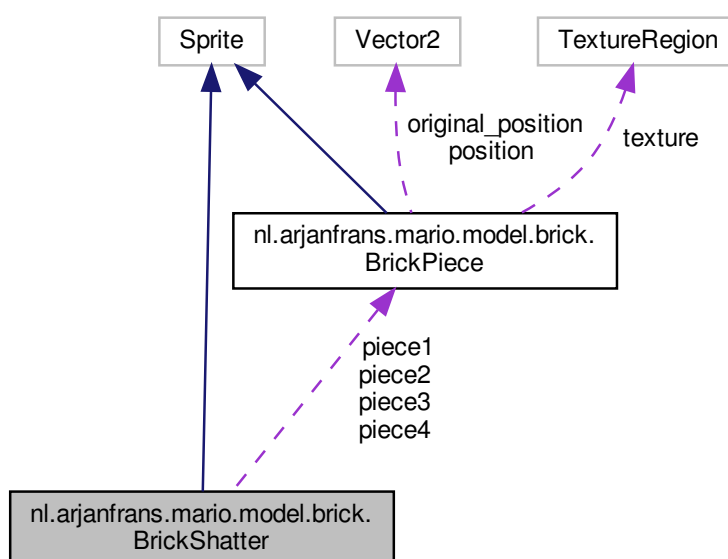
4.5 nl.arjanfrans.mario.model.brick.BrickShatter Class Reference

This class is the class meant to model the shattering of the bricks in the game.

Inheritance diagram for nl.arjanfrans.mario.model.brick.BrickShatter:



Collaboration diagram for nl.arjanfrans.mario.model.brick.BrickShatter:



Public Member Functions

- [BrickShatter](#) (float x, float y)
Constructor method for [BrickShatter](#).
- void [draw](#) (Batch batch)
This is the method meant to draw a [BrickShatter](#).

Private Attributes

- [BrickPiece](#) **piece1**
- [BrickPiece](#) **piece2**
- [BrickPiece](#) **piece3**
- [BrickPiece](#) **piece4**

4.5.1 Detailed Description

This class is the class meant to model the shattering of the bricks in the game.

4.5.2 Constructor & Destructor Documentation

4.5.2.1 [BrickShatter\(\)](#)

```
nl.arjanfrans.mario.model.brick.BrickShatter.BrickShatter (
    float x,
    float y )
```

Constructor method for [BrickShatter](#).

Parameters

<i>x</i>	- base x coordinate of the brick pieces
<i>y</i>	- base y coordinate of the brick pieces

Returns

an instance of [BrickShatter](#)

4.5.3 Member Function Documentation

4.5.3.1 draw()

```
void nl.arjanfrans.mario.model.brick.BrickShatter.draw (  
    Batch batch )
```

This is the method meant to draw a [BrickShatter](#).

Parameters

<code>batch</code>	- an object used to draw 2D rectangles that reference a texture (region).
--------------------	---

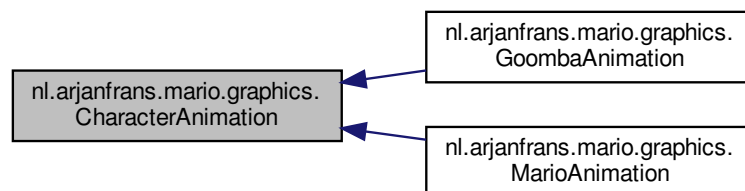
The documentation for this class was generated from the following file:

- `core/src/nl/arjanfrans/mario/model/brick/BrickShatter.java`

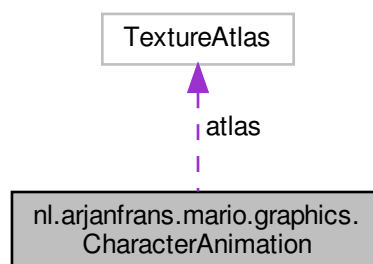
4.6 nl.arjanfrans.mario.graphics.CharacterAnimation Class Reference

This is an abstract class that will be implemented to handle the animations of various characters in the game.

Inheritance diagram for `nl.arjanfrans.mario.graphics.CharacterAnimation`:



Collaboration diagram for `nl.arjanfrans.mario.graphics.CharacterAnimation`:



Public Member Functions

- `void dispose ()`
This method disposes of the animation.

Static Public Attributes

- static final float **scale** = 1/16f

Protected Attributes

- TextureAtlas **atlas** = new TextureAtlas("data/characters/characters.atlas")

4.6.1 Detailed Description

This is an abstract class that will be implemented to handle the animations of various characters in the game.

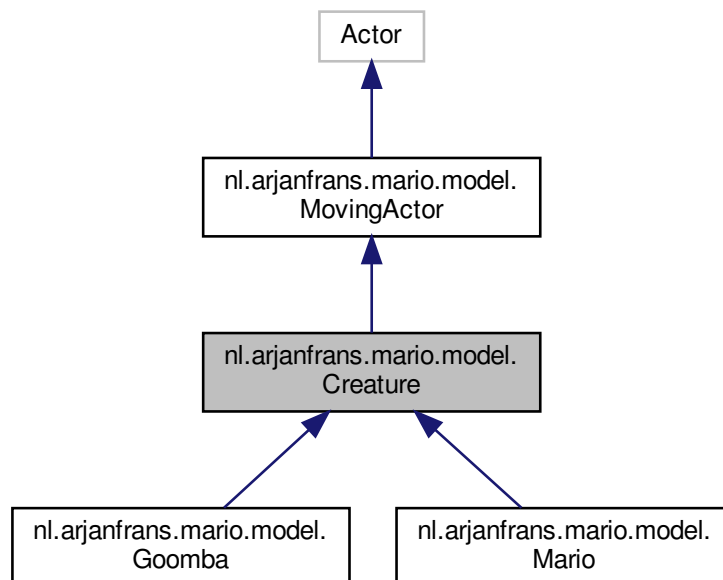
The documentation for this class was generated from the following file:

- core/src/nl/arjanfrans/mario/graphics/CharacterAnimation.java

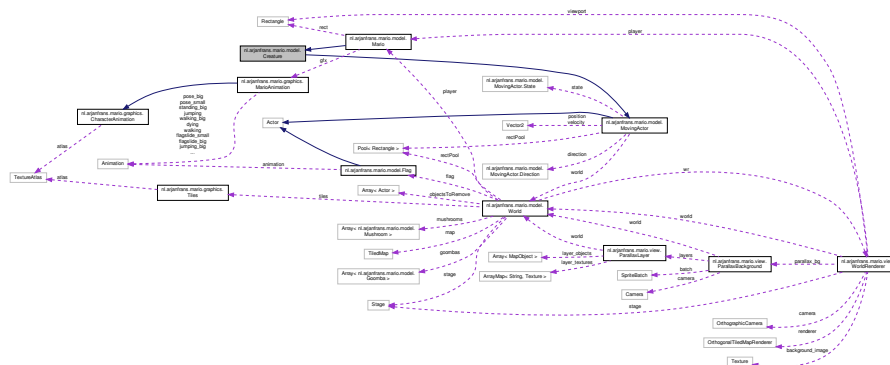
4.7 nl.arjanfrans.mario.model.Creature Class Reference

This class is the class model to represent any moving actor that is interactive, and not [Mario](#).

Inheritance diagram for nl.arjanfrans.mario.model.Creature:



Collaboration diagram for `nl.arjanfrans.mario.model.Creature`:



Public Member Functions

- [Creature](#) ([World](#) world, float positionX, float positionY, float f)
Constructor method.
- abstract Animation [getAnimation](#) ()
Gets the animation of the creature.

Protected Member Functions

- abstract void [dieByFalling](#) ()
Eliminates the creature when it dies by falling.
- abstract void [collisionXAction](#) ()
Describes behaviour when creature interacts with object in the X direction.

Additional Inherited Members

4.7.1 Detailed Description

This class is the class model to represent any moving actor that is interactive, and not [Mario](#).

4.7.2 Constructor & Destructor Documentation

4.7.2.1 Creature()

```
nl.arjanfrans.mario.model.Creature.Creature (
    World world,
    float positionX,
    float positionY,
    float f )
```

Constructor method.

Method which initializes and instance of [Creature](#)

Parameters

<i>world</i>	World object which defines which game instance the creature exists in
<i>positionX</i>	The initial x coordinate for the creature
<i>positionY</i>	The initial y coordinate for the creature
<i>f</i>	Height of the creature

Returns

An instance of [Creature](#)

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

- [core/src/nl/arjanfrans/mario/model/Creature.java](#)

4.8 nl.arjanfrans.mario.debug.D Class Reference

Debug class.

Static Public Member Functions

- static void [o](#) (String msg)
Print debug message.
- static void [o](#) (float msg)
Print debug message.

4.8.1 Detailed Description

Debug class.

4.8.2 Member Function Documentation

4.8.2.1 [o\(\)](#) [1/2]

```
static void nl.arjanfrans.mario.debug.D.o (
    String msg ) [static]
```

Print debug message.

Parameters

<i>msg</i>	String value
------------	--------------

4.8.2.2 o() [2/2]

```
static void nl.arjanfrans.mario.debug.D.o (
    float msg ) [static]
```

Print debug message.

Parameters

<i>msg</i>	float value
------------	-------------

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

- [core/src/nl/arjanfrans/mario/debug/D.java](#)

4.9 nl.arjanfrans.mario.desktop.DesktopLauncher Class Reference

This class is the main method allowing the game to initialize and launch.

Static Public Member Functions

- static void [main](#) (String[] arg)
Main method.

4.9.1 Detailed Description

This class is the main method allowing the game to initialize and launch.

4.9.2 Member Function Documentation

4.9.2.1 main()

```
static void nl.arjanfrans.mario.desktop.DesktopLauncher.main (
    String [] arg ) [static]
```

Main method.

Method which is launched to trigger the initialization of the game through libGDX

Parameters

<i>arg</i>	- an array of string arguments from the command line
------------	--

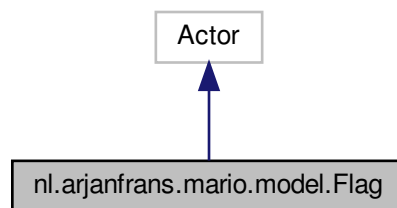
The documentation for this class was generated from the following file:

- [desktop/src/nl/arjanfrans/mario/desktop/DesktopLauncher.java](#)

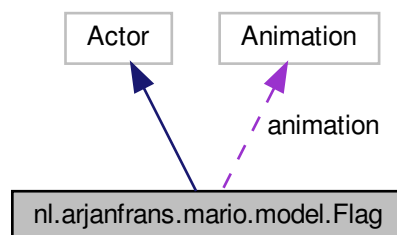
4.10 nl.arjanfrans.mario.model.Flag Class Reference

This flag represents the flag pole at the end of the stage that completes if [Mario](#) interacts with it.

Inheritance diagram for nl.arjanfrans.mario.model.Flag:



Collaboration diagram for nl.arjanfrans.mario.model.Flag:



Public Member Functions

- [Flag](#) (float x, float y, float width, float height, float [endX](#), float [endY](#))
Constructor method.
- void [act](#) (float delta)
How the [Flag](#) acts each time instance.
- void [takeDown](#) ()
[Mario](#) captures flag.
- void [draw](#) (Batch batch, float parentAlpha)
Draws the flag.
- Rectangle [rect](#) ()
Rectangle object in which the [Flag](#) exists in.
- float [getEndX](#) ()
Gets end X coordinate.
- float [getEndY](#) ()
Gets end Y coordinate.
- boolean [isDown](#) ()
Gets whether the flag is down or not.
- void [setDown](#) (boolean [down](#))
Sets the flag to the down state.

