controller.simulation

Class Simulation

```
java.lang.Object
  └controller.simulation.Simulation
```

Direct Known Subclasses:
TrafficLightSimulationController, VehicleSimulationController

---

```
public abstract class Simulation
extends java.lang.Object
```

Basisklasse für alle Simulations-Controller

Field Summary

private WorldModel	**world**

Constructor Summary

Simulation()

Method Summary

WorldModel	**getWorld**()
void	**setWorld**(WorldModel world)
void	**update**() Aktualisiert die Daten in der Welt

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

world

```
private WorldModel world
```

Constructor Detail

Simulation

```
public Simulation()
```

Method Detail

getWorld

```
public WorldModel getWorld()
```

---

setWorld

```
public void setWorld(WorldModel world)
```

---

update

```
public void update()
```

Aktualisiert die Daten in der Welt

---

controller.simulation

Class SimulationController

```
java.lang.Object
  └ controller.simulation.SimulationController
```

```
public class SimulationController
extends java.lang.Object
```

Kümmert sich um die Simulation

Field Summary

private boolean	**running**
private TrafficLightSimulationController	**trafficLightSim**
private VehicleSimulationController	**vehicleSim**

Constructor Summary

SimulationController()

Method Summary

boolean	**isRunning**()
void	**setRunning**(boolean running)
void	**start**() Startet die Simulation
void	**stop**() Stoppt die Simulation

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

running

```
private boolean running
```

---

trafficLightSim

```
private TrafficLightSimulationController trafficLightSim
```

---

vehicleSim

```
private VehicleSimulationController vehicleSim
```

Constructor Detail

SimulationController

```
public SimulationController()
```

Method Detail

isRunning

```
public boolean isRunning()
```

---

setRunning

```
public void setRunning(boolean running)
```

---

start

```
public void start()
```

Startet die Simulation

---

stop

```
public void stop()
```

Stoppt die Simulation

---

controller.simulation

Class TrafficLightSimulationController

```
java.lang.Object
  └ controller.simulation.Simulation
      └ controller.simulation.TrafficLightSimulationController
```

```
public class TrafficLightSimulationController
extends Simulation
```

Controller für die Ampelschaltung

Ablauf einer Ampelsimulation:

- Aus dem WorldModel holt sich der Controller alle platzierten Kacheln (`WorldModel.getPlacedTiles()`)
- Wenn diese Kacheln über eine Ampel verfügt und diese auch aktiv ist (`PlacedTileModel.isTrafficlightEnabled()`) werden alle Strecken (`RouteModel`) der Kachel (`TileModel.getRoutes()`) durchgegangen und dort die Ampeln (`PlacedTrafficlightModel`) entsprechend des hier definieret Ablaufes geschaltet.
- Der Controller merkt sich dazu, ob der Ampelverbund einer Kachel bereits initialisiert wurde und setzt dann die Ampeln in die entsprechende Phase gesetzt `PlacedTrafficlightModel.setPhase(TrafficlightPhase)`

Field Summary

private int	**greenPhaseDuration**
private int	**redPhaseDuration**
private int	**redYellowPhaseDuration**
private int	**yellowDuration**

Constructor Summary

TrafficLightSimulationController()

Method Summary

int	**getGreenPhaseDuration**()
int	**getRedPhaseDuration**()
int	**getRedYellowPhaseDuration**()
int	**getYellowDuration**()
void	**setGreenPhaseDuration**(int greenPhaseDuration)
void	**setRedPhaseDuration**(int redPhaseDuration)
void	**setRedYellowPhaseDuration**(int redYellowPhaseDuration)
void	**setYellowDuration**(int yellowDuration)

Methods inherited from class controller.simulation.Simulation

getWorld, setWorld, update

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

redPhaseDuration

```
private int redPhaseDuration
```

---

redYellowPhaseDuration

```
private int redYellowPhaseDuration
```

---

greenPhaseDuration

```
private int greenPhaseDuration
```

---

yellowDuration

```
private int yellowDuration
```

Constructor Detail

TrafficLightSimulationController

```
public TrafficLightSimulationController()
```

Method Detail

getRedPhaseDuration

```
public int getRedPhaseDuration()
```

---

setRedPhaseDuration

```
public void setRedPhaseDuration(int redPhaseDuration)
```

---

getRedYellowPhaseDuration

```
public int getRedYellowPhaseDuration()
```

---

setRedYellowPhaseDuration

```
public void setRedYellowPhaseDuration(int redYellowPhaseDuration)
```

---

getGreenPhaseDuration

```
public int getGreenPhaseDuration()
```

---

setGreenPhaseDuration

```
public void setGreenPhaseDuration(int greenPhaseDuration)
```

---

getYellowDuration

```
public int getYellowDuration()
```

---

setYellowDuration

```
public void setYellowDuration(int yellowDuration)
```

Class VehicleSimulationController

```
java.lang.Object
  └controller.simulation.Simulation
      └controller.simulation.VehicleSimulationController
```

```
public class VehicleSimulationController
extends Simulation
```

Controller für das Fahren der Fahrzeuge

Ablauf einer Fahrsimulation:

- Aus dem WorldModel holt sich der Controller alle platzierten Kacheln (`WorldModel.getPlacedTiles()`) und arbeitet sie nacheinander ab.
- Wenn eine Kachel über platzierte Fahrzeuge verfügt werden alle Fahrzeuge (`PlacedVehicleModel`) der Kachel (`PlacedTileModel.getPlacedVehicles()`) durchgegangen und das Fahren wird Simuliert. (`driveVehicle(PlacedVehicleModel)`)

Constructor Summary

`VehicleSimulationController``()`

Method Summary

void	**`checkTile`**`(PlacedVehicleModel vehicle)` Überprüft, ob das Fahrzeug seine Kachel wechselt
void	**`checkWay`**`(PlacedVehicleModel vehicle)` Überprüft Weg für das Fahrzeug.
void	**`driveVehicle`**`(PlacedVehicleModel vehicle)` Lässt Fahrzeuge auf Welt fahren
void	**`vehiclesGo`**`()` Lässt alle Fahrzeuge auf der Welt fahren

Methods inherited from class controller.simulation.Simulation
`getWorld`, `setWorld`, `update`

Methods inherited from class java.lang.Object
`clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait`

Constructor Detail

VehicleSimulationController

```
public VehicleSimulationController()
```

Method Detail

vehiclesGo

```
public void vehiclesGo()
```

Lässt alle Fahrzeuge auf der Welt fahren

---

driveVehicle

```
public void driveVehicle(PlacedVehicleModel vehicle)
```

Lässt Fahrzeuge auf Welt fahren

Parameters:

`vehicle` -
`top` -
`left` -
`rotation` -

---

checkTile

```
public void checkTile(PlacedVehicleModel vehicle)
```

Überprüft, ob das Fahrzeug seine Kachel wechselt

Parameters:

`vehicle` -

---

checkWay

```
public void checkWay(PlacedVehicleModel vehicle)
```

Überprüft Weg für das Fahrzeug. Kachel kann verschiednene Abbiegungen haben, oder ein Ende, and dem das Fahrzeug wieder umkehrt.

Parameters:

`vehicle` -

---

model.dialogue

Class DialogueModel

```
java.lang.Object
  └ model.Model
      └ model.dialogue.DialogueModel
```

Direct Known Subclasses:

ErrorDialogueModel, HelpDialogueModel, LoadDialogueModel, NewDialogueModel

---

```
public abstract class DialogueModel
extends Model
```

Basisklasse für alle Dialoge

Field Summary

private java.lang.String	**cancelCloseButton**
private java.lang.String	**title**

Constructor Summary

DialogueModel()

Method Summary

java.lang.String	**getCancelCloseButton**()
java.lang.String	**getTitle**()
void	**setCancelCloseButton**(java.lang.String cancelCloseButton)
void	**setTitle**(java.lang.String title)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

title

```
private java.lang.String title
```

---

cancelCloseButton

```
private java.lang.String cancelCloseButton
```

Constructor Detail

DialogueModel

```
public DialogueModel()
```

Method Detail

getTitle

```
public java.lang.String getTitle()
```

---

setTitle

```
public void setTitle(java.lang.String title)
```

---

getCancelCloseButton

```
public java.lang.String getCancelCloseButton()
```

---

setCancelCloseButton

```
public void setCancelCloseButton(java.lang.String cancelCloseButton)
```

---

model.dialogue

Class ErrorDialogueModel

```
java.lang.Object
  └ model.Model
      └ model.dialogue.DialogueModel
          └ model.dialogue.ErrorDialogueModel
```

```
public class ErrorDialogueModel
extends DialogueModel
```

Model für die `ErrorDialogueView`

Field Summary

private java.lang.String	**errorMessage**

Constructor Summary

ErrorDialogueModel()

Method Summary

java.lang.String

	getErrorMessage()
void	**setErrorMessage**(java.lang.String errorMessage)

Methods inherited from class model.dialogue.DialogueModel
getCancelCloseButton, getTitle, setCancelCloseButton, setTitle

