

de.marioehkart.marioehkarte.Coordinates Class Reference

This class represents a set of coordinates in a 2D space. It includes methods for adding coordinates and transforming them based on an angle. The coordinates are represented by x, y, and an angle in radians. The class provides a constructor for initializing coordinates and methods for adding and transforming them. [More...](#)

Public Member Functions

- Coordinates** ()
Default constructor for **Coordinates** class. Initializes the coordinates to (0, 0) with an angle of 0 radians.
- Coordinates** (double **x**, double **y**, double **angle_x**)
Constructor for **Coordinates** class. Initializes the coordinates with the given x, y, and angle values.

Static Public Member Functions

- static **Coordinates** **addCoordinates** (**Coordinates** a, **Coordinates** b)
Addition of two **Coordinates** objects. Adds the x and y coordinates and angles of two **Coordinates** objects.
- static **Coordinates** **transformCoordinates** (**Coordinates** a, double angle)
Transformation of coordinates based on an angle. Transforms the coordinates of a **Coordinates** object by rotating them around the origin.

Public Attributes

- double **x**
The x-coordinate.
- double **y**
The y-coordinate.
- double **angle_x**
The angle in radians.

Detailed Description

This class represents a set of coordinates in a 2D space. It includes methods for adding coordinates and transforming them based on an angle. The coordinates are represented by x, y, and an angle in radians. The class provides a constructor for initializing coordinates and methods for adding and transforming them.

The class is used in the context of a railway system, where coordinates represent positions on the tracks. The coordinates can be used to calculate positions of trains or other objects on the railway. The transformation method allows for rotating the coordinates based on a given angle. The class is part of a larger system that includes sections and rails, which are used to represent the railway tracks.

Author
Joel Bommeli

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Constructor & Destructor Documentation

◆ Coordinates() [1/2]

```
de.marioehkart.marioehkarte.Coordinates.Coordinates ( )
```

Default constructor for **Coordinates** class. Initializes the coordinates to (0, 0) with an angle of 0 radians.

Parameters

- x** The x-coordinate.
- y** The y-coordinate.
- angle_x** The angle in radians.

◆ Coordinates() [2/2]

```
de.marioehkart.marioehkarte.Coordinates.Coordinates ( double x,  
                                                         double y,  
                                                         double angle_x )
```

Constructor for **Coordinates** class. Initializes the coordinates with the given x, y, and angle values.

Parameters

- x** The x-coordinate.
- y** The y-coordinate.
- angle_x** The angle in radians.

Member Function Documentation

◆ addCoordinates()

```
static Coordinates de.marioehkart.marioehkarte.Coordinates.addCoordinates ( Coordinates a,  
                                                                           Coordinates b )
```

static

Addition of two **Coordinates** objects. Adds the x and y coordinates and angles of two **Coordinates** objects.

Parameters

- a** The first **Coordinates** object.
- b** The second **Coordinates** object.

Returns

A new **Coordinates** object with the summed coordinates and angles.

◆ transformCoordinates()

```
static Coordinates de.marioehkart.marioehkarte.Coordinates.transformCoordinates ( Coordinates a,  
double angle )
```

static

Transformation of coordinates based on an angle. Transforms the coordinates of a **Coordinates** object by rotating them around the origin.

Parameters

- a** The **Coordinates** object to be transformed.
- angle** The angle in radians by which to rotate the coordinates.

Returns

A new **Coordinates** object with the transformed coordinates.

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

- /Users/bmmli.jl/Dokumente/PlatformIO/Projects/Marioehh-Kart_Interface/MarioehKartServer/MarioehKarte/src/de/marioehkart/marioehkarte/**Coordinates.java**