Private Attributes

- Animation [animation](#)
- float [stateTime](#)
- float [endX](#)
- float [endY](#)
- boolean [down](#) = false
- float [bottomY](#)
- float [slideOffset](#) = 2

4.10.1 Detailed Description

This flag represents the flag pole at the end of the stage that completes if [Mario](#) interacts with it.

4.10.2 Constructor & Destructor Documentation

4.10.2.1 [Flag\(\)](#)

```
nl.arjanfrans.mario.model.Flag.Flag (
    float x,
    float y,
    float width,
    float height,
    float endX,
    float endY )
```

Constructor method.

Method which initializes an instance of [Flag](#)

Parameters

<i>x</i>	x coordinate of the position of the Flag
<i>y</i>	y coordinate of the position of the Flag
<i>width</i>	The width of the Flag
<i>height</i>	The height of the Flag
<i>endX</i>	x coordinate to describe where the Flag ends
<i>endY</i>	y coordinate to describe where the Flag ends

Returns

An instance of [Flag](#)

4.10.3 Member Function Documentation**4.10.3.1 act()**

```
void nl.arjanfrans.mario.model.Flag.act (
    float delta )
```

How the [Flag](#) acts each time instance.

After each discrete time step, this method is called and the state time is updated

Parameters

<i>delta</i>	The change in time for the actor
--------------	----------------------------------

4.10.3.2 draw()

```
void nl.arjanfrans.mario.model.Flag.draw (
    Batch batch,
    float parentAlpha )
```

Draws the flag.

Assists libGDX in drawing the [Flag](#) into the world, defines position and animation

Parameters

<i>batch</i>	Texture region where the Flag is being drawn
<i>parentAlpha</i>	Not used

4.10.3.3 getEndX()

```
float nl.arjanfrans.mario.model.Flag.getEndX ( )
```

Gets end X coordinate.

Returns

Returns float representing the x coordinate where the rectangle surrounding the [Flag](#) ends

4.10.3.4 getEndY()

```
float nl.arjanfrans.mario.model.Flag.getEndY ( )
```

Gets end Y coordinate.

Returns

Returns float representing the y coordinate where the rectangle surrounding the [Flag](#) ends

4.10.3.5 isDown()

```
boolean nl.arjanfrans.mario.model.Flag.isDown ( )
```

Gets whether the flag is down or not.

Returns

Returns boolean of whether the flag has been captured or not

4.10.3.6 rect()

```
Rectangle nl.arjanfrans.mario.model.Flag.rect ( )
```

Rectangle object in which the [Flag](#) exists in.

Returns

Returns libGDX rectangle object with this objects coordinates

4.10.3.7 setDown()

```
void nl.arjanfrans.mario.model.Flag.setDown (
    boolean down )
```

Sets the flag to the down state.

Parameters

<i>down</i>	A boolean representing whether the Flag is in the down state or not
-------------	---

4.10.3.8 takeDown()

```
void nl.arjanfrans.mario.model.Flag.takeDown ( )
```

[Mario](#) captures flag.

Triggered when [Mario](#) interacts with the [Flag](#) pole

4.10.4 Member Data Documentation

4.10.4.1 animation

```
Animation nl.arjanfrans.mario.model.Flag.animation [private]
```

Animation that the flag displays

4.10.4.2 bottomY

```
float nl.arjanfrans.mario.model.Flag.bottomY [private]
```

Y coordinate to describe the bottom of the flag

4.10.4.3 down

```
boolean nl.arjanfrans.mario.model.Flag.down = false [private]
```

If the flag has been captured or not

4.10.4.4 endX

```
float nl.arjanfrans.mario.model.Flag.endX [private]
```

X coordinate to describe where the [Flag](#) ends

4.10.4.5 endY

```
float nl.arjanfrans.mario.model.Flag.endY [private]
```

Y coordinate to describe where the [Flag](#) ends

4.10.4.6 slideOffset

```
float nl.arjanfrans.mario.model.Flag.slideOffset = 2 [private]
```

Y value to compensate for the slide height

4.10.4.7 stateTime

```
float nl.arjanfrans.mario.model.Flag.stateTime [private]
```

Internal time representation of object

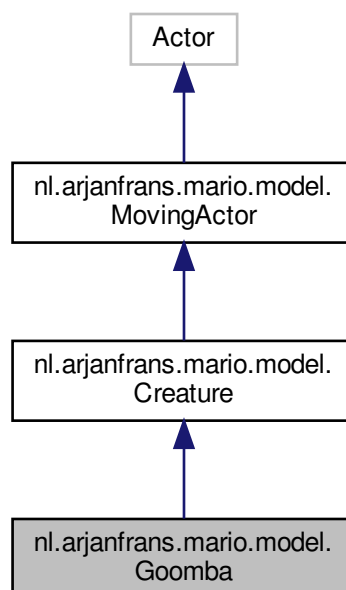
The documentation for this class was generated from the following file:

- [core/src/nl/arjanfrans/mario/model/Flag.java](#)

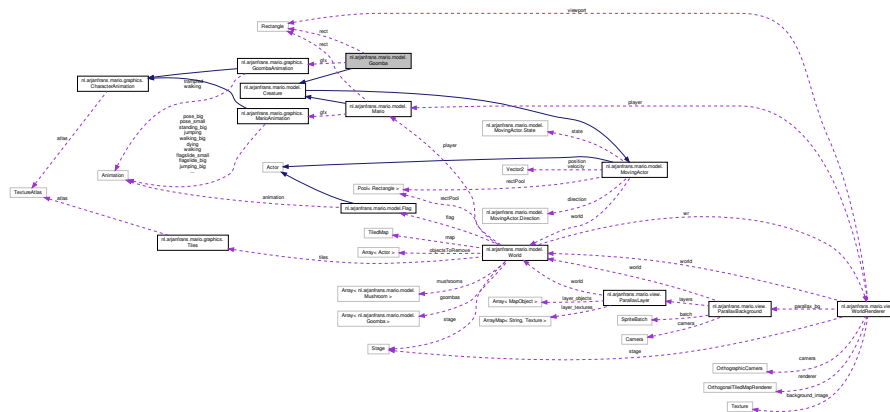
4.11 nl.arjanfrans.mario.model.Goomba Class Reference

[Goomba](#) represents the [Goomba](#) enemies from the original [Mario](#) game.

Inheritance diagram for `nl.arjanfrans.mario.model.Goomba`:



Collaboration diagram for nl.arjanfrans.mario.model.Goomba:



Public Member Functions

- [Goomba](#) ([World](#) world, float positionX, float positionY)
Constructor method.
- void [draw](#) ([Batch](#) batch, float parentAlpha)
Draws the [Goomba](#) on the GUI.
- void [act](#) (float delta)
Determines how the [Goomba](#) acts after each discrete time step.
- Animation [getAnimation](#) ()
Gets the animation of this [Goomba](#).
- void [dispose](#) ()
Removes the [Goomba](#) from the world.

Protected Member Functions

- void [deadByTrample](#) ()
[Goomba](#) dies by getting trampled.
- void [dieByFalling](#) ()
[Goomba](#) dies by falling off the map.
- void [collisionWithCreature](#) ()
Determines behaviour when [Goomba](#) collides with another creature.
- void [collisionXAction](#) ()
Determines behaviour of when [Goomba](#) collides with an object in the X direction.

Protected Attributes

- float [max_velocity](#) = 1f
- [GoombaAnimation](#) [gfx](#) = new [GoombaAnimation](#)()
- Rectangle [rect](#) = new Rectangle()

Private Member Functions

- void [dieByTrample](#) ()
When [Goomba](#) dies by getting trampled.

4.11.1 Detailed Description

[Goomba](#) represents the [Goomba](#) enemies from the original [Mario](#) game.

4.11.2 Constructor & Destructor Documentation

4.11.2.1 Goomba()

```
nl.arjanfrans.mario.model.Goomba.Goomba (
    World world,
    float positionX,
    float positionY )
```

Constructor method.

Method which initializes an instance of [Goomba](#)

Parameters

<i>world</i>	The world in which the Goomba will exist in
<i>positionX</i>	x coordinate of the position of the Goomba
<i>positionY</i>	y coordinate of the position of the Goomba

Returns

An instance of [Goomba](#)

4.11.3 Member Function Documentation

4.11.3.1 act()

```
void nl.arjanfrans.mario.model.Goomba.act (
    float delta )
```

Determines how the [Goomba](#) acts after each discrete time step.

Parameters

<i>delta</i>	Float representing the change in time
--------------	---------------------------------------

4.11.3.2 collisionWithCreature()

```
void nl.arjanfrans.mario.model.Goomba.collideWithCreature ( ) [protected]
```

Determines behaviour when [Goomba](#) collides with another creature.

Checks if this [Goomba](#) is colliding with any other [Goomba](#) in the world

4.11.3.3 dieByTrample()

```
void nl.arjanfrans.mario.model.Goomba.dieByTrample ( ) [private]
```

When [Goomba](#) dies by getting trampled.

A [Goomba](#) will die when getting trampled ([Mario](#) steps on [Goomba](#)'s head). This results in the [Goomba](#) dying and being removed from the world

4.11.3.4 draw()

```
void nl.arjanfrans.mario.model.Goomba.draw (
    Batch batch,
    float parentAlpha )
```

Draws the [Goomba](#) on the GUI.

Assists libGDX in drawing the [Goomba](#) to a specified batch

Parameters

<i>batch</i>	The texture region where the Goomba is being drawn
<i>parentAlpha</i>	Not used

4.11.3.5 getAnimation()

```
Animation nl.arjanfrans.mario.model.Goomba.getAnimation ( )
```

Gets the animation of this [Goomba](#).

Returns

Animation object representing which animations the [Goomba](#) will play

4.11.4 Member Data Documentation

4.11.4.1 gfx

```
GoombaAnimation nl.arjanfrans.mario.model.Goomba.gfx = new GoombaAnimation() [protected]
```

Animations of [Goomba](#)

4.11.4.2 max_velocity

```
float nl.arjanfrans.mario.model.Goomba.max_velocity = 1f [protected]
```

Maximum velocity of [Goomba](#)

4.11.4.3 rect

```
Rectangle nl.arjanfrans.mario.model.Goomba.rect = new Rectangle() [protected]
```

Rectangle object surrounding the [Goomba](#)

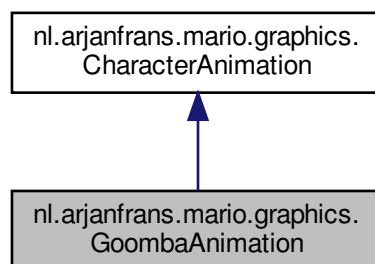
The documentation for this class was generated from the following file:

- [core/src/nl/arjanfrans/mario/model/Goomba.java](#)

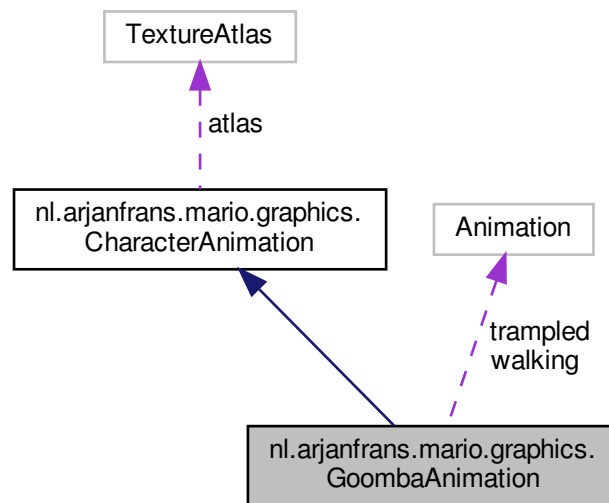
4.12 nl.arjanfrans.mario.graphics.GoombaAnimation Class Reference

This is a class that implements the abstract class, [CharacterAnimation](#), specifically for the animation of the Goomba character.