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

errorMessage

```
private java.lang.String errorMessage
```

Constructor Detail

ErrorDialogueModel

```
public ErrorDialogueModel()
```

Method Detail

getErrorMessage

```
public java.lang.String getErrorMessage()
```

---

setErrorMessage

```
public void setErrorMessage(java.lang.String errorMessage)
```

---

model.dialogue

Class HelpDialogueModel

```
java.lang.Object
  └model.Model
      └model.dialogue.DialogueModel
          └model.dialogue.HelpDialogueModel
```

```
public class HelpDialogueModel
extends DialogueModel
```

Model für die HelpDialogueView

Field Summary

private java.lang.String	**authors**
private java.lang.String	**helpInfo**
private java.lang.String	**version**

Constructor Summary

HelpDialogueModel()

Method Summary

java.lang.String	**getAuthors**()
java.lang.String	**getHelpInfo**()
java.lang.String	**getVersion**()
void	**setAuthors**(java.lang.String authors)
void	**setHelpInfo**(java.lang.String helpInfo)
void	**setVersion**(java.lang.String version)

Methods inherited from class model.dialogue.DialogueModel
getCancelCloseButton, getTitle, setCancelCloseButton, setTitle

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

helpInfo

```
private java.lang.String helpInfo
```

---

authors

```
private java.lang.String authors
```

---

version

```
private java.lang.String version
```

Constructor Detail

HelpDialogueModel

```
public HelpDialogueModel()
```

Method Detail

getHelpInfo

```
public java.lang.String getHelpInfo()
```

---

setHelpInfo

```
public void setHelpInfo(java.lang.String helpInfo)
```

---

getAuthors

```
public java.lang.String getAuthors()
```

---

setAuthors

```
public void setAuthors(java.lang.String authors)
```

---

getVersion

```
public java.lang.String getVersion()
```

---

setVersion

```
public void setVersion(java.lang.String version)
```

---

model.dialogue

Class LoadDialogueModel

```
java.lang.Object
  └ model.Model
      └
```

```
model.dialogue.DialogueModel
  └ model.dialogue.LoadDialogueModel
```

Direct Known Subclasses:
SaveDialogueModel

```
public class LoadDialogueModel
extends DialogueModel
```

Model für die `LoadDialogueView`

Field Summary

private java.lang.String	**filename**
private java.lang.String	**okButton**

Constructor Summary

LoadDialogueModel()

Method Summary

java.lang.String	**getFilename**()
java.lang.String	**getOkButton**()
void	**setFilename**(java.lang.String filename)
void	**setOkButton**(java.lang.String okButton)

Methods inherited from class model.dialogue.DialogueModel
getCancelCloseButton, getTitle, setCancelCloseButton, setTitle

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

okButton

```
private java.lang.String okButton
```

---

filename

```
private java.lang.String filename
```

Constructor Detail

LoadDialogueModel

```
public LoadDialogueModel()
```

Method Detail

getOkButton

```
public java.lang.String getOkButton()
```

---

setOkButton

```
public void setOkButton(java.lang.String okButton)
```

---

getFilename

```
public java.lang.String getFilename()
```

---

setFilename

```
public void setFilename(java.lang.String filename)
```

---

model.dialogue

Class NewDialogueModel

```
java.lang.Object
  └ model.Model
      └ model.dialogue.DialogueModel
          └ model.dialogue.NewDialogueModel
```

```
public class NewDialogueModel
extends DialogueModel
```

Model für die NewDialogueView

Field Summary

private int	**maxHorTiles**

private int	**maxVerTiles**
private java.lang.String	**okButton**

Constructor Summary

NewDialogueModel()

Method Summary

int	**getMaxHorTiles**()
int	**getMaxVerTiles**()
java.lang.String	**getOkButton**()
void	**setMaxHorTiles**(int maxHorTiles)
void	**setMaxVerTiles**(int maxVerTiles)
void	**setOkButton**(java.lang.String okButton)

Methods inherited from class model.dialogue.DialogueModel
getCancelCloseButton, getTitle, setCancelCloseButton, setTitle

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

okButton

private java.lang.String **okButton**

---

maxHorTiles

private int **maxHorTiles**

---

maxVerTiles

private int **maxVerTiles**

Constructor Detail

NewDialogueModel

```
public NewDialogueModel()
```

Method Detail

getOkButton

```
public java.lang.String getOkButton()
```

---

setOkButton

```
public void setOkButton(java.lang.String okButton)
```

---

getMaxHorTiles

```
public int getMaxHorTiles()
```

---

setMaxHorTiles

```
public void setMaxHorTiles(int maxHorTiles)
```

---

getMaxVerTiles

```
public int getMaxVerTiles()
```

---

setMaxVerTiles

```
public void setMaxVerTiles(int maxVerTiles)
```

---

model.dialogue

Class SaveDialogueModel

```
java.lang.Object
  └ model.Model
      └ model.dialogue.DialogueModel
          └ model.dialogue.LoadDialogueModel
              └ model.dialogue.SaveDialogueModel
```

```
public class SaveDialogueModel
extends LoadDialogueModel
```

Model für die SaveDialogueView

Constructor Summary

SaveDialogueModel()

Method Summary

Methods inherited from class model.dialogue.LoadDialogueModel
getFilename, getOkButton, setFilename, setOkButton

Methods inherited from class model.dialogue.DialogueModel
getCancelCloseButton, getTitle, setCancelCloseButton, setTitle

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

SaveDialogueModel

```
public SaveDialogueModel()
```

---

data.dataobject

Class BaseTileData

```
java.lang.Object
  └ data.dataobject.DataObject
      └ data.dataobject.BaseTileData
```

Direct Known Subclasses:

TileData

```
public class BaseTileData
extends DataObject
```

Data-Klasse für Basis-Kachel

Field Summary

private java.lang.String	**source**

Constructor Summary
BaseTileData()

Method Summary	
java.lang.String	**getSource**()
void	**setSource**(java.lang.String source)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

source

```
private java.lang.String source
```

Constructor Detail

BaseTileData

```
public BaseTileData()
```

Method Detail

getSource

```
public java.lang.String getSource()
```

---

setSource

```
public void setSource(java.lang.String source)
```

---

data.dataobject

Class CurveData

```
java.lang.Object
  └ data.dataobject.DataObject
      └ data.dataobject.RouteData
```

└ **data.dataobject.CurveData**

---

public class **CurveData**
extends RouteData

Data-Klasse für eine Kurve

Field Summary

private LocationData	**corner**

Constructor Summary

CurveData()

Method Summary

LocationData	**getCorner**()
void	**setCorner**(LocationData corner)

Methods inherited from class data.dataobject.RouteData
getEnd, getStart, setEnd, setStart

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

corner

private LocationData **corner**

Constructor Detail

CurveData

public **CurveData**()

Method Detail

getCorner

```
public LocationData getCorner()
```

Returns:

---

setCorner

```
public void setCorner(LocationData corner)
```

Parameters:

corner -

---

data.dataobject

Class DataObject

```
java.lang.Object
  └ data.dataobject.DataObject
```

Direct Known Subclasses:

BaseTileData, LocationData, RouteData, TextData, TrafficlightData, VehicleData, VehicleSpeedData, WorldData

---

```
public abstract class DataObject
extends java.lang.Object
```

Basisklasse für alle Data-Klassen

Constructor Summary

DataObject()

Method Summary

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

DataObject

```
public DataObject()
```

---

data.dataobject

Class LocationData

```
java.lang.Object
  └ data.dataobject.DataObject
      └ data.dataobject.LocationData
```

```
public class LocationData
extends DataObject
```

Data-Klasse für ein Punkt eines Strassenstückes

Field Summary

private boolean	**trafficlight**
private java.lang.String	**type**

Constructor Summary

LocationData(java.lang.String type, boolean trafficlight)

Method Summary

boolean	**hasTrafficlight**()
boolean	**isCenter**()
boolean	**isEast**()
boolean	**isNorth**()
boolean	**isNorthEast**()
boolean	**isNorthWest**()
boolean	**isSouth**()
boolean	**isSouthEast**()
boolean	**isSouthWest**()
boolean	**isWest**()

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

type

```
private java.lang.String type
```

---

trafficlight

```
private boolean trafficlight
```

Constructor Detail

LocationData

```
public LocationData(java.lang.String type,
                    boolean trafficlight)
```

Parameters:

type -
trafficlight -

Method Detail

isNorth

```
public boolean isNorth()
```

Returns:

---

isEast

```
public boolean isEast()
```

Returns:

---

isSouth

```
public boolean isSouth()
```

Returns:

---

isWest

```
public boolean isWest()
```

Returns:

---

isCenter

```
public boolean isCenter()
```

Returns:

---

isNorthEast

```
public boolean isNorthEast()
```

Returns:

---

isSouthEast

```
public boolean isSouthEast()
```

Returns:

---

isSouthWest

```
public boolean isSouthWest()
```

Returns:

---

isNorthWest

```
public boolean isNorthWest()
```

Returns:

---

hasTrafficlight

```
public boolean hasTrafficlight()
```

Returns:

---

data.dataobject

Class PlacedTileData

```
java.lang.Object
  └ data.dataobject.DataObject
      └ data.dataobject.BaseTileData
          └ data.dataobject.TileData
```