Inheritance diagram for nl.arjanfrans.mario.graphics.GoombaAnimation:



Collaboration diagram for nl.arjanfrans.mario.graphics.GoombaAnimation:



Public Member Functions

- [GoombaAnimation](#) ()
Constructor method for [GoombaAnimation](#).
- Animation [getAnimation](#) (State state)
A method meant to retrieve a Goomba animation based on the Goomba's state.
- Vector2 [getDimensions](#) (State state)
A method meant to retrieve the dimensions of a Goomba animation based on the Goomba's state.

Private Attributes

- Animation **walking**
- Animation **trampled**

Additional Inherited Members

4.12.1 Detailed Description

This is a class that implements the abstract class, [CharacterAnimation](#), specifically for the animation of the Goomba character.

4.12.2 Constructor & Destructor Documentation

4.12.2.1 GoombaAnimation()

```
nl.arjanfrans.mario.graphics.GoombaAnimation.GoombaAnimation ( )
```

Constructor method for [GoombaAnimation](#).

Method which initializes an instance of [GoombaAnimation](#).

Returns

An instance of [GoombaAnimation](#)

4.12.3 Member Function Documentation

4.12.3.1 getAnimation()

```
Animation nl.arjanfrans.mario.graphics.GoombaAnimation.getAnimation (
    State state )
```

A method meant to retrieve a Goomba animation based on the Goomba's state.

Parameters

<i>state</i>	- the state of the Goomba, refers to the State enum class
--------------	---

Returns

An instance of Animation

4.12.3.2 getDimensions()

```
Vector2 nl.arjanfrans.mario.graphics.GoombaAnimation.getDimensions (
    State state )
```

A method meant to retrieve the dimensions of a Goomba animation based on the Goomba's state.

Parameters

<i>state</i>	- the state of the Goomba, refers to the State enum class.
--------------	--

Returns

An instance of Vector2.

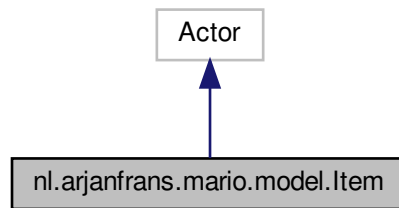
The documentation for this class was generated from the following file:

- `core/src/nl/arjanfrans/mario/graphics/GoombaAnimation.java`

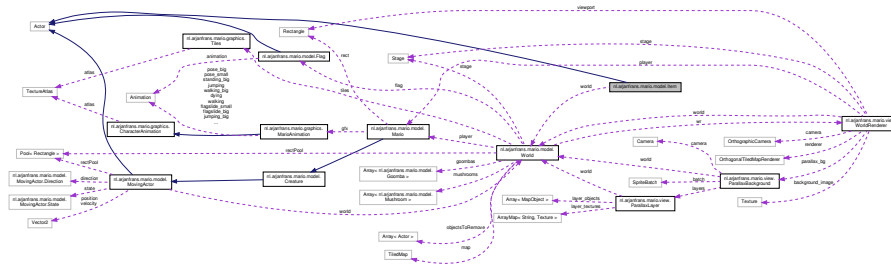
4.13 nl.arjanfrans.mario.model.Item Class Reference

Represents any item in game.

Inheritance diagram for nl.arjanfrans.mario.model.Item:



Collaboration diagram for nl.arjanfrans.mario.model.Item:



Public Member Functions

- **Item** (**World world**, boolean visible)
Constructor method.

Protected Attributes

- World world

4.13.1 Detailed Description

Represents any item in game.

4.13.2 Constructor & Destructor Documentation

4.13.2.1 Item()

```
nl.arjanfrans.mario.model.Item.Item (
    World world,
    boolean visible )
```

Constructor method.

Method which initializes an instance of [Item](#)

Parameters

<i>world</i>	The world in which the Goomba will exist in
<i>visible</i>	If the item is visible or not

Returns

An instance of [Item](#)

4.13.3 Member Data Documentation

4.13.3.1 world

```
World nl.arjanfrans.mario.model.Item.world [protected]
```

The world in which the item exists

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

- [core/src/nl/arjanfrans/mario/model/Item.java](#)

4.14 nl.arjanfrans.mario.model.Mario Class Reference

Represents the playable character in the game.

- Draws *Mario* on the GUI.
- Animation `getAnimation ()`
Returns *Mario*'s animations.
- void `dispose ()`
Removes *Mario* from the GUI.
- void `setImmune (boolean immune)`
Sets *Mario*'s immune status.
- void `move (Direction dir)`
Sets *Mario*'s velocity and direction to be in the direction of the specified movement.
- boolean `isControlsEnabled ()`
Returns whether the user has control of *Mario*.
- void `setControlsEnabled (boolean controlsEnabled)`
Sets whether the user has control of *Mario* or not.

Protected Member Functions

- void `updateSize ()`
Updates *Mario*'s size on GUI based on the dimensions of the state and level.
- void `dieByFalling ()`
Eliminates *Mario* when he is below the bounds of the stage.
- void `collisionXAction ()`
Triggered when *Mario* collides with an object in the X direction.
- void `collisionWithEnemy ()`
Determines if *Mario* is colliding with any enemy.
- void `applyPhysics (Rectangle rect)`
Applies gravity and physics to *Mario*.
- void `collisionWithMushroom ()`
Determines if *Mario* is consuming a mushroom.

Protected Attributes

- `MarioAnimation gfx` = new `MarioAnimation()`
- `Rectangle rect` = new `Rectangle()`

Private Member Functions

- void `hitByEnemy ()`
Behaviour when *Mario* is hit by an enemy.
- boolean `isTouched (float startX, float endX)`
Returns whether *Mario* is touching an object.
- void `jump ()`
Behaviour for when *Mario* jumps.
- void `big_mario (Mushroom mushroom)`
Causes *Mario* to transform into Big *Mario* (power-up)

Private Attributes

- float `jump_boost` = 40f
- boolean `immune`
- boolean `controlsEnabled` = true

4.14.1 Detailed Description

Represents the playable character in the game.

4.14.2 Constructor & Destructor Documentation

4.14.2.1 Mario()

```
nl.arjanfrans.mario.model.Mario.Mario (
    World world,
    float positionX,
    float positionY )
```

Constructor method.

Method which initializes an instance of [Mario](#)

Parameters

<i>world</i>	The world in which Mario will exist in
<i>positionX</i>	x coordinate of the position of Mario
<i>positionY</i>	y coordinate of the position of Mario

Returns

An instance of [Mario](#)

4.14.3 Member Function Documentation

4.14.3.1 act()

```
void nl.arjanfrans.mario.model.Mario.act (
    float delta )
```

Controls [Mario](#)'s movement after each discrete time step.

Parameters

<i>delta</i>	Change in time
--------------	----------------

4.14.3.2 applyPhysics()

```
void nl.arjanfrans.mario.model.Mario.applyPhysics (
    Rectangle rect ) [protected]
```

Applies gravity and physics to [Mario](#).

Applies gravity if [Mario](#) is falling. Determines if [Mario](#) is colliding with an actor or object within the stage

Parameters

<i>rect</i>	A rectangle object that is being checked for collision against Mario
-------------	--

4.14.3.3 big_mario()

```
void nl.arjanfrans.mario.model.Mario.big_mario (
    Mushroom mushroom ) [private]
```

Causes [Mario](#) to transform into Big [Mario](#) (power-up)

Changes [Mario](#)'s model to be large, have an extra health point, and plays an audio cue

Parameters

<i>mushroom</i>	The mushroom Mario has consumed
-----------------	---

4.14.3.4 captureFlag()

```
void nl.arjanfrans.mario.model.Mario.captureFlag (
    Flag flag,
    float endX,
    float endY )
```

Behaviour when [Mario](#) interacts with the flag pole (finishes the game)

Plays slide animation, win sound, and completes the game

Parameters

<i>flag</i>	The flag object in which Mario has interacted with
<i>endX</i>	x coordinate where Mario will walk to after sliding down the pole
<i>endY</i>	y coordinate where Mario will walk to after sliding down the pole

4.14.3.5 collisionWithEnemy()

```
void nl.arjanfrans.mario.model.Mario.collisionWithEnemy ( ) [protected]
```

Determines if [Mario](#) is colliding with any enemy.

Checks all [Goomba](#)'s in the stage for collision with [Mario](#). If [Mario](#) is colliding then [Mario](#) will take damage or be eliminated. If [Mario](#) is trampling a [Goomba](#) then the [Goomba](#) will be eliminated

4.14.3.6 collisionWithMushroom()

```
void nl.arjanfrans.mario.model.Mario.collisionWithMushroom ( ) [protected]
```

Determines if [Mario](#) is consuming a mushroom.

Checks all mushrooms in the stage and determines if [Mario](#) is consuming (colliding) with any of them

4.14.3.7 collisionXAction()

```
void nl.arjanfrans.mario.model.Mario.collisionXAction ( ) [protected]
```

Triggered when [Mario](#) collides with an object in the X direction.

Stops [Mario](#) since [Mario](#) cannot move through object

4.14.3.8 draw()

```
void nl.arjanfrans.mario.model.Mario.draw (
    Batch batch,
    float parentAlpha )
```

Draws [Mario](#) on the GUI.

Assists libGDX in drawing [Mario](#) in a specific batch

Parameters

<i>batch</i>	The texture region where Mario is to be drawn
<i>parentAlpha</i>	Not used

4.14.3.9 getAnimation()

```
Animation nl.arjanfrans.mario.model.Mario.getAnimation ( )
```

Returns [Mario](#)'s animations.

Returns

An animation object representing [Mario](#)'s animations

4.14.3.10 hitByEnemy()

```
void nl.arjanfrans.mario.model.Mario.hitByEnemy ( ) [private]
```

Behaviour when [Mario](#) is hit by an enemy.

When [Mario](#) is hit by an enemy he will take damage, or be eliminated from the stage

4.14.3.11 isControlsEnabled()

```
boolean nl.arjanfrans.mario.model.Mario.isControlsEnabled ( )
```

Returns whether the user has control of [Mario](#).

Returns

A boolean whether the user has control of [Mario](#) or not

4.14.3.12 isTouched()

```
boolean nl.arjanfrans.mario.model.Mario.isTouched (
    float startX,
    float endX ) [private]
```

Returns whether [Mario](#) is touching an object.

Parameters

<i>startX</i>	x coordinate of the position of the object Mario may be colliding with
<i>endY</i>	y coordinate of the position of the object Mario may be colliding with

Returns

A boolean whether [Mario](#) is colliding with the object

4.14.3.13 jump()

```
void nl.arjanfrans.mario.model.Mario.jump ( ) [private]
```

Behaviour for when [Mario](#) jumps.

Causes [Mario](#)'s y velocity to increase by his jump velocity. Plays jump sound effect

4.14.3.14 move()

```
void nl.arjanfrans.mario.model.Mario.move (
    Direction dir )
```

Sets [Mario](#)'s velocity and direction to be in the direction of the specified movement.

Parameters

<i>dir</i>	The direction in which Mario is desired to move in
------------	--

4.14.3.15 setControlsEnabled()

```
void nl.arjanfrans.mario.model.Mario.setControlsEnabled (
    boolean controlsEnabled )
```

Sets whether the user has control of [Mario](#) or not.

Parameters

<i>controlsEnabled</i>	A boolean representing whether the user has control of Mario or not
------------------------	---

4.14.3.16 setImmune()

```
void nl.arjanfrans.mario.model.Mario.setImmune (
    boolean immune )
```

Sets [Mario](#)'s immune status.

Parameters

<i>immune</i>	A boolean representing if Mario is immune or not
---------------	--

4.14.4 Member Data Documentation

4.14.4.1 controlsEnabled

```
boolean nl.arjanfrans.mario.model.Mario.controlsEnabled = true [private]
```

If the user can control [Mario](#) or not

4.14.4.2 gfx

```
MarioAnimation nl.arjanfrans.mario.model.Mario.gfx = new MarioAnimation() [protected]
```

Mario's animations

4.14.4.3 immune

```
boolean nl.arjanfrans.mario.model.Mario.immune [private]
```

If Mario can take damage or not

4.14.4.4 rect

```
Rectangle nl.arjanfrans.mario.model.Mario.rect = new Rectangle() [protected]
```

Rectangle surrounding Mario

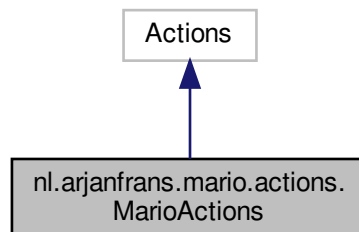
The documentation for this class was generated from the following file:

- [core/src/nl/arjanfrans/mario/model/Mario.java](#)

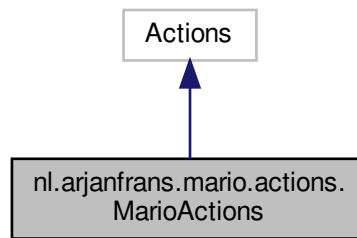
4.15 nl.arjanfrans.mario.actions.MarioActions Class Reference

Inherited class Actions.

Inheritance diagram for nl.arjanfrans.mario.actions.MarioActions:



Collaboration diagram for nl.arjanfrans.mario.actions.MarioActions:



Classes

- class **bigMario**
Inherited class Action.
- class **finishLevel**
Inherited class Action.
- class **flagTakeDown**
Inherited class Action.
- class **setState**
Inherited class Action.
- class **stopImmune**
Inherited class Action.
- class **walkTo**
Inherited class Action.

Static Public Member Functions

- static Action [stopImmuneAction](#) (Mario actor)
Stopping immune actions.
- static Action [bigMarioAction](#) (Mario actor)
Actions for big mario.
- static Action [flagTakeDownAction](#) (Flag flag)
Taking down the flag action.
- static Action [finishLevelAction](#) ()
- static Action [setStateAction](#) (Mario actor, State state)
Set action state.
- static Action [walkToAction](#) (Mario actor, float x, float y)
Action for walking to.

4.15.1 Detailed Description

Inherited class Actions.

4.15.2 Member Function Documentation

4.15.2.1 bigMarioAction()

```
static Action nl.arjanfrans.mario.actions.MarioActions.bigMarioAction (
    Mario actor ) [static]
```

Actions for big mario.

Parameters

<i>actor</i>	Mario object
--------------	--------------

Returns

bigMario(actor) Action object

4.15.2.2 finishLevelAction()

```
static Action nl.arjanfrans.mario.actions.MarioActions.finishLevelAction ( ) [static]
```

Set the World reset_flag to true

Returns

finishLevel() Action object

4.15.2.3 flagTakeDownAction()

```
static Action nl.arjanfrans.mario.actions.MarioActions.flagTakeDownAction (
    Flag flag ) [static]
```

Taking down the flag action.

Parameters

<i>flag</i>	Flag object
-------------	-------------

Returns

flagTakeDown(flag)

4.15.2.4 setStateAction()

```
static Action nl.arjanfrans.mario.actions.MarioActions.setStateAction (
    Mario actor,
    State state ) [static]
```

Set action state.

Parameters

<i>actor</i>	Mario object
<i>state</i>	State object

Returns

setState(actor, state) Action object

4.15.2.5 stopImmuneAction()

```
static Action nl.arjanfrans.mario.actions.MarioActions.stopImmuneAction (
    Mario actor ) [static]
```

Stopping immune actions.

Parameters

<i>actor</i>	Mario object
--------------	--------------

Returns

true boolean value

4.15.2.6 walkToAction()

```
static Action nl.arjanfrans.mario.actions.MarioActions.walkToAction (
    Mario actor,
    float x,
    float y ) [static]
```

Action for walking to.

Parameters

<i>actor</i>	Mario object
<i>x</i>	coordinate
<i>y</i>	coordinate

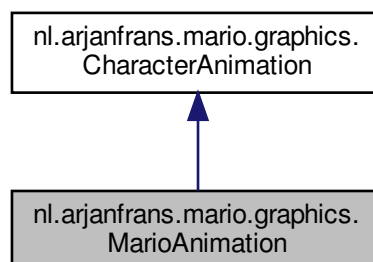
The documentation for this class was generated from the following file:

- `core/src/nl/arjanfrans/mario/actions/MarioActions.java`

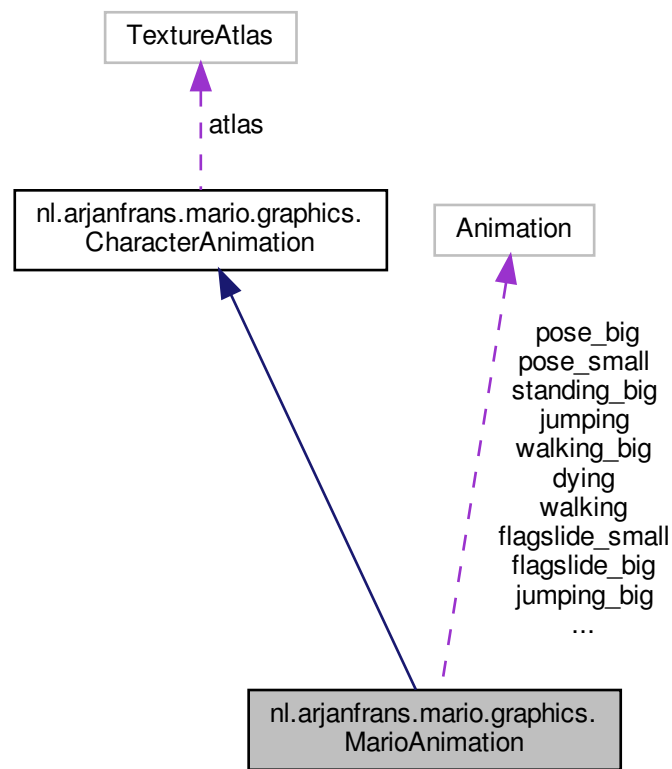
4.16 nl.arjanfrans.mario.graphics.MarioAnimation Class Reference

This is a class that implements the abstract class, [CharacterAnimation](#), specifically for the animation of Mario.

Inheritance diagram for `nl.arjanfrans.mario.graphics.MarioAnimation`:



Collaboration diagram for nl.arjanfrans.mario.graphics.MarioAnimation:



Public Member Functions

- [MarioAnimation](#) ()
Constructor method for [MarioAnimation](#).
- Animation [getAnimation](#) (State state, int level)
A method meant to retrieve a Mario animation based on the Mario's state and size.
- Vector2 [getDimensions](#) (State state, int level)
A method meant to retrieve the dimensions of a Mario animation based on Mario's state, and size.
- float [getFrameWidth](#) (int level, float width)
A method meant to retrieve the frame width of a Mario animation based on Mario's size and width.
- float [getFrameHeight](#) (int level, float height)
A method meant to retrieve the frame height of a Mario animation based on Mario's size and width.

Static Private Attributes

- static Animation **walking**
- static Animation **standing**
- static Animation **jumping**
- static Animation **dying**

- static Animation **walking_big**
- static Animation **standing_big**
- static Animation **jumping_big**
- static Animation **crouch_big**
- static Animation **flagslide_small**
- static Animation **flagslide_big**
- static Animation **pose_small**
- static Animation **pose_big**

Additional Inherited Members

4.16.1 Detailed Description

This is a class that implements the abstract class, [CharacterAnimation](#), specifically for the animation of Mario.

4.16.2 Constructor & Destructor Documentation

4.16.2.1 MarioAnimation()

```
nl.arjanfrans.mario.graphics.MarioAnimation.MarioAnimation ( )
```

Constructor method for [MarioAnimation](#).

Method which initializes an instance of [MarioAnimation](#).

Returns

An instance of [MarioAnimation](#)

4.16.3 Member Function Documentation

4.16.3.1 getAnimation()

```
Animation nl.arjanfrans.mario.graphics.MarioAnimation.getAnimation (
    State state,
    int level )
```

A method meant to retrieve a Mario animation based on the Mario's state and size.

Parameters

<i>state</i>	- the state of the Goomba, refers to the State enum class.
<i>level</i>	- an integer indicating Mario's current size.

Returns

An instance of Animation

4.16.3.2 getDimensions()

```
Vector2 nl.arjanfrans.mario.graphics.MarioAnimation.getDimensions (
    State state,
    int level )
```

A method meant to retrieve the dimensions of a Mario animation based on Mario's state, and size.

Parameters

<i>state</i>	- the state of the Goomba, refers to the State enum class.
<i>level</i>	- an integer indicating Mario's current size.

Returns

An instance of Vector2.

4.16.3.3 getFrameHeight()

```
float nl.arjanfrans.mario.graphics.MarioAnimation.getFrameHeight (
    int level,
    float height )
```

A method meant to retrieve the frame height of a Mario animation based on Mario's size and width.

Parameters

<i>height</i>	- a float representing the height of the frame.
<i>level</i>	- an integer indicating Mario's current size.

Returns

a float representing the frame height.

4.16.3.4 getFrameWidth()

```
float nl.arjanfrans.mario.graphics.MarioAnimation.getFrameWidth (
    int level,
    float width )
```

A method meant to retrieve the frame width of a Mario animation based on Mario's size and width.

Parameters

<i>width</i>	- a float representing the width of the frame.
<i>level</i>	- an integer indicating Mario's current size.

Returns

a float representing the frame width.

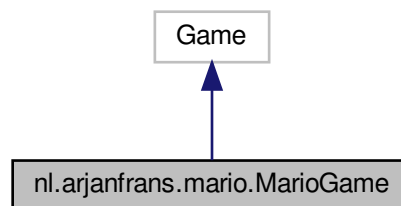
The documentation for this class was generated from the following file:

- core/src/nl/arjanfrans/mario/graphics/MarioAnimation.java

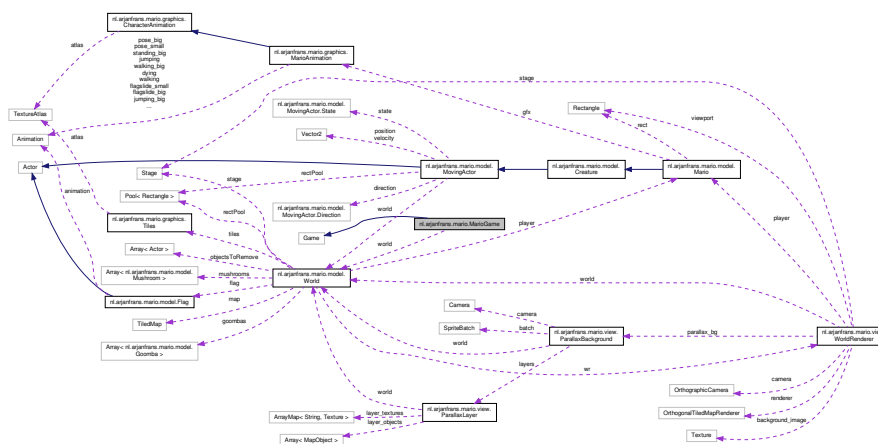
4.17 nl.arjanfrans.mario.MarioGame Class Reference

The class meant to render the game.