└ **data.dataobject.PlacedTileData**

---

public class **PlacedTileData**
extends TileData

Data-Klasse für eine platzierte Klasse

Field Summary

private int	**left**
private int	**rotation**
private int	**top**
private java.util.ArrayList<PlacedVehicleData>	**vehicles**

Constructor Summary

PlacedTileData()

Method Summary

int	**getLeft**()
int	**getRotation**()
int	**getTop**()
PlacedVehicleData[]	**getVehicles**()
void	**setLeft**(int left)
void	**setRotation**(int rotation)
void	**setTop**(int top)
void	**setVehicles**(PlacedVehicleData[] vehicles)

Methods inherited from class data.dataobject.TileData

getDescription, getId, getName, getRoutes, setDescription, setId, setName, setRoutes

Methods inherited from class data.dataobject.BaseTileData

getSource, setSource

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

left

```
private int left
```

---

top

```
private int top
```

---

rotation

```
private int rotation
```

---

vehicles

```
private java.util.ArrayList<PlacedVehicleData> vehicles
```

Constructor Detail

PlacedTileData

```
public PlacedTileData()
```

Method Detail

getLeft

```
public int getLeft()
```

---

setLeft

```
public void setLeft(int left)
```

---

getTop

```
public int getTop()
```

---

setTop

```
public void setTop(int top)
```

---

getRotation

```
public int getRotation()
```

---

setRotation

```
public void setRotation(int rotation)
```

---

getVehicles

```
public PlacedVehicleData[] getVehicles()
```

Returns:

---

setVehicles

```
public void setVehicles(PlacedVehicleData[] vehicles)
```

Parameters:

vehicles -

---

data.dataobject

Class PlacedVehicleData

```
java.lang.Object
  └ data.dataobject.DataObject
      └ data.dataobject.VehicleData
          └ data.dataobject.PlacedVehicleData
```

```
public class PlacedVehicleData
extends VehicleData
```

Data-Klasse für ein platziertes Fahrzeug

Field Summary

private int	**left**
private int	**rotation**
private int	**top**

Constructor Summary

PlacedVehicleData()

Method Summary

int	**getLeft**()
int	**getRotation**()
int	**getTop**()
void	**setLeft**(int left)
void	**setRotation**(int rotation)
void	**setTop**(int top)

Methods inherited from class data.dataobject.VehicleData
getDescription, getId, getName, getSource, getSpeed, setDescription, setId, setName, setSource, setSpeed

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

left

private int **left**

---

top

private int **top**

---

rotation

private int **rotation**

Constructor Detail

PlacedVehicleData

```
public PlacedVehicleData()
```

Method Detail

getLeft

```
public int getLeft()
```

---

setLeft

```
public void setLeft(int left)
```

---

getTop

```
public int getTop()
```

---

setTop

```
public void setTop(int top)
```

---

getRotation

```
public int getRotation()
```

---

setRotation

```
public void setRotation(int rotation)
```

---

data.dataobject

Class RouteData

```
java.lang.Object
  └ data.dataobject.DataObject
      └ data.dataobject.RouteData
```

Direct Known Subclasses:
CurveData, StraightData

```
public abstract class RouteData
extends DataObject
```

Data-Klasse für ein Strassenstück

Field Summary

private LocationData	**end**
private LocationData	**start**

Constructor Summary

RouteData()

Method Summary

LocationData	**getEnd**()
LocationData	**getStart**()
void	**setEnd**(LocationData end)
void	**setStart**(LocationData start)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

start

private LocationData **start**

---

end

private LocationData **end**

Constructor Detail

RouteData

public **RouteData**()

Method Detail

getStart

```
public LocationData getStart()
```

Returns:

---

getEnd

```
public LocationData getEnd()
```

Returns:

---

setStart

```
public void setStart(LocationData start)
```

Parameters:
start -

---

setEnd

```
public void setEnd(LocationData end)
```

Parameters:
end -

---

data.dataobject

Class StraightData

```
java.lang.Object
  └ data.dataobject.DataObject
      └ data.dataobject.RouteData
          └ data.dataobject.StraightData
```

```
public class StraightData
extends RouteData
```

Data-Klasse für ein gerades Strassenstück

Constructor Summary

StraightData()

Method Summary

Methods inherited from class data.dataobject.RouteData
getEnd, getStart, setEnd, setStart

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

StraightData

```
public StraightData()
```

---

data.dataobject

Class TextData

```
java.lang.Object
  └ data.dataobject.DataObject
      └ data.dataobject.TextData
```

```
public class TextData
extends DataObject
```

Data-Klasse für ein Text

Field Summary

private java.lang.String	**id**
private java.lang.String	**text**

Constructor Summary

TextData()

Method Summary

java.lang.String	**getId**()
java.lang.String	**getText**()
void	**setId**(java.lang.String id)
void	

	setText(java.lang.String text)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

id

```
private java.lang.String id
```

---

text

```
private java.lang.String text
```

Constructor Detail

TextData

```
public TextData()
```

Method Detail

getId

```
public java.lang.String getId()
```

---

setId

```
public void setId(java.lang.String id)
```

---

getText

```
public java.lang.String getText()
```

---

setText

```
public void setText(java.lang.String text)
```

---

data.dataobject

Class TileData

```
java.lang.Object
  └ data.dataobject.DataObject
      └ data.dataobject.BaseTileData
          └ data.dataobject.TileData
```

Direct Known Subclasses:
PlacedTileData

```
public class TileData
extends BaseTileData
```

Data-Klasse für eine Kachel mit Straße

Field Summary

private java.lang.String	**description**
private java.lang.String	**id**
private java.lang.String	**name**
private java.util.ArrayList<RouteData>	**routes**

Constructor Summary

TileData()

Method Summary

java.lang.String	**getDescription**()
java.lang.String	**getId**()
java.lang.String	**getName**()
RouteData[]	**getRoutes**() Gibt die Strecken dieser Kacheln zurück
void	**setDescription**(java.lang.String description)
void	**setId**(java.lang.String id)
void	**setName**(java.lang.String name)
void	**setRoutes**(RouteData[] routes) Setzt die Strecken dieser Kachel

Methods inherited from class data.dataobject.BaseTileData
getSource, setSource

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

id

```
private java.lang.String id
```

---

name

```
private java.lang.String name
```

---

description

```
private java.lang.String description
```

---

routes

```
private java.util.ArrayList<RouteData> routes
```

Constructor Detail

TileData

```
public TileData()
```

Method Detail

getId

```
public java.lang.String getId()
```

---

setId

```
public void setId(java.lang.String id)
```

---

getName

```
public java.lang.String getName()
```

---

setName

```
public void setName(java.lang.String name)
```

---

getDescription

```
public java.lang.String getDescription()
```

---

setDescription

```
public void setDescription(java.lang.String description)
```

---

getRoutes

```
public RouteData[] getRoutes()
```

Gibt die Strecken dieser Kacheln zurück

Returns:

---

setRoutes

```
public void setRoutes(RouteData[] routes)
```

Setzt die Strecken dieser Kachel

Parameters:

`routes` -

---

data.dataobject

Class TrafficlightData

```
java.lang.Object
  └ data.dataobject.DataObject
      └ data.dataobject.TrafficlightData
```

```
public class TrafficlightData
extends DataObject
```

Data-Klasse für eine Ampel

Field Summary

private java.lang.String	**greenSource**

private java.lang.String	**offSource**
private java.lang.String	**redSource**
private java.lang.String	**redYellowSource**
private java.lang.String	**yellowSource**

Constructor Summary

TrafficlightData()

Method Summary

java.lang.String	**getGreenSource**()
java.lang.String	**getOffSource**()
java.lang.String	**getRedSource**()
java.lang.String	**getRedYellowSource**()
java.lang.String	**getYellowSource**()
void	**setGreenSource**(java.lang.String greenSource)
void	**setOffSource**(java.lang.String offSource)
void	**setRedSource**(java.lang.String redSource)
void	**setRedYellowSource**(java.lang.String redYellowSource)
void	**setYellowSource**(java.lang.String yellowSource)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

offSource

```
private java.lang.String offSource
```

---

redSource

```
private java.lang.String redSource
```

---

redYellowSource

```
private java.lang.String redYellowSource
```

---

greenSource

```
private java.lang.String greenSource
```

---

yellowSource

```
private java.lang.String yellowSource
```

Constructor Detail

TrafficlightData

```
public TrafficlightData()
```

Method Detail

getOffSource

```
public java.lang.String getOffSource()
```

---

setOffSource

```
public void setOffSource(java.lang.String offSource)
```

---

getRedSource

```
public java.lang.String getRedSource()
```

---

setRedSource

```
public void setRedSource(java.lang.String redSource)
```

---

getRedYellowSource

```
public java.lang.String getRedYellowSource()
```

---

setRedYellowSource

```
public void setRedYellowSource(java.lang.String redYellowSource)
```

---

getGreenSource

```
public java.lang.String getGreenSource()
```

---

setGreenSource

```
public void setGreenSource(java.lang.String greenSource)
```

---

getYellowSource

```
public java.lang.String getYellowSource()
```

---

setYellowSource

```
public void setYellowSource(java.lang.String yellowSource)
```