Inheritance diagram for nl.arjanfrans.mario.MarioGame:



Collaboration diagram for nl.arjanfrans.mario.MarioGame:



Public Member Functions

- void `create` ()
The method creates a new World object.
- void `dispose` ()
The method disposes of a World object.
- void `resize` (int width, int height)
The method resizes the game, as the window is resized.
- void `pause` ()
- void `resume` ()
- void `render` ()
The method makes any necessary updates to the game, and calls when the application should render itself.

Static Public Attributes

- static final String **VERSION** = "0.01"
- static final boolean **DEBUG** = true
- static final int **FPS** = 60

Private Attributes

- `World` **world**

4.17.1 Detailed Description

The class meant to render the game.

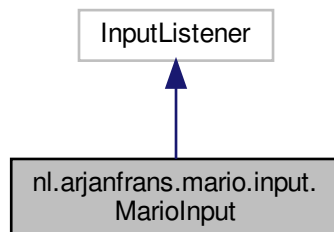
The documentation for this class was generated from the following file:

- `core/src/nl/arjanfrans/mario/MarioGame.java`

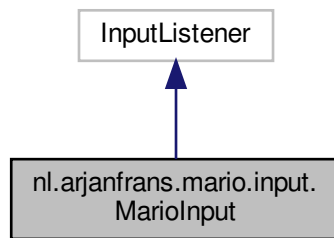
4.18 nl.arjanfrans.mario.input.MarioInput Class Reference

Inherited class that overrides mario input methods.

Inheritance diagram for nl.arjanfrans.mario.input.MarioInput:



Collaboration diagram for nl.arjanfrans.mario.input.MarioInput:



Public Member Functions

- boolean `touchDown` (`InputEvent` event, float x, float y, int pointer, int button)
- void `touchUp` (`InputEvent` event, float x, float y, int pointer, int button)
- boolean `keyDown` (`InputEvent` event, int keycode)
- boolean `keyUp` (`InputEvent` event, int keycode)

4.18.1 Detailed Description

Inherited class that overrides mario input methods.

4.18.2 Member Function Documentation

4.18.2.1 `keyDown()`

```
boolean nl.arjanfrans.mario.input.MarioInput.keyDown (
    InputEvent event,
    int keycode )
```

4.18.2.2 `keyUp()`

```
boolean nl.arjanfrans.mario.input.MarioInput.keyUp (
    InputEvent event,
    int keycode )
```

4.18.2.3 touchDown()

```
boolean nl.arjanfrans.mario.input.MarioInput.touchDown (
    InputEvent event,
    float x,
    float y,
    int pointer,
    int button )
```

4.18.2.4 touchUp()

```
void nl.arjanfrans.mario.input.MarioInput.touchUp (
    InputEvent event,
    float x,
    float y,
    int pointer,
    int button )
```

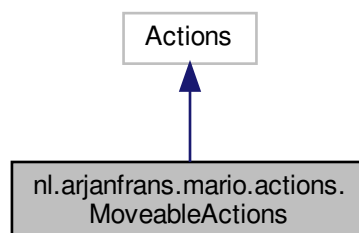
The documentation for this class was generated from the following file:

- [core/src/nl/arjanfrans/mario/input/MarioInput.java](#)

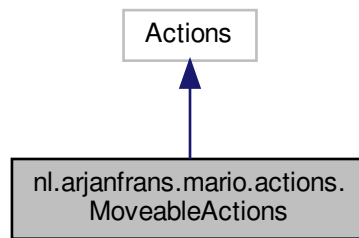
4.19 nl.arjanfrans.mario.actions.MoveableActions Class Reference

Inherited class Actions.

Inheritance diagram for nl.arjanfrans.mario.actions.MoveableActions:



Collaboration diagram for `nl.arjanfrans.mario.actions.MoveableActions`:



Classes

- class **Die**
Inherited class Action.
- class **startMoving**
Inherited class Action.

Static Public Member Functions

- static Action [DieAction](#) (Actor actor)
Action for Mario's death.
- static Action [startMovingAction](#) (Actor actor)
Action for Mario to start moving.

4.19.1 Detailed Description

Inherited class Actions.

4.19.2 Member Function Documentation

4.19.2.1 DieAction()

```
static Action nl.arjanfrans.mario.actions.MoveableActions.DieAction (  
    Actor actor ) [static]
```

Action for Mario's death.

Parameters

<i>actor</i>	Actor object
--------------	--------------

Returns

Die(*actor*) Action object

4.19.2.2 startMovingAction()

```
static Action nl.arjanfrans.mario.actions.MoveableActions.startMovingAction (
    Actor actor ) [static]
```

Action for Mario to start moving.

Parameters

<i>actor</i>	Actor object
--------------	--------------

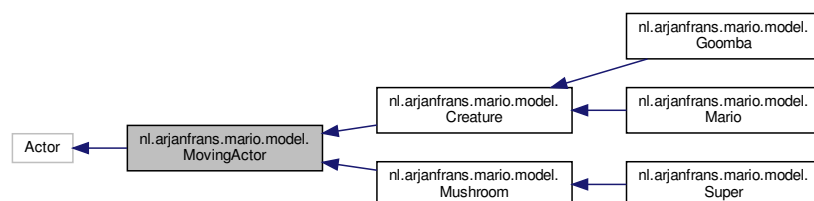
The documentation for this class was generated from the following file:

- [core/src/nl/arjanfrans/mario/actions/MoveableActions.java](#)

4.20 nl.arjanfrans.mario.model.MovingActor Class Reference

Represents a moving actor in the game.

Inheritance diagram for nl.arjanfrans.mario.model.MovingActor:



Protected Member Functions

- Rectangle **rectangle** ()
- void [applyPhysics](#) (Rectangle rect)
This method applies the laws of motion to a rectangle.
- boolean [collisionX](#) (Rectangle rect)
This method checks if the rectangle collides with anything in the x direction.
- int [] [checkTiles](#) (boolean checkX)
This method checks for tiles in the x and y directions.
- void [collisionY](#) (Rectangle rect)
This method checks if the rectangle collides with anything in the y direction.
- Array< Rectangle > [getTiles](#) (boolean isX)
This method gets the tiles in the x and y directions.
- void [hitGround](#) ()
This method sets the grounded boolean instance variable to true.
- abstract void [dieByFalling](#) ()
This method is an abstract method handled by the inherited class.
- abstract void [collisionXAction](#) ()
This method is an abstract method handled by the inherited class.

Protected Attributes

- float **max_velocity**
- float **jump_velocity** = 40f
- float **damping** = 0.87f
- Vector2 **position**
- Vector2 **velocity**
- [World](#) **world**
- boolean **dead**
- boolean **moving**
- State **state** = State.Standing
- float **stateTime** = 0
- int **level**
- boolean **facesRight** = true
- Direction **direction**
- boolean **grounded** = false
- Pool< Rectangle > **rectPool**

4.20.1 Detailed Description

Represents a moving actor in the game.

4.20.2 Constructor & Destructor Documentation

4.20.2.1 MovingActor()

```
nl.arjanfrans.mario.model.MovingActor.MovingActor (
    World world,
    float x,
    float y,
    float max_velocity )
```

Constructor method.

Method which initializes an instance of a [MovingActor](#)

Parameters

<i>world</i>	The world in which MovingActor will exist in
<i>x</i>	is the x coordinate of the position of the MovingActor
<i>y</i>	is the y coordinate of the position of the MovingActor

Returns

An instance of [MovingActor](#)

4.20.3 Member Function Documentation

4.20.3.1 `applyPhysics()`

```
void nl.arjanfrans.mario.model.MovingActor.applyPhysics (  
    Rectangle rect ) [protected]
```

This method applies the laws of motion to a rectangle.

In the game a [MovingActor](#), can be physically represented by a rectangle, so when a [MovingActor](#) moves the laws of physics should apply.

Parameters

<i>rect</i>	- The rectangle that the MovingActor represents.
-------------	--

4.20.3.2 `checkTiles()`

```
int [] nl.arjanfrans.mario.model.MovingActor.checkTiles (  
    boolean checkX ) [protected]
```

This method checks for tiles in the x and y directions.

Parameters

<i>checkX</i>	- A boolean value indicating in which direction we are checking for tiles.
---------------	--

Returns

an array of integers

4.20.3.3 collisionX()

```
boolean nl.arjanfrans.mario.model.MovingActor.collisionX (  
    Rectangle rect ) [protected]
```

This method checks if the rectangle collides with anything in the x direction.

In the game a [MovingActor](#), can be physically represented by a rectangle, so when a [MovingActor](#) meets an immovable object in x direction, the method should return true.

Parameters

<i>rect</i>	- The rectangle that the MovingActor represents.
-------------	--

Returns

a boolean

4.20.3.4 collisionY()

```
void nl.arjanfrans.mario.model.MovingActor.collisionY (  
    Rectangle rect ) [protected]
```

This method checks if the rectangle collides with anything in the y direction.

In the game a [MovingActor](#), can be physically represented by a rectangle, so when a [MovingActor](#) meets an immovable object in y direction, the method should return true.

Parameters

<i>rect</i>	- The rectangle that the MovingActor represents.
-------------	--

Returns

a boolean

4.20.3.5 getDamping()

```
float nl.arjanfrans.mario.model.MovingActor.getDamping ( )
```

This method gets the damping constant in the damping instance variable.

Returns

a float representing the damping constant.

4.20.3.6 getJump_velocity()

```
float nl.arjanfrans.mario.model.MovingActor.getJump_velocity ( )
```

This method gets the value of the jump_velocity instance variable.

Returns

a float representing the jump velocity.

4.20.3.7 getMax_velocity()

```
float nl.arjanfrans.mario.model.MovingActor.getMax_velocity ( )
```

This method gets the value of the max_velocity instance variable.

Returns

a float representing the max velocity.

4.20.3.8 getState()

```
State nl.arjanfrans.mario.model.MovingActor.getState ( )
```

This method gets the state of the [MovingActor](#).

Returns

a member of the State enumeration class representing what the [MovingActor](#) is doing.

4.20.3.9 getStateTime()

```
float nl.arjanfrans.mario.model.MovingActor.getStateTime ( )
```

This method gets the stateTime constant in the stateTime instance variable.

Returns

a float representing the state time.

4.20.3.10 getTiles()

```
Array<Rectangle> nl.arjanfrans.mario.model.MovingActor.getTiles (
    boolean isX ) [protected]
```

This method gets the tiles in the x and y directions.

Parameters

<i>isX</i>	- A boolean value indicating the direction in which the tile are being retrieved.
------------	---

Returns

an array of Rectangle objects

4.20.3.11 getVelocity()

```
Vector2 nl.arjanfrans.mario.model.MovingActor.getVelocity ( )
```

This method gets the Vector2 object in the velocity instance variable.

Returns

a Vector2 object representing the velocity of a [MovingActor](#).

4.20.3.12 isDead()

```
boolean nl.arjanfrans.mario.model.MovingActor.isDead ( )
```

This method gets the boolean value of the dead instance variable.

Returns

a boolean representing whether the [MovingActor](#) is dead or not.

4.20.3.13 isFacesRight()

```
boolean nl.arjanfrans.mario.model.MovingActor.isFacesRight ( )
```

This method gets the boolean value of the facesRight instance variable.

Returns

a boolean representing which way the [MovingActor](#) faces.

4.20.3.14 isMoving()

```
boolean nl.arjanfrans.mario.model.MovingActor.isMoving ( )
```

This method gets the boolean value of the moving instance variable.

Returns

a boolean representing whether the [MovingActor](#) is in motion.

4.20.3.15 move()

```
void nl.arjanfrans.mario.model.MovingActor.move (
    Direction dir )
```

This method moves the [MovingActor](#) in specific directions.

When on the ground a [MovingActor](#) can be move in two directions, either left or right

Parameters

<i>dir</i>	- A direction listed in the enumeration class called Direction.
------------	---

4.20.3.16 setDead()

```
void nl.arjanfrans.mario.model.MovingActor.setDead (
    boolean dead )
```

This method sets the boolean value of the dead instance variable.

Parameters

<i>a</i>	boolean representing whether the MovingActor is dead or not.
----------	--

4.20.3.17 setMoving()

```
void nl.arjanfrans.mario.model.MovingActor.setMoving (
    boolean moving )
```

This method sets the boolean value of the moving instance variable.

Parameters

<i>moving</i>	- a boolean indicating whether the MovignActor is in motion.
---------------	--

4.20.3.18 `setState()`

```
void nl.arjanfrans.mario.model.MovingActor.setState (
    State state )
```

This method sets the state of the [MovingActor](#).

Parameters

<i>a</i>	member of the State enumeration class representing what the MovingActor is doing.
----------	---

4.20.4 Member Data Documentation

4.20.4.1 `rectPool`

```
Pool<Rectangle> nl.arjanfrans.mario.model.MovingActor.rectPool [protected]
```

Initial value:

```
= new Pool<Rectangle>() {
    @Override
    protected Rectangle newObject() {
        return new Rectangle();
    }
}
```

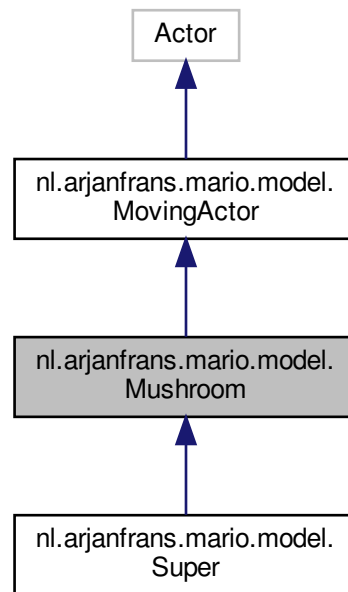
The documentation for this class was generated from the following file:

- `core/src/nl/arjanfrans/mario/model/MovingActor.java`

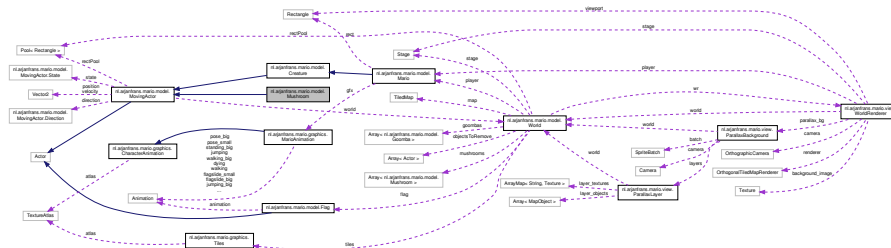
4.21 `nl.arjanfrans.mario.model.Mushroom` Class Reference

Inherited class [MovingActor](#).

Inheritance diagram for nl.arjanfrans.mario.model.Mushroom:



Collaboration diagram for nl.arjanfrans.mario.model.Mushroom:



Public Member Functions

- **Mushroom** (**World** world, float x, float y, float max_velocity)
Constructor method.
- void **appear** ()
Make mushroom appear.
- abstract void **dispose** ()
Dispose mushroom.

Additional Inherited Members

4.21.1 Detailed Description

Inherited class [MovingActor](#).

Public Member Functions

- [ParallaxBackground](#) ([World](#) world, [ParallaxLayer](#)[] pLayers, Camera pCamera, SpriteBatch pBatch)
Constructor method for [ParallaxBackground](#).
- void [render](#) ()
A method meant to render the parallax background.
- void [moveX](#) (float pDelta)
A method meant to move the parallax background on the x-axis.
- void [moveY](#) (float pDelta)
A method meant to move the parallax background on the y-axis.
- void [dispose](#) ()
A method meant to dispose of all layers of the [ParallaxBackground](#).

Private Member Functions

- void [drawLayer](#) ([ParallaxLayer](#) layer, SpriteBatch batch)
A method meant to draw the layers of the Parallax background.

Private Attributes

- [ParallaxLayer](#)[] **layers**
- Camera **camera**
- SpriteBatch **batch**
- [World](#) **world**

4.22.1 Detailed Description

The class meant to create a parallax background.

4.22.2 Constructor & Destructor Documentation

4.22.2.1 ParallaxBackground()

```
nl.arjanfrans.mario.view.ParallaxBackground.ParallaxBackground (
    World world,
    ParallaxLayer [] pLayers,
    Camera pCamera,
    SpriteBatch pBatch )
```

Constructor method for [ParallaxBackground](#).

Parameters

<i>world</i>	- the world that the ParallaxBackground is displaying
<i>pLayers</i>	- an array of ParallaxLayers
<i>pCamera</i>	- a Camera object that will move back and forth on the background
<i>pBatch</i>	- a SpriteBatch object

Returns

an instance of [ParallaxBackground](#)

4.22.3 Member Function Documentation

4.22.3.1 drawLayer()

```
void nl.arjanfrans.mario.view.ParallaxBackground.drawLayer (
    ParallaxLayer layer,
    SpriteBatch batch ) [private]
```

A method meant to draw the layers of the Parallax background.

Parameters

<i>layer</i>	- a ParallaxLayer
<i>batch</i>	- a SpriteBatch object

4.22.3.2 moveX()

```
void nl.arjanfrans.mario.view.ParallaxBackground.moveX (
    float pDelta )
```

A method meant to move the parallax background on the x-axis.

Parameters

<i>pDelta</i>	- a float constant indicating how much to move by on the x - axis
---------------	---

4.22.3.3 moveY()

```
void nl.arjanfrans.mario.view.ParallaxBackground.moveY (
    float pDelta )
```

A method meant to move the parallax background on the y-axis.

Parameters

<i>pDelta</i>	- a float constant indicating how much to move by on the y - axis
---------------	---

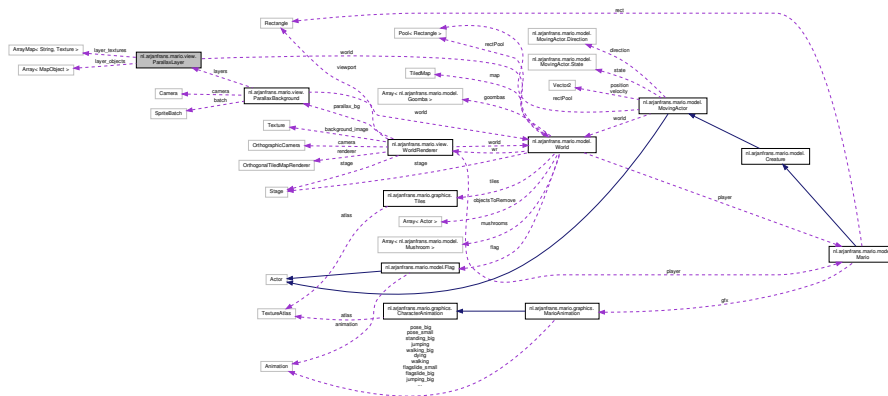
The documentation for this class was generated from the following file:

- core/src/nl/arjanfrans/mario/view/ParallaxBackground.java

4.23 nl.arjanfrans.mario.view.ParallaxLayer Class Reference

The class meant to retrieve a layer from a [ParallaxBackground](#).

Collaboration diagram for nl.arjanfrans.mario.view.ParallaxLayer:



Public Member Functions

- [ParallaxLayer](#) ([World](#) world, String layer_name, float pRatioX, float pRatioY)
Constructor method for [ParallaxLayer](#).
- `ArrayMap< String, Texture > getLayerTextures ()`
- `Array< MapObject > getLayerObjects ()`
- `void dispose ()`
A method meant to dispose of all layer textures of the [ParallaxLayer](#).

Protected Member Functions

- `void moveX (float pDelta)`
A method meant to move this layer in the x direction, based on a constant value.
- `void moveY (float pDelta)`
A method meant to move this layer in the y direction, based on a constant value.

Private Member Functions

- `void loadObjects ()`
A method meant to load the objects from the tmx file, convert them into textures and put them on the layer.

Private Attributes

- [World](#) **world**
- `Array< MapObject >` **layer_objects**
- `ArrayMap< String, Texture >` **layer_textures**
- `String` **layer_name**

4.23.1 Detailed Description

The class meant to retrieve a layer from a [ParallaxBackground](#).

4.23.2 Constructor & Destructor Documentation

4.23.2.1 ParallaxLayer()

```
nl.arjanfrans.mario.view.ParallaxLayer.ParallaxLayer (
    World world,
    String layer_name,
    float pRatioX,
    float pRatioY )
```

Constructor method for [ParallaxLayer](#).

Parameters

<i>world</i>	- The world that the ParallaxLayer exists in
<i>layer_name</i>	- a string representing the name of the layer
<i>pRatioX</i>	- a float representing how much the layer will move in the x direction if the background is moved.
<i>pRatioY</i>	- a float representing how much the layer will move in the y direction if the background is moved.

4.23.3 Member Function Documentation

4.23.3.1 moveX()

```
void nl.arjanfrans.mario.view.ParallaxLayer.moveX (
    float pDelta ) [protected]
```

A method meant to move this layer in the x direction, based on a constant value.

Parameters

<i>pDelta</i>	- a float representing the shift in the layer.
---------------	--

4.23.3.2 moveY()

```
void nl.arjanfrans.mario.view.ParallaxLayer.moveY (  
    float pDelta ) [protected]
```

A method meant to move this layer in the y direction, based on a constant value.