---

data.dataobject

Class VehicleData

```
java.lang.Object
  └ data.dataobject.DataObject
      └ data.dataobject.VehicleData
```

Direct Known Subclasses:

PlacedVehicleData

```
public class VehicleData
extends DataObject
```

Data-Klasse für ein Fahrzeug

Field Summary

private java.lang.String	**description**
private java.lang.String	**id**
private	**name**

java.lang.String	
private java.lang.String	**source**
private VehicleSpeedData	**speed**

Constructor Summary

VehicleData()

Method Summary

java.lang.String	**getDescription**()
java.lang.String	**getId**()
java.lang.String	**getName**()
java.lang.String	**getSource**()
VehicleSpeedData	**getSpeed**()
void	**setDescription**(java.lang.String description)
void	**setId**(java.lang.String id)
void	**setName**(java.lang.String name)
void	**setSource**(java.lang.String source)
void	**setSpeed**(VehicleSpeedData speed)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

id

```
private java.lang.String id
```

---

name

```
private java.lang.String name
```

---

description

```
private java.lang.String description
```

---

source

```
private java.lang.String source
```

---

speed

```
private VehicleSpeedData speed
```

Constructor Detail

VehicleData

```
public VehicleData()
```

Method Detail

getId

```
public java.lang.String getId()
```

---

setId

```
public void setId(java.lang.String id)
```

---

getName

```
public java.lang.String getName()
```

---

setName

```
public void setName(java.lang.String name)
```

---

getDescription

```
public java.lang.String getDescription()
```

---

setDescription

```
public void setDescription(java.lang.String description)
```

---

getSource

```
public java.lang.String getSource()
```

---

setSource

```
public void setSource(java.lang.String source)
```

---

getSpeed

```
public VehicleSpeedData getSpeed()
```

Returns:

---

setSpeed

```
public void setSpeed(VehicleSpeedData speed)
```

Parameters:

speed -

---

data.dataobject

Class VehicleSpeedData

```
java.lang.Object
  └ data.dataobject.DataObject
      └ data.dataobject.VehicleSpeedData
```

```
public class VehicleSpeedData
extends DataObject
```

Data-Klasse für die Geschwindigkeit eines Fahrzeuges

Field Summary

private java.lang.String	**id**
private float	**seconds**

Constructor Summary

VehicleSpeedData()

Method Summary

java.lang.String	**getId**()
float	**getSeconds**()
void	**setId**(java.lang.String id)
void	**setSeconds**(float seconds)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

id

```
private java.lang.String id
```

---

seconds

```
private float seconds
```

Constructor Detail

VehicleSpeedData

```
public VehicleSpeedData()
```

Method Detail

getId

```
public java.lang.String getId()
```

---

setId

```
public void setId(java.lang.String id)
```

---

getSeconds

```
public float getSeconds()
```

---

setSeconds

```
public void setSeconds(float seconds)
```

---

data.dataobject

Class WorldData

```
java.lang.Object
  └data.dataobject.DataObject
      └data.dataobject.WorldData
```

```
public class WorldData
extends DataObject
```

Data-Klasse für eine Welt

Field Summary

private BaseTileData	**baseTile**
private int	**height**
private java.util.ArrayList<PlacedTileData>	**placedTiles**
private java.util.ArrayList<TileData>	**tiles**
private java.util.ArrayList<VehicleData>	**vehicles**
private int	**width**

Constructor Summary

WorldData()

Method Summary

BaseTileData	**getBasetile**()
int	**getHeight**()
PlacedTileData[]	

	getPlacedTiles()
TileData[]	**getTiles**()
VehicleData[]	**getVehicleData**()
int	**getWidth**()
void	**setBasetile**(BaseTileData basetile)
void	**setHeight**(int height)
void	**setPlacedTiles**(PlacedTileData[] placedTiles)
void	**setTiles**(TileData[] tiles)
void	**setVehicleData**(VehicleData[] vehicles)
void	**setWidth**(int width)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

width

private int **width**

---

height

private int **height**

---

placedTiles

private java.util.ArrayList<PlacedTileData> **placedTiles**

---

baseTile

private BaseTileData **baseTile**

---

tiles

```
private java.util.ArrayList<TileData> tiles
```

---

vehicles

```
private java.util.ArrayList<VehicleData> vehicles
```

Constructor Detail

WorldData

```
public WorldData()
```

Method Detail

getWidth

```
public int getWidth()
```

---

setWidth

```
public void setWidth(int width)
```

---

getHeight

```
public int getHeight()
```

---

setHeight

```
public void setHeight(int height)
```

---

getBasetile

```
public BaseTileData getBasetile()
```

Returns:

---

setBasetile

```
public void setBasetile(BaseTileData basetile)
```

Parameters:

`basetile` -

---

getTiles

```
public TileData[] getTiles()
```

Returns:

---

setTiles

```
public void setTiles(TileData[] tiles)
```

Parameters:
tiles -

---

getPlacedTiles

```
public PlacedTileData[] getPlacedTiles()
```

Returns:

---

setPlacedTiles

```
public void setPlacedTiles(PlacedTileData[] placedTiles)
```

Parameters:
placedTiles -

---

getVehicleData

```
public VehicleData[] getVehicleData()
```

Returns:

---

setVehicleData

```
public void setVehicleData(VehicleData[] vehicles)
```

Parameters:
vehicles -

---

model.menu

Class MenuItemListModel

```
java.lang.Object
  └ model.Model
      └ model.menu.MenuItemListModel
```

```
public class MenuItemListModel
```

extends Model

Enthält die Einträge der Menüleiste

Field Summary

private java.lang.String[]	**items** Enthält die Einträge des Menüs

Constructor Summary

MenuItemListModel()

Method Summary

java.lang.String[]	**getItems**()
void	**setItems**(java.lang.String[] items)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

items

```
private java.lang.String[] items
```

Enthält die Einträge des Menüs

Constructor Detail

MenuItemListModel

```
public MenuItemListModel()
```

Method Detail

getItems

```
public java.lang.String[] getItems()
```

---

setItems

```
public void setItems(java.lang.String[] items)
```

---

controller

Class DialogueController

```
java.lang.Object
  └controller.SubController
      └controller.DialogueController
```

```
public class DialogueController
extends SubController
```

Kümmert sich um die Anzeige der verschiedenen Dialoge

Field Summary

private ErrorDialogueView	**error**
private HelpDialogueView	**help**
private LoadDialogueView	**load**
private NewDialogueView	**newWorld**
private SaveDialogueView	**save**

Constructor Summary

DialogueController() Konstruktor

Method Summary

void	**closeAll**() Schließt alle offenen Dialoge
SaveDialogueView	**getSaveDialogue**() Gibt den Save-Dialog zurück
void	**showErrorDialoge**(ErrorDialogueModel model) Zeigt den Fehler-Dialog an.
void	**showHelpDialogue**() Zeigt den Hilfe-Dialog an
void	**showLoadDialogue**() Zeigt den Dialog zum Laden einer Welt an
void	**showNewDialogue**()

	Zeigt den Dialog zum erzeugen einer neuen Welt an
void	**showSaveDialogue**() Zeigt den Dialog zum Speichern einer Welt an

Methods inherited from class controller.SubController
getDataFactory, getMaster, getView, setDataFactory, setMaster, setView

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

error

```
private ErrorDialogueView error
```

---

help

```
private HelpDialogueView help
```

---

load

```
private LoadDialogueView load
```

---

save

```
private SaveDialogueView save
```

---

newWorld

```
private NewDialogueView newWorld
```

Constructor Detail

DialogueController

```
public DialogueController()
```

Konstruktor

Method Detail

showLoadDialogue

```
public void showLoadDialogue()
```

Zeigt den Dialog zum Laden einer Welt an

---

showSaveDialogue

```
public void showSaveDialogue()
```

Zeigt den Dialog zum Speichern einer Welt an

---

showHelpDialogue

```
public void showHelpDialogue()
```

Zeigt den Hilfe-Dialog an

---

showNewDialogue

```
public void showNewDialogue()
```

Zeigt den Dialog zum erzeugen einer neuen Welt an

---

showErrorDialoge

```
public void showErrorDialoge(ErrorDialogueModel model)
```

Zeigt den Fehler-Dialog an.