Parameters

<i>pDelta</i>	- a float representing the shift in the layer.
---------------	--

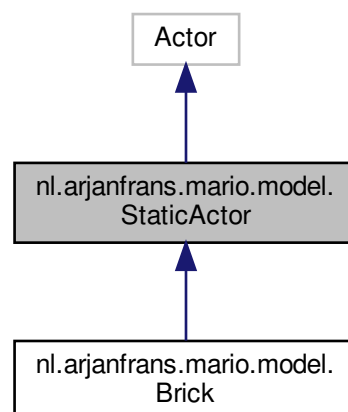
The documentation for this class was generated from the following file:

- core/src/nl/arjanfrans/mario/view/ParallaxLayer.java

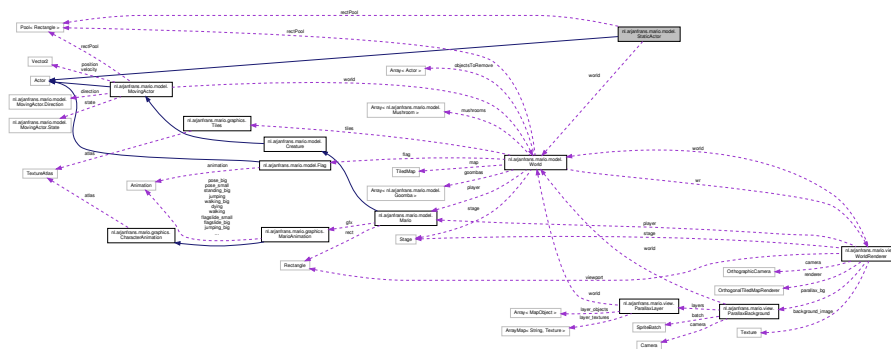
4.24 nl.arjanfrans.mario.model.StaticActor Class Reference

Inherited class that represents static actor.

Inheritance diagram for nl.arjanfrans.mario.model.StaticActor:



Collaboration diagram for `nl.arjanfrans.mario.model.StaticActor`:



Public Member Functions

- `StaticActor` (`World world`)
Constructor method.
- `Rectangle` `rectangle` ()
Get object Rectangle.
- `boolean` `isDestroyed` ()
Get boolean.

Protected Member Functions

- `abstract void` `hit` (`int mario_level`)

Protected Attributes

- `World` `world`
- `boolean` `destroyed`
- `Pool< Rectangle >` `rectPool`

4.24.1 Detailed Description

Inherited class that represents static actor.

4.24.2 Constructor & Destructor Documentation

4.24.2.1 StaticActor()

```
nl.arjanfrans.mario.model.StaticActor.StaticActor (
    World world )
```

Constructor method.

Method which initializes an instance of `StaticActor`

Parameters

<code>world</code>	The world object in which Mario will exist in
--------------------	---

4.24.3 Member Function Documentation

4.24.3.1 isDestroyed()

```
boolean nl.arjanfrans.mario.model.StaticActor.isDestroyed ( )
```

Get boolean.

Returns

destroyed boolean value true if destroyed

4.24.3.2 rectangle()

```
Rectangle nl.arjanfrans.mario.model.StaticActor.rectangle ( )
```

Get object Rectangle.

Returns

r of Rectangle

4.24.4 Member Data Documentation

4.24.4.1 rectPool

```
Pool<Rectangle> nl.arjanfrans.mario.model.StaticActor.rectPool [protected]
```

Initial value:

```
= new Pool<Rectangle>()
{
    @Override
    protected Rectangle newObject() {
        return new Rectangle();
    }
}
```

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

- core/src/nl/arjanfrans/mario/model/[StaticActor.java](#)

Protected Member Functions

- void [dieByFalling](#) ()
This method is an abstract method handled by the inherited class.
- void [collisionXAction](#) ()
This method is an abstract method handled by the inherited class.

Protected Attributes

- Rectangle **rect** = new Rectangle()

Static Private Attributes

- static TextureRegion **texture**

4.25.1 Detailed Description

Inherited class that overrides [Mushroom](#) methods that represents mario in super state.

4.25.2 Constructor & Destructor Documentation

4.25.2.1 Super()

```
nl.arjanfrans.mario.model.Super.Super (
    World world,
    float x,
    float y,
    float max_velocity )
```

Constructor method.

Method which initializes an instance of [Super](#)

Parameters

<i>world</i>	The world object in which Mario will exist in
<i>x</i>	coordinate of super mushroom
<i>y</i>	coordinate of super mushroom
<i>max_velocity</i>	of super mushroom

4.25.3 Member Function Documentation

4.25.3.1 act()

```
void nl.arjanfrans.mario.model.Super.act (
    float delta )
```

4.25.3.2 collisionXAction()

```
void nl.arjanfrans.mario.model.Super.collisionXAction ( ) [protected]
```

This method is an abstract method handled by the inherited class.

4.25.3.3 dieByFalling()

```
void nl.arjanfrans.mario.model.Super.dieByFalling ( ) [protected]
```

This method is an abstract method handled by the inherited class.

4.25.3.4 dispose()

```
void nl.arjanfrans.mario.model.Super.dispose ( )
```

Dispose mushroom.

4.25.3.5 draw()

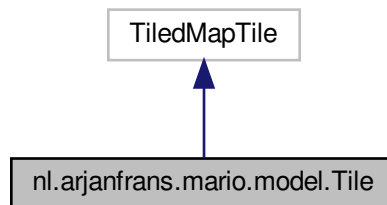
```
void nl.arjanfrans.mario.model.Super.draw (
    Batch batch,
    float parentAlpha )
```

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

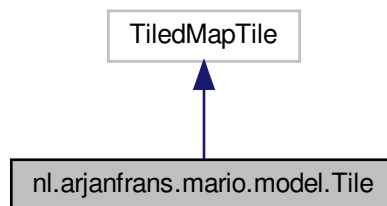
- [core/src/nl/arjanfrans/mario/model/Super.java](#)

4.26 nl.arjanfrans.mario.model.Tile Class Reference

Inheritance diagram for nl.arjanfrans.mario.model.Tile:



Collaboration diagram for nl.arjanfrans.mario.model.Tile:



Public Member Functions

- int **getId** ()
- void **setId** (int id)
- BlendMode **getBlendMode** ()
- void **setBlendMode** (BlendMode blendMode)
- TextureRegion **getTextureRegion** ()
- void **setTextureRegion** (TextureRegion textureRegion)
- MapProperties **getProperties** ()
- float **getOffsetX** ()
- void **setOffsetX** (float offsetX)
- float **getOffsetY** ()
- void **setOffsetY** (float offsetY)

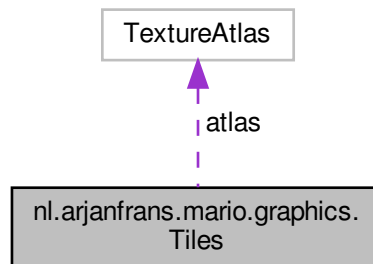
The documentation for this class was generated from the following file:

- core/src/nl/arjanfrans/mario/model/Tile.java

4.27 nl.arjanfrans.mario.graphics.Tiles Class Reference

This is a class meant to deal with the tiles that make up the graphics of the game.

Collaboration diagram for nl.arjanfrans.mario.graphics.Tiles:



Public Member Functions

- void [dispose](#) ()
A method meant to dispose of the atlas file.

Static Public Member Functions

- static Array< StaticTiledMapTile > [getAnimatedTile](#) (String name)
A method meant to retrieve an animation tile based on the name of the animation.
- static Animation [getAnimation](#) (float speed, String name)
A method meant to retrieve an animation based on the name of the animation.
- static TextureRegion [getTile](#) (String name)
A method meant to find a tile in a tile sheet based on the named indicated for it in the atlas file.
- static TextureRegion [getTile8](#) (String name)
A method meant to find a tile (split into to sets of eight pixels) in a tile sheet based on the named indicated for it in the atlas file.

Static Private Attributes

- static TextureAtlas **atlas** = new TextureAtlas("data/tiles/mario_tileset.atlas")

4.27.1 Detailed Description

This is a class meant to deal with the tiles that make up the graphics of the game.

4.27.2 Member Function Documentation

4.27.2.1 getAnimatedTile()

```
static Array<StaticTiledMapTile> nl.arjanfrans.mario.graphics.Tiles.getAnimatedTile (
    String name ) [static]
```

A method meant to retrieve an animation tile based on the name of the animation.

Parameters

<i>name</i>	- the name of the animation found in the mario_tileset.atlas file.
-------------	--

Returns

an array of StaticTiledMapTile, representing the frames of the Animation.

4.27.2.2 getAnimation()

```
static Animation nl.arjanfrans.mario.graphics.Tiles.getAnimation (
    float speed,
    String name ) [static]
```

A method meant to retrieve an animation based on the name of the animation.

Parameters

<i>name</i>	- the name of the animation found in the mario_tileset.atlas file.
<i>speed</i>	- a float representing how fast the frames are to be moved through.

Returns

an Animation object, representing the Animation named.

4.27.2.3 getTile()

```
static TextureRegion nl.arjanfrans.mario.graphics.Tiles.getTile (
    String name ) [static]
```

A method meant to find a tile in a tile sheet based on the named indicated for it in the atlas file.

Public Member Functions

- [World](#) ()
Constructor method.
- void [removeActor](#) (Actor a)
Removes actor.
- void [update](#) ()
Updates world.
- Array< [StaticActor](#) > [getStaticActors](#) ()
- [WorldRenderer](#) [getRenderer](#) ()
Get render of world.
- [Mario](#) [getPlayer](#) ()
Get player.
- TiledMap [getMap](#) ()
Get map of world.
- Array< [Goomba](#) > [getEnemies](#) ()
Get enemies in world.
- Array< [Mushroom](#) > [getMushrooms](#) ()
Get mushrooms in world.
- Array< Rectangle > [getTiles](#) (int startX, int startY, int endX, int endY)
Get tiles of world.
- void [dispose](#) ()
Dispose world.
- Stage [getStage](#) ()
Get stage of world.

Static Public Attributes

- static final float **GRAVITY** = -150
- static final float **scale** = 1/16f
- static boolean **reset_flag** = false
- static Array< Actor > **objectsToRemove** = new Array<Actor>()

Private Member Functions

- Array< [Goomba](#) > [generateEnemies](#) ()
Generates enemies.
- void [reset](#) ()
Resets world.
- void [generateFlag](#) (MapLayer layer)
- void [generateBricks](#) (TiledMapTileLayer layer)
- void [itemsInBrick](#) ([Brick](#) brick, int x, int y)
- void [animateTiles](#) (TiledMapTileLayer layer)
- void [endLevel](#) ()
End level of world.
- void [initTileset](#) (TiledMapTileLayer layer)

Private Attributes

- [Mario](#) **player**
- `TiledMap` **map**
- `Array< Goomba >` **goombas**
- `Array< Mushroom >` **mushrooms**
- `Pool< Rectangle >` **rectPool**
- `Stage` **stage**
- [WorldRenderer](#) **wr**
- `boolean` **playing_finish_song** = false
- [Flag](#) **flag**
- `boolean` **level_ended** = false

Static Private Attributes

- `static Tiles tiles` = new [Tiles](#)()

4.28.1 Detailed Description

Represents world.

4.28.2 Constructor & Destructor Documentation

4.28.2.1 World()

```
nl.arjanfrans.mario.model.World.World ( )
```

Constructor method.

Method which initializes an instance of [World](#)

4.28.3 Member Function Documentation

4.28.3.1 animateTiles()

```
void nl.arjanfrans.mario.model.World.animateTiles (
    TiledMapTileLayer layer ) [private]
```

Make the tiles containing 'animation' key animated.

Parameters

<i>layer</i>	TiledMapTileLayer object
--------------	--------------------------

4.28.3.2 generateBricks()

```
void nl.arjanfrans.mario.model.World.generateBricks (
    TiledMapTileLayer layer ) [private]
```

Turn all bricks into actors.

Parameters

<i>layer</i>	TiledMapTileLayer object
--------------	--------------------------

4.28.3.3 generateEnemies()

```
Array<Goomba> nl.arjanfrans.mario.model.World.generateEnemies ( ) [private]
```

Generates enemies.