Parameters:

`model` -

---

closeAll

```
public void closeAll()
```

Schließt alle offenen Dialoge

---

getSaveDialogue

```
public SaveDialogueView getSaveDialogue()
```

Gibt den Save-Dialog zurück

Returns:

---

controller

Class GUIController

```
java.lang.Object
  └controller.GUIController
```

```
public class GUIController
extends java.lang.Object
```

Basis-Klasse der Anwendung Der GUIController erzeugt die SubController und übergibt ihnen die DataFactory sowie die View mit der sie arbeiten

---

Field Summary

private DialogueController	**dialogue**
private java.lang.String	**language**
private int	**maxHorTiles**
private int	**maxVerTiles**
private MenuController	**menu**
private SimulationController	**simulation**
private ToolBarController	**toolbar**
private AppView	**view**
private WorldController	**world**

Constructor Summary

GUIController() Erzeugt den Controller und die dazugehörigen Untercontroller

Method Summary

protected DialogueController	**getDialogueController**() Gibt den Dialog-Controller zurück
java.lang.String	**getLanguage**()
int	**getMaxHorTiles**()
int	**getMaxVerTiles**()

void	**loadWorldAction**() Öffnet den Dialiog zum Laden einer Welt und lädt dann anschliepend die Welt
void	**setLanguage**(java.lang.String language)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

toolbar

private ToolBarController **toolbar**

---

menu

private MenuController **menu**

---

dialogue

private DialogueController **dialogue**

---

world

private WorldController **world**

---

simulation

private SimulationController **simulation**

---

view

private AppView **view**

---

maxVerTiles

private int **maxVerTiles**

---

maxHorTiles

private int **maxHorTiles**

---

language

```
private java.lang.String language
```

Constructor Detail

GUIController

```
public GUIController()
```

Erzeugt den Controller und die dazugehörigen Untercontroller

Method Detail

getMaxVerTiles

```
public int getMaxVerTiles()
```

---

getMaxHorTiles

```
public int getMaxHorTiles()
```

---

getLanguage

```
public java.lang.String getLanguage()
```

---

setLanguage

```
public void setLanguage(java.lang.String language)
```

---

getDialogueController

```
protected DialogueController getDialogueController()
```

Gibt den Dialog-Controller zurück

Returns:

---

loadWorldAction

```
public void loadWorldAction()
```

Öffnet den Dialiog zum Laden einer Welt und lädt dann anschliepend die Welt

---

controller

Class MenuController

```
java.lang.Object
  └controller.SubController
      └controller.MenuController
```

```
public class MenuController
extends SubController
```

Kontroller für die Menüleiste

Field Summary

private MenuItemListModel	**menuModel**
private MenuView	**menuView**

Constructor Summary

MenuController() Konstruktor

Method Summary

void	**menuClicked**(MenuItemListModel menuItem) Ruft dem angelickten Menüpunkt entsprechend einen Dialog auf

Methods inherited from class controller.SubController
getDataFactory, getMaster, getView, setDataFactory, setMaster, setView

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

menuModel

```
private MenuItemListModel menuModel
```

---

menuView

```
private MenuView menuView
```

Constructor Detail

MenuController

```
public MenuController()
```

Konstruktor

Method Detail

menuClicked

```
public void menuClicked(MenuItemListModel menuItem)
```

Ruft dem angelickten Menüpunkt entsprechend einen Dialog auf

Parameters:

`menuItem` -

---

controller

Class SubController

```
java.lang.Object
  └ controller.SubController
```

Direct Known Subclasses:

DialogueController, MenuController, ToolBarController, WorldController

---

```
public abstract class SubController
extends java.lang.Object
```

Basisklasse für alle Untercontroller

Field Summary

private DataFactory	**dataFactory**
private GUIController	**master**
private View	**view**

Constructor Summary

SubController()

Method Summary

DataFactory	**getDataFactory**()
GUIController	**getMaster**()
View	**getView**()
void	**setDataFactory**(DataFactory dataFactory)
void	**setMaster**(GUIController master)
void	**setView**(View view)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

dataFactory

private DataFactory **dataFactory**

---

view

private View **view**

---

master

private GUIController **master**

Constructor Detail

SubController

public **SubController**()

Method Detail

getDataFactory

public DataFactory **getDataFactory**()

---

setDataFactory

```
public void setDataFactory(DataFactory dataFactory)
```

---

getView

```
public View getView()
```

---

setView

```
public void setView(View view)
```

---

getMaster

```
public GUIController getMaster()
```

---

setMaster

```
public void setMaster(GUIController master)
```

---

controller

Class ToolBarController

```
java.lang.Object
  └controller.SubController
      └controller.ToolBarController
```

```
public class ToolBarController
extends SubController
```

Controller für die Werkzeugleiste

Field Summary

private ToolbarView	**toolbar**

Constructor Summary

ToolBarController()

Method Summary

Methods inherited from class controller.SubController
getDataFactory, getMaster, getView, setDataFactory, setMaster, setView

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

toolbar

```
private ToolbarView toolbar
```

Constructor Detail

ToolBarController

```
public ToolBarController()
```

---

controller

Class WorldController

```
java.lang.Object
  └controller.SubController
      └controller.WorldController
```

```
public class WorldController
extends SubController
```

Controller für die Welt

Field Summary

private WorldManager	**manager**
private WorldModel	**model**
private WorldData	**worldData**
private WorldView	**worldView**

Constructor Summary

WorldController()

Konstruktor

Method Summary

void	**addTileAt**(TileModel tile, int left, int top, int rotation) Fügt eine Kachel an der Stelle left, top hinzu
void	**addVehicleAt**(VehicleModel vehicle, int left, int top, int rotation) Fügt einer Kachel ein Fahrzeug hinzu
void	**enableTrafficlight**(PlacedTileModel model)
void	**removeTile**(PlacedTileModel placedTile) Entfernt eine Kachel
void	**removeVehicle**(PlacedVehicleModel placedVehicle) Entfernt eine Kachel
void	**saveWorld**() Speichert die aktuelle Welt

Methods inherited from class controller.SubController
getDataFactory, getMaster, getView, setDataFactory, setMaster, setView

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

manager

private WorldManager **manager**

---

worldView

private WorldView **worldView**

---

worldData

private WorldData **worldData**

---

model

private WorldModel **model**

Constructor Detail

WorldController

```
public WorldController()
```

Konstruktor

Method Detail

addTileAt

```
public void addTileAt(TileModel tile,
                      int left,
                      int top,
                      int rotation)
```

Fügt eine Kachel an der Stelle left, top hinzu

Parameters:

`tile` -
`left` -
`top` -
`rotation` -

---

saveWorld

```
public void saveWorld()
```

Speichert die aktuelle Welt

---

removeTile

```
public void removeTile(PlacedTileModel placedTile)
```

Entfernt eine Kachel

Parameters:

`placedTile` -

---

removeVehicle

```
public void removeVehicle(PlacedVehicleModel placedVehicle)
```

Entfernt eine Kachel

Parameters:

`placedVehicle` -

---

addVehicleAt

```
public void addVehicleAt(VehicleModel vehicle,
                         int left,
```

```
                        int top,
                        int rotation)
```

Fügt einer Kachel ein Fahrzeug hinzu

Parameters:

`vehicle` -
`left` -
`top` -
`rotation` -

---

enableTrafficlight

```
public void enableTrafficlight(PlacedTileModel model)
```

Parameters:

`model` -

---

data.datamanager

Class Manager

```
java.lang.Object
  └ data.datamanager.Manager
```

Direct Known Subclasses:

WorldManager

```
public abstract class Manager
extends java.lang.Object
```

Basisklasse aller Manager für Daten

Constructor Summary

Manager()

Method Summary

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

Manager

```
public Manager()
```

---

data.datamanager

Class WorldManager

```
java.lang.Object
  └ data.datamanager.Manager
      └ data.datamanager.WorldManager
```

```
public class WorldManager
extends Manager
```

Enthält die Logik zum Manipulieren einer World

Constructor Summary

WorldManager()

Method Summary

void	**saveWorld**(WorldData world, java.lang.String filename) Speichert eine Welt in die Datei filename

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

WorldManager

```
public WorldManager()
```

Method Detail

saveWorld

```
public void saveWorld(WorldData world,
                      java.lang.String filename)
```

Speichert eine Welt in die Datei filename

Parameters:

world -
filename -

---

model.planer

Class BaseTileModel

```
java.lang.Object
  └model.Model
      └model.planer.PlanerModel
          └model.planer.SourceModel
              └model.planer.BaseTileModel
```

Direct Known Subclasses:
TileModel

```
public class BaseTileModel
extends SourceModel
```

Model für eine Basis-Kachel ("leere Kachel")

Field Summary

private WorldModel	**baseTile**

Constructor Summary

BaseTileModel()

Method Summary

Methods inherited from class model.planer.SourceModel
getSource, setSource

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

baseTile

```
private WorldModel baseTile
```

Constructor Detail

BaseTileModel

```
public BaseTileModel()
```

---

model.planer

Class CurveModel

```
java.lang.Object
  └ model.Model
      └ model.planer.PlanerModel
          └ model.planer.RouteModel
              └ model.planer.StraightModel
                  └ model.planer.CurveModel
```

```
public class CurveModel
extends StraightModel
```

Model für ein Kurvenstück.

Field Summary

private LocationModel	**corner** "Corner" gibt die Ecke an, um die sich die Kurve bewegt

Constructor Summary

CurveModel()

Method Summary

LocationModel	**getCorner**()
void	**setCorner**(LocationModel corner)

Methods inherited from class model.planer.RouteModel
getEnd, getStart, setEnd, setStart

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

corner

```
private LocationModel corner
```

"Corner" gibt die Ecke an, um die sich die Kurve bewegt

Constructor Detail

CurveModel

```
public CurveModel()
```

Method Detail

getCorner

```
public LocationModel getCorner()
```

Returns:

---

setCorner

```
public void setCorner(LocationModel corner)
```

Parameters:

corner -

---

model.planer

Class LocationModel

```
java.lang.Object
  └model.Model
      └model.planer.PlanerModel
          └model.planer.LocationModel
```

```
public class LocationModel
extends PlanerModel
```

Model für ein Start-/Endpunkt eines Strassenstückes.

Field Summary

private boolean	**trafficlight**
private java.lang.String	**type**

Constructor Summary

LocationModel()

Method Summary

java.lang.String	**getType**()
boolean	**hasTrafficLight**()
boolean	**isCenter**()
boolean	**isEast**()
boolean	**isNorth**()
boolean	**isNorthEast**()
boolean	**isNorthWest**()
boolean	**isSouth**()
boolean	**isSouthEast**()
boolean	**isSouthWest**()
boolean	**isWest**()
void	**setType**(java.lang.String type)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

type

```
private java.lang.String type
```

---

trafficlight

```
private boolean trafficlight
```

Constructor Detail

LocationModel

```
public LocationModel()
```

Method Detail

getType

```
public java.lang.String getType()
```

---

setType

```
public void setType(java.lang.String type)
```

---

hasTrafficLight

```
public boolean hasTrafficLight()
```

Returns:

---

isNorth

```
public boolean isNorth()
```

Returns:

---

isEast

```
public boolean isEast()
```

Returns:

---

isSouth

```
public boolean isSouth()
```

Returns:

---

isWest

```
public boolean isWest()
```

Returns:

---

isCenter

```
public boolean isCenter()
```

Returns:

---

isNorthEast

```
public boolean isNorthEast()
```

Returns:

---

isSouthEast

```
public boolean isSouthEast()
```

Returns:

---

isSouthWest

```
public boolean isSouthWest()
```

Returns:

---

isNorthWest

```
public boolean isNorthWest()
```

Returns:

---

model.planer

Class PlacedTileModel

```
java.lang.Object
  └ model.Model
      └ model.planer.PlanerModel
          └ model.planer.SourceModel
              └ model.planer.BaseTileModel
                  └ model.planer.TileModel
                      └ model.planer.PlacedTileModel
```

```
public class PlacedTileModel
extends TileModel
```

Model für eine platzierte Kachel

Field Summary

private int	**left**

private PlacedVehicleModel[]	**placedVehicles**
private int	**rotation**
private int	**top**
private boolean	**trafficlightEnabled**

Constructor Summary

PlacedTileModel()

Method Summary

void	**addVehicle**(PlacedVehicleModel vehicle) Fügt ein Fahrzeug einer Kachel hinzu
int	**getLeft**()
PlacedVehicleModel[]	**getPlacedVehicles**()
int	**getRotation**()
int	**getTop**()
boolean	**isTrafficlightEnabled**()
void	**next**() Schaltet die Ampel eine Phase weiter
void	**removeVehicle**(PlacedVehicleModel vehicle) Lässt ein Fahrzeug aus der Kachel nehmen
void	**setLeft**(int left)
void	**setPlacedVehicles**(PlacedVehicleModel[] placedVehicles)
void	**setRotation**(int rotation)
void	**setTop**(int top)
void	**setTrafficlightEnabled**(boolean trafficlightEnabled)

Methods inherited from class model.planer.TileModel

getDescription, getName, getRoutes, hasTrafficlight, setDescription, setName, setRoutes

Methods inherited from class model.planer.SourceModel
getSource, setSource

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

left

```
private int left
```

---

top

```
private int top
```

---

rotation

```
private int rotation
```

---

placedVehicles

```
private PlacedVehicleModel[] placedVehicles
```

---

trafficlightEnabled

```
private boolean trafficlightEnabled
```

Constructor Detail

PlacedTileModel

```
public PlacedTileModel()
```

Method Detail

getLeft

```
public int getLeft()
```

---

setLeft

```
public void setLeft(int left)
```

---

getTop

```
public int getTop()
```

---

setTop

```
public void setTop(int top)
```

---

getRotation

```
public int getRotation()
```

---

setRotation

```
public void setRotation(int rotation)
```

---

getPlacedVehicles

```
public PlacedVehicleModel[] getPlacedVehicles()
```

---

setPlacedVehicles

```
public void setPlacedVehicles(PlacedVehicleModel[] placedVehicles)
```

---

isTrafficlightEnabled

```
public boolean isTrafficlightEnabled()
```

---

setTrafficlightEnabled

```
public void setTrafficlightEnabled(boolean trafficlightEnabled)
```

---

addVehicle

```
public void addVehicle(PlacedVehicleModel vehicle)
```

Fügt ein Fahrzeug einer Kachel hinzu

Parameters:

`vehicle` -

---

removeVehicle

```
public void removeVehicle(PlacedVehicleModel vehicle)
```

Lässt ein Fahrzeug aus der Kachel nehmen

Parameters:
`vehicle` -

---

next

```
public void next()
```

Schaltet die Ampel eine Phase weiter

---

model.planer

Class PlacedTrafficlightModel

```
java.lang.Object
  └ model.Model
      └ model.planer.PlanerModel
          └ model.planer.TrafficlightModel
              └ model.planer.PlacedTrafficlightModel
```

```
public class PlacedTrafficlightModel
extends TrafficlightModel
```

Model einer platzierten Ampel

Field Summary

private TrafficlightPhase	**phase**

Constructor Summary

PlacedTrafficlightModel()

Method Summary

TrafficlightPhase	**getPhase**()
java.lang.String	**getSourceForCurrentPhase**() Gibt die Quelldatei für die aktuelle Phase zurück
java.lang.String	**getSourceForPhase**(TrafficlightPhase phase) Gibt die Quelldate für eine bestimmte Phase zurück
void	**setPhase**(TrafficlightPhase phase)

Methods inherited from class model.planer.TrafficlightModel
getGreenSource, getOffSource, getRedSource, getRedYellowSource, getYellowSource, setGreenSource, setOffSource, setRedSource, setRedYellowSource, setYellowSource

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

phase

```
private TrafficlightPhase phase
```

Constructor Detail

PlacedTrafficlightModel

```
public PlacedTrafficlightModel()
```

Method Detail

getPhase

```
public TrafficlightPhase getPhase()
```

---

setPhase

```
public void setPhase(TrafficlightPhase phase)
```

---

getSourceForCurrentPhase

```
public java.lang.String getSourceForCurrentPhase()
```

Gibt die Quelldatei für die aktuelle Phase zurück

Returns:

---

getSourceForPhase

```
public java.lang.String getSourceForPhase(TrafficlightPhase phase)
```

Gibt die Quelldate für eine bestimmte Phase zurück

Parameters:

phase -

Returns:

---

model.planer

Class PlacedVehicleModel

```
java.lang.Object
  └ model.Model
      └ model.planer.PlanerModel
          └ model.planer.SourceModel
              └ model.planer.VehicleModel
                  └ model.planer.PlacedVehicleModel
```

```
public class PlacedVehicleModel
extends VehicleModel
```

Model für ein platziertes Fahrzeug

Field Summary

private int	**left**
private int	**rotation**
private PlacedTileModel	**tile**
private int	**top**

Constructor Summary

PlacedVehicleModel()

Method Summary

int	**getLeft**()
int	**getRotation**()
PlacedTileModel	**getTile**()
int	**getTop**()
void	**setLeft**(int left)
void	**setRotation**(int rotation)

void	**setTile**(PlacedTileModel tile)
void	**setTop**(int top)

Methods inherited from class model.planer.VehicleModel
getDescription, getName, getSpeed, setDescription, setName, setSpeed

Methods inherited from class model.planer.SourceModel
getSource, setSource

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

left

```
private int left
```

---

top

```
private int top
```

---

rotation

```
private int rotation
```

---

tile

```
private PlacedTileModel tile
```

Constructor Detail

PlacedVehicleModel

```
public PlacedVehicleModel()
```

Method Detail

getLeft

```
public int getLeft()
```

---

setLeft

```
public void setLeft(int left)
```

---

getTop

```
public int getTop()
```

---

setTop

```
public void setTop(int top)
```

---

getRotation

```
public int getRotation()
```

---

setRotation

```
public void setRotation(int rotation)
```

---

getTile

```
public PlacedTileModel getTile()
```

---

setTile

```
public void setTile(PlacedTileModel tile)
```

---

model.planer

Class PlanerModel

```
java.lang.Object
  └model.Model
      └model.planer.PlanerModel
```

Direct Known Subclasses:
LocationModel, RouteModel, SourceModel, TrafficlightModel, WorldModel

---

```
public abstract class PlanerModel
extends Model
```

Basisklasse für alle Planer-Models

Constructor Summary

PlanerModel()

Method Summary

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

PlanerModel

```
public PlanerModel()
```

---

model.planer

Class RouteModel

```
java.lang.Object
  └ model.Model
      └ model.planer.PlanerModel
          └ model.planer.RouteModel
```

Direct Known Subclasses:

StraightModel

```
public class RouteModel
extends PlanerModel
```

Model für ein Strassenstück

Field Summary

private LocationModel	**end**
private LocationModel	**start**

Constructor Summary

RouteModel()