Method that generates enemies from [Goomba](#) object array

Returns

goombas array

4.28.3.4 generateFlag()

```
void nl.arjanfrans.mario.model.World.generateFlag (
    MapLayer layer ) [private]
```

Setup the flag at the end of the level

Parameters

<i>layer</i>	Tmx map layer with the object named 'flag';
--------------	---

4.28.3.5 getEnemies()

```
Array<Goomba> nl.arjanfrans.mario.model.World.getEnemies ( )
```

Get enemies in world.

Returns

enemies Array

4.28.3.6 getMap()

```
TiledMap nl.arjanfrans.mario.model.World.getMap ( )
```

Get map of world.

Returns

map TiledMap object

4.28.3.7 getMushrooms()

```
Array<Mushroom> nl.arjanfrans.mario.model.World.getMushrooms ( )
```

Get mushrooms in world.

Returns

mushrooms Array

4.28.3.8 getPlayer()

```
Mario nl.arjanfrans.mario.model.World.getPlayer ( )
```

Get player.

Returns

player Mario object

4.28.3.9 getRenderer()

```
WorldRenderer nl.arjanfrans.mario.model.World.getRenderer ( )
```

Get render of world.

Returns

wr WorldRenderer object

4.28.3.10 getStage()

```
Stage nl.arjanfrans.mario.model.World.getStage ( )
```

Get stage of world.

Returns

stage Stage object

4.28.3.11 getStaticActors()

```
Array<StaticActor> nl.arjanfrans.mario.model.World.getStaticActors ( )
```

Returns

All [StaticActor](#) classes. Bricks for example.

4.28.3.12 getTiles()

```
Array<Rectangle> nl.arjanfrans.mario.model.World.getTiles (
    int startX,
    int startY,
    int endX,
    int endY )
```

Get tiles of world.

Returns

tiles Array

4.28.3.13 initTileset()

```
void nl.arjanfrans.mario.model.World.initTileset (
    TiledMapTileLayer layer ) [private]
```

Tiles that have a 'texture' property will be using an optimized tileset. This is to avoid screen tearing.

Parameters

<i>layer</i>	TiledMapTileLayer object
--------------	--------------------------

4.28.3.14 itemsInBrick()

```
void nl.arjanfrans.mario.model.World.itemsInBrick (
    Brick brick,
    int x,
    int y ) [private]
```

Check if there are items in a brick, if there are they are added to the brick.

Parameters

<i>brick</i>	Brick object
<i>x</i>	coordinate
<i>y</i>	coordinate

4.28.3.15 removeActor()

```
void nl.arjanfrans.mario.model.World.removeActor (
    Actor a )
```

Removes actor.

Parameters

<i>a</i>	object Actor
----------	--------------

4.28.4 Member Data Documentation**4.28.4.1 flag**

```
Flag nl.arjanfrans.mario.model.World.flag [private]
```

The flag at the end of the level.

4.28.4.2 rectPool

Pool<Rectangle> nl.arjanfrans.mario.model.World.rectPool [private]

Initial value:

```
= new Pool<Rectangle>()
{
    @Override
    protected Rectangle newObject()
    {
        return new Rectangle();
    }
}
```

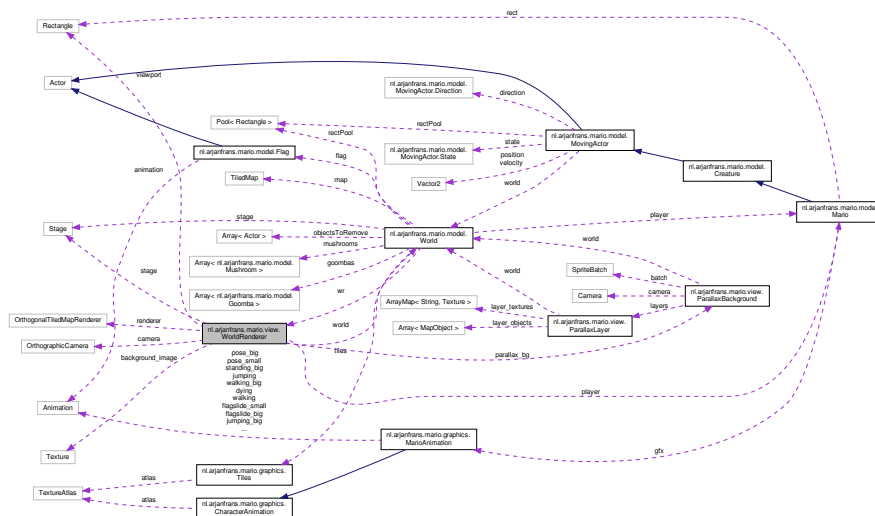
The documentation for this class was generated from the following file:

- core/src/nl/arjanfrans/mario/model/World.java

4.29 nl.arjanfrans.mario.view.WorldRenderer Class Reference

Render of world.

Collaboration diagram for nl.arjanfrans.mario.view.WorldRenderer:



Public Member Functions

- **WorldRenderer** (**World** world)
Constructor method.
- void **resize** (int width, int height)
Set size of viewport.
- OrthographicCamera **getCamera** ()
Get camera.
- void **render** ()
Rendering world.
- void **dispose** ()
Disposing render of world.

Private Member Functions

- Texture `loadBackground` ()
Get texture.
- void `drawBackground` (SpriteBatch batch, float posX, float posY)
Set background.

Private Attributes

- OrthogonalTiledMapRenderer **renderer**
- OrthographicCamera **camera**
- `World` **world**
- `Mario` **player**
- Texture **background_image**
- Stage **stage**
- `ParallaxBackground` **parallax_bg**
- Rectangle **viewport**

Static Private Attributes

- static final int **VIRTUAL_WIDTH** = 512
- static final int **VIRTUAL_HEIGHT** = 448
- static final float **ASPECT_RATIO** = (float)VIRTUAL_WIDTH/(float)VIRTUAL_HEIGHT

4.29.1 Detailed Description

Render of world.

4.29.2 Constructor & Destructor Documentation

4.29.2.1 WorldRenderer()

```
nl.arjanfrans.mario.view.WorldRenderer.WorldRenderer (
    World world )
```

Constructor method.

Method which initializes an instance of `WorldRenderer`

Parameters

<code>world</code>	The world object in which Mario will exist in
--------------------	---

4.29.3 Member Function Documentation

4.29.3.1 drawBackground()

```
void nl.arjanfrans.mario.view.WorldRenderer.drawBackground (
    SpriteBatch batch,
    float posX,
    float posY ) [private]
```

Set background.

Parameters

<i>batch</i>	SpriteBatch object
<i>posX</i>	coordinate
<i>posY</i>	coordinate

4.29.3.2 getCamera()

```
OrthographicCamera nl.arjanfrans.mario.view.WorldRenderer.getCamera ( )
```

Get camera.

Returns

camera OrthographicCamera object

4.29.3.3 loadBackground()

```
Texture nl.arjanfrans.mario.view.WorldRenderer.loadBackground ( ) [private]
```

Get texture.

Returns

texture of world

4.29.3.4 resize()

```
void nl.arjanfrans.mario.view.WorldRenderer.resize (
    int width,
    int height )
```

Set size of viewport.

Adjust size of world

Parameters

<i>width</i>	of window
<i>height</i>	of window

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

- `core/src/nl/arjanfrans/mario/view/WorldRenderer.java`

Chapter 5

File Documentation

5.1 core/src/nl/arjanfrans/mario/actions/ActorActions.java File Reference

Classes

- class [nl.arjanfrans.mario.actions.ActorActions](#)
Inherited class Actions.
- class **nl.arjanfrans.mario.actions.ActorActions.removeActor**
Inherited class Action.

5.2 core/src/nl/arjanfrans/mario/actions/MarioActions.java File Reference

Classes

- class [nl.arjanfrans.mario.actions.MarioActions](#)
Inherited class Actions.
- class **nl.arjanfrans.mario.actions.MarioActions.stopImmune**
Inherited class Action.
- class **nl.arjanfrans.mario.actions.MarioActions.bigMario**
Inherited class Action.
- class **nl.arjanfrans.mario.actions.MarioActions.flagTakeDown**
Inherited class Action.
- class **nl.arjanfrans.mario.actions.MarioActions.finishLevel**
Inherited class Action.
- class **nl.arjanfrans.mario.actions.MarioActions.setState**
Inherited class Action.
- class **nl.arjanfrans.mario.actions.MarioActions.walkTo**
Inherited class Action.

5.3 core/src/nl/arjanfrans/mario/actions/MoveableActions.java File Reference

Classes

- class [nl.arjanfrans.mario.actions.MoveableActions](#)
Inherited class Actions.
- class [nl.arjanfrans.mario.actions.MoveableActions.Die](#)
Inherited class Action.
- class [nl.arjanfrans.mario.actions.MoveableActions.startMoving](#)
Inherited class Action.

5.4 core/src/nl/arjanfrans/mario/debug/D.java File Reference

Classes

- class [nl.arjanfrans.mario.debug.D](#)
Debug class.

5.5 core/src/nl/arjanfrans/mario/input/MarioInput.java File Reference

Classes

- class [nl.arjanfrans.mario.input.MarioInput](#)
Inherited class that overrides mario input methods.

5.6 core/src/nl/arjanfrans/mario/model/Creature.java File Reference

Classes

- class [nl.arjanfrans.mario.model.Creature](#)
This class is the class model to represent any moving actor that is interactive, and not [Mario](#).

5.7 core/src/nl/arjanfrans/mario/model/Flag.java File Reference

Classes

- class [nl.arjanfrans.mario.model.Flag](#)
This flag represents the flag pole at the end of the stage that completes if [Mario](#) interacts with it.

5.8 core/src/nl/arjanfrans/mario/model/Goomba.java File Reference

Classes

- class [nl.arjanfrans.mario.model.Goomba](#)
Goomba represents the Goomba enemies from the original Mario game.

5.9 core/src/nl/arjanfrans/mario/model/Item.java File Reference

Classes

- class [nl.arjanfrans.mario.model.Item](#)
Represents any item in game.

5.10 core/src/nl/arjanfrans/mario/model/Mario.java File Reference

Classes

- class [nl.arjanfrans.mario.model.Mario](#)
Represents the playable character in the game.

5.11 core/src/nl/arjanfrans/mario/model/Mushroom.java File Reference

Classes

- class [nl.arjanfrans.mario.model.Mushroom](#)
Inherited class [MovingActor](#).

5.12 core/src/nl/arjanfrans/mario/model/StaticActor.java File Reference

Classes

- class [nl.arjanfrans.mario.model.StaticActor](#)
Inherited class that represents static actor.

5.13 core/src/nl/arjanfrans/mario/model/Super.java File Reference

Classes

- class [nl.arjanfrans.mario.model.Super](#)
Inherited class that overrides Mushroom methods that represents mario in super state.

5.14 core/src/nl/arjanfrans/mario/model/World.java File Reference

Classes

- class [nl.arjanfrans.mario.model.World](#)
Represents world.

5.15 core/src/nl/arjanfrans/mario/view/WorldRenderer.java File Reference

Classes

- class [nl.arjanfrans.mario.view.WorldRenderer](#)
Render of world.

5.16 desktop/src/nl/arjanfrans/mario/desktop/DesktopLauncher.java File Reference

Classes

- class [nl.arjanfrans.mario.desktop.DesktopLauncher](#)
This class is the main method allowing the game to initialize and launch.

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