Method Summary

LocationModel	**getEnd**()
LocationModel	**getStart**()
void	**setEnd**(LocationModel location)
void	**setStart**(LocationModel location)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

start

```
private LocationModel start
```

---

end

```
private LocationModel end
```

Constructor Detail

RouteModel

```
public RouteModel()
```

Method Detail

getStart

```
public LocationModel getStart()
```

Returns:

---

setStart

```
public void setStart(LocationModel location)
```

Parameters:

location -

---

getEnd

```
public LocationModel getEnd()
```

Returns:

---

setEnd

```
public void setEnd(LocationModel location)
```

Parameters:

location -

---

model.planer

Class SourceModel

```
java.lang.Object
  └ model.Model
      └ model.planer.PlanerModel
          └ model.planer.SourceModel
```

Direct Known Subclasses:

BaseTileModel, TrashModel, VehicleModel

```
public abstract class SourceModel
extends PlanerModel
```

Basisklasse für alle Models, die eine Quelle besitzen

Field Summary

private java.lang.String	**source**

Constructor Summary

SourceModel()

Method Summary

java.lang.String	**getSource**()
void	**setSource**(java.lang.String source)

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

source

```
private java.lang.String source
```

Constructor Detail

SourceModel

```
public SourceModel()
```

Method Detail

getSource

```
public java.lang.String getSource()
```

---

setSource

```
public void setSource(java.lang.String source)
```

---

model.planer

Class StraightModel

```
java.lang.Object
  └ model.Model
      └ model.planer.PlanerModel
          └ model.planer.RouteModel
              └ model.planer.StraightModel
```

Direct Known Subclasses:

CurveModel

```
public class StraightModel
extends RouteModel
```

Model für ein gerades Straßenstück

Constructor Summary

StraightModel()

Method Summary

Methods inherited from class model.planer.RouteModel
getEnd, getStart, setEnd, setStart

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

StraightModel

```
public StraightModel()
```

---

model.planer

Class TileModel

```
java.lang.Object
  └ model.Model
      └ model.planer.PlanerModel
          └ model.planer.SourceModel
              └ model.planer.BaseTileModel
                  └ model.planer.TileModel
```

Direct Known Subclasses:

PlacedTileModel

```
public class TileModel
extends BaseTileModel
```

Model für eine Kachel mir Straßen

Field Summary

private java.lang.String	**description**
private java.lang.String	**name**
private java.util.ArrayList<RouteModel>	**routes**

Constructor Summary

TileModel()

Method Summary

java.lang.String	**getDescription**()
java.lang.String	**getName**()
RouteModel[]	**getRoutes**()
boolean	**hasTrafficlight**() Gibt an, ob es eine Ampel-Version dieser Kachel gibt Leitet sich aus allen Strecken dieser Kachel ab getRoutes(), und ob deren Punkte RouteModel.getStart(), RouteModel.getEnd() eine Ampel haben LocationModel.hasTrafficLight()
void	**setDescription**(java.lang.String description)
void	**setName**(java.lang.String name)
void	**setRoutes**(RouteModel[] routes)

Methods inherited from class model.planer.SourceModel
getSource, setSource

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

name

private java.lang.String **name**

---

description

private java.lang.String **description**

---

routes

private java.util.ArrayList<RouteModel> **routes**

Constructor Detail

TileModel

```
public TileModel()
```

Method Detail

getName

```
public java.lang.String getName()
```

---

setName

```
public void setName(java.lang.String name)
```

---

getDescription

```
public java.lang.String getDescription()
```

---

setDescription

```
public void setDescription(java.lang.String description)
```

---

getRoutes

```
public RouteModel[] getRoutes()
```

Returns:

---

setRoutes

```
public void setRoutes(RouteModel[] routes)
```

Parameters:

routes -

---

hasTrafficlight

```
public boolean hasTrafficlight()
```

Gibt an, ob es eine Ampel-Version dieser Kachel gibt

Leitet sich aus allen Strecken dieser Kachel ab `getRoutes()`, und ob deren Punkte `RouteModel.getStart()`, `RouteModel.getEnd()` eine Ampel haben `LocationModel.hasTrafficLight()`

Returns:

---

model.planer

Class TrafficlightModel

```
java.lang.Object
  └ model.Model
      └ model.planer.PlanerModel
          └ model.planer.TrafficlightModel
```

Direct Known Subclasses:
PlacedTrafficlightModel

```
public class TrafficlightModel
extends PlanerModel
```

Model einer Ampel

Field Summary

private java.lang.String	**greenSource**
private java.lang.String	**offSource**
private java.lang.String	**redSource**
private java.lang.String	**redYellowSource**
private java.lang.String	**yellowSource**

Constructor Summary

TrafficlightModel()

Method Summary

java.lang.String	**getGreenSource**()
java.lang.String	**getOffSource**()
java.lang.String	**getRedSource**()
java.lang.String	**getRedYellowSource**()
java.lang.String	**getYellowSource**()
void	**setGreenSource**(java.lang.String greenSource)

void	**setOffSource**(java.lang.String offSource)
void	**setRedSource**(java.lang.String redSource)
void	**setRedYellowSource**(java.lang.String redYellowSource)
void	**setYellowSource**(java.lang.String yellowSource)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

offSource

private java.lang.String **offSource**

---

redSource

private java.lang.String **redSource**

---

redYellowSource

private java.lang.String **redYellowSource**

---

greenSource

private java.lang.String **greenSource**

---

yellowSource

private java.lang.String **yellowSource**

Constructor Detail

TrafficlightModel

public **TrafficlightModel**()

Method Detail

getOffSource

```
public java.lang.String getOffSource()
```

---

setOffSource

```
public void setOffSource(java.lang.String offSource)
```

---

getRedSource

```
public java.lang.String getRedSource()
```

---

setRedSource

```
public void setRedSource(java.lang.String redSource)
```

---

getRedYellowSource

```
public java.lang.String getRedYellowSource()
```

---

setRedYellowSource

```
public void setRedYellowSource(java.lang.String redYellowSource)
```

---

getGreenSource

```
public java.lang.String getGreenSource()
```

---

setGreenSource

```
public void setGreenSource(java.lang.String greenSource)
```

---

getYellowSource

```
public java.lang.String getYellowSource()
```

---

setYellowSource

```
public void setYellowSource(java.lang.String yellowSource)
```

---

model.planer

Class TrashModel

```
java.lang.Object
  └model.Model
      └model.planer.PlanerModel
          └model.planer.SourceModel
              └model.planer.TrashModel
```

```
public class TrashModel
extends SourceModel
```

Model für den Mülleimer

Constructor Summary

TrashModel()

Method Summary

Methods inherited from class model.planer.SourceModel
getSource, setSource

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

TrashModel

```
public TrashModel()
```

---

model.planer

Class VehicleModel

```
java.lang.Object
  └model.Model
      └model.planer.PlanerModel
          └model.planer.SourceModel
              └model.planer.VehicleModel
```

Direct Known Subclasses:
PlacedVehicleModel

```
public class VehicleModel
extends SourceModel
```

Model für ein Auto

Field Summary

private java.lang.String	**description**
private java.lang.String	**name**
private float	**speed**

Constructor Summary

VehicleModel()

Method Summary

java.lang.String	**getDescription**()
java.lang.String	**getName**()
float	**getSpeed**()
void	**setDescription**(java.lang.String description)
void	**setName**(java.lang.String name)
void	**setSpeed**(float speed)

Methods inherited from class model.planer.SourceModel
getSource, setSource

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

name

private java.lang.String **name**

---

description

```
private java.lang.String description
```

---

speed

```
private float speed
```

Constructor Detail

VehicleModel

```
public VehicleModel()
```

Method Detail

getName

```
public java.lang.String getName()
```

---

setName

```
public void setName(java.lang.String name)
```

---

getDescription

```
public java.lang.String getDescription()
```

---

setDescription

```
public void setDescription(java.lang.String description)
```

---

getSpeed

```
public float getSpeed()
```

---

setSpeed

```
public void setSpeed(float speed)
```

---

model.planer

Class WorldModel

```
java.lang.Object
  └ model.Model
      └ model.planer.PlanerModel
```

└ **model.planer.WorldModel**

```
public class WorldModel
extends PlanerModel
```

Model für eine Welt

Field Summary

private int	**height**
private java.util.ArrayList<PlacedTileModel>	**placedTiles**
private java.util.ArrayList<TileModel>	**tiles**
private java.util.ArrayList<VehicleModel>	**vehicles**
private int	**width**

Constructor Summary

WorldModel()

Method Summary

void	**addPlacedTile**(PlacedTileModel tile)
BaseTileModel	**getBasetile**()
int	**getHeight**()
PlacedTileModel[]	**getPlacedTiles**()
TileModel[]	**getTiles**() Gibt die Kacheln einer Welt zurück
VehicleModel[]	**getVehicles**()
int	**getWidth**()
void	**removeFromPlacedTiles**(PlacedTileModel tile)
void	**removePlacedTile**(PlacedTileModel placedTile) Entfernt die Kachel placedTile aus der Welt
void	**setBaseTile**(BaseTileModel baseTile)

void	**setHeight**(int height)
void	**setPlacedTiles**(PlacedTileModel[] placedTiles)
void	**setTiles**(TileModel[] tiles)
void	**setVehicles**(VehicleModel[] vehicles)
void	**setWidth**(int width)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

height

private int **height**

---

width

private int **width**

---

vehicles

private java.util.ArrayList<VehicleModel> **vehicles**

---

placedTiles

private java.util.ArrayList<PlacedTileModel> **placedTiles**

---

tiles

private java.util.ArrayList<TileModel> **tiles**

Constructor Detail

WorldModel

public **WorldModel**()

Method Detail

getHeight

```
public int getHeight()
```

---

setHeight

```
public void setHeight(int height)
```

---

getWidth

```
public int getWidth()
```

---

setWidth

```
public void setWidth(int width)
```

---

getBasetile

```
public BaseTileModel getBasetile()
```

Returns:

---

setBaseTile

```
public void setBaseTile(BaseTileModel baseTile)
```

Parameters:

`baseTile` -

---

getTiles

```
public TileModel[] getTiles()
```

Gibt die Kacheln einer Welt zurück

Returns:

---

setTiles

```
public void setTiles(TileModel[] tiles)
```

Parameters:

`tiles` -

---

getVehicles

```
public VehicleModel[] getVehicles()
```

Returns:

---

setVehicles

```
public void setVehicles(VehicleModel[] vehicles)
```

Parameters:
vehicles -

---

getPlacedTiles

```
public PlacedTileModel[] getPlacedTiles()
```

Returns:

---

setPlacedTiles

```
public void setPlacedTiles(PlacedTileModel[] placedTiles)
```

Parameters:
placedTiles -

---

removeFromPlacedTiles

```
public void removeFromPlacedTiles(PlacedTileModel tile)
```

Parameters:
tile -

---

removePlacedTile

```
public void removePlacedTile(PlacedTileModel placedTile)
```

Entfernt die Kachel placedTile aus der Welt

Parameters:
placedTile -

---

addPlacedTile

```
public void addPlacedTile(PlacedTileModel tile)
```

Parameters:
tile -

---

model

Class Model

```
java.lang.Object
  └model.Model
```

Direct Known Subclasses:
DialogueModel, MenuItemListModel, PlanerModel

```
public abstract class Model
extends java.lang.Object
```

Basisklasse für alle Models

Constructor Summary

`Model()`

Method Summary

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

Model

```
public Model()
```

---

data.datasource.xml

Class LanguageXMLSource

```
java.lang.Object
  └data.datasource.xml.XMLSource
      └data.datasource.xml.LanguageXMLSource
```

```
public class LanguageXMLSource
extends XMLSource
```

XML-Quelle zur Internationalisierung

Constructor Summary

LanguageXMLSource()

Method Summary

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

LanguageXMLSource

```
public LanguageXMLSource()
```

---

data.datasource.xml

Class TileXMLSource

```
java.lang.Object
  └ data.datasource.xml.XMLSource
      └ data.datasource.xml.TileXMLSource
```

```
public class TileXMLSource
extends XMLSource
```

XML-Quelle für Kacheln

Constructor Summary

TileXMLSource()

Method Summary

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

TileXMLSource

```
public TileXMLSource()
```

---

data.datasource.xml

Class WorldXMLSource

```
java.lang.Object
  └ data.datasource.xml.XMLSource
      └ data.datasource.xml.WorldXMLSource
```

```
public class WorldXMLSource
extends XMLSource
```

XML-Quelle einer Welt

Constructor Summary

WorldXMLSource()

Method Summary

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

WorldXMLSource

```
public WorldXMLSource()
```

---

data.datasource.xml

Class XMLDataSource

```
java.lang.Object
  └ data.datasource.xml.XMLDataSource
```

All Implemented Interfaces:

DataSource

```
public class XMLDataSource
extends java.lang.Object
implements DataSource
```

XML-Datenquelle

Field Summary

private LanguageXMLSource	**language**
private TileXMLSource	**tile**
private WorldXMLSource	**world**

Constructor Summary

XMLDataSource()

Method Summary

TextData[]	**getTexts**(java.lang.String language) Lädt die Texte aus der lang.xml
TileData[]	**getTiles**() Lädt die Liste der Kacheln aus der tiles.xml
VehicleData[]	**getVehicles**() Lädt die Liste der Fahrzeuge aus der tiles.xml
WorldData	**getWorld**(java.lang.String filename)
void	**save**(DataObject dataObject) Speichert ein Datenobjekt als XML

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

tile

private TileXMLSource **tile**

---

language

private LanguageXMLSource **language**

---

world

private WorldXMLSource **world**

Constructor Detail

XMLDataSource

```
public XMLDataSource()
```

Method Detail

getVehicles

```
public VehicleData[] getVehicles()
```

Lädt die Liste der Fahrzeuge aus der tiles.xml

Specified by:
getVehicles in interface DataSource

Returns:

---

getTiles

```
public TileData[] getTiles()
```

Lädt die Liste der Kacheln aus der tiles.xml

Specified by:
getTiles in interface DataSource

Returns:

---

save

```
public void save(DataObject dataObject)
```

Speichert ein Datenobjekt als XML

Specified by:
save in interface DataSource

Parameters:
dataObject -

---

getWorld

```
public WorldData getWorld(java.lang.String filename)
```

Specified by:
getWorld in interface DataSource

Parameters:

filename -

Returns:

---

getTexts

```
public TextData[] getTexts(java.lang.String language)
```

Lädt die Texte aus der lang.xml

Specified by:
getTexts in interface DataSource

Parameters:
language -

Returns:

---

data.datasource.xml

Class XMLSource

```
java.lang.Object
  └ data.datasource.xml.XMLSource
```

Direct Known Subclasses:
LanguageXMLSource, TileXMLSource, WorldXMLSource

```
public abstract class XMLSource
extends java.lang.Object
```

Basisklasse aller XML-Quellen

Constructor Summary

XMLSource()

Method Summary

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

XMLSource

```
public XMLSource()
```

data

Class DataFactory

```
java.lang.Object
  └data.DataFactory
```

All Implemented Interfaces:

DataSource

```
public abstract class DataFactory
extends java.lang.Object
implements DataSource
```

Erzeugt `DataObject`

Field Summary

private DataSource	**dataSource**

Constructor Summary

DataFactory()

Method Summary

BaseTileData	**getBaseTile**() Gibt die Standard-Basiskacheln zurück
DataSource	**getDataSource**()
WorldData	**getNewWorld**(int maxHorTiles, int maxVerTiles) Erzeugt ein neues Welt-Objekt mit der angegeben Breite und Höhe in Kacheln
TextData	**getText**(java.lang.String id, java.lang.String language) Gibt den übersetzten Text mit der ID id zurück
TextData[]	**getTexts**(java.lang.String language) Gibt die (übersetzten Texte zurück)
TileData[]	**getTiles**() Gibt die Standard-Liste mit allen Kacheln zurück
TrafficlightData	**getTrafficlight**() Gibt die Standard-Ampel zurück
VehicleData[]	**getVehicles**() Gibt die Standard-Liste mit allen Fahrzeugen zurück
WorldData	**getWorld**(java.lang.String filename)
void	

	save(DataObject dataObject) Speichert ein Daten-Objekt
void	**setDataSource**(DataSource dataSource)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

dataSource

private DataSource **dataSource**

Constructor Detail

DataFactory

public **DataFactory**()

Method Detail

getDataSource

public DataSource **getDataSource**()

---

setDataSource

public void **setDataSource**(DataSource dataSource)

---

getVehicles

public VehicleData[] **getVehicles**()

Gibt die Standard-Liste mit allen Fahrzeugen zurück

Specified by:

getVehicles in interface DataSource

Returns:

---

getTiles

public TileData[] **getTiles**()

Gibt die Standard-Liste mit allen Kacheln zurück

Specified by:
`getTiles` in interface `DataSource`

Returns:

---

save

```
public void save(DataObject dataObject)
```

Speichert ein Daten-Objekt

Specified by:
`save` in interface `DataSource`

Parameters:
`dataObject` -

---

getNewWorld

```
public WorldData getNewWorld(int maxHorTiles,
                             int maxVerTiles)
```

Erzeugt ein neues Welt-Objekt mit der angegeben Breite und Höhe in Kacheln

Parameters:
`maxHorTiles` -
`maxVerTiles` -
Returns:

---

getBaseTile

```
public BaseTileData getBaseTile()
```

Gibt die Standard-Basiskacheln zurück

Returns:

---

getTrafficlight

```
public TrafficlightData getTrafficlight()
```

Gibt die Standard-Ampel zurück

Returns:

---

getTexts

```
public TextData[] getTexts(java.lang.String language)
```

Gibt die (übersetzten Texte zurück)

Specified by:
`getTexts` in interface `DataSource`

Parameters:
`language` -
Returns:

---

getText

```
public TextData getText(java.lang.String id,
                        java.lang.String language)
```

Gibt den übersetzten Text mit der ID id zurück

Parameters:
`id` -
`language` -
Returns:

---

getWorld

```
public WorldData getWorld(java.lang.String filename)
```

Specified by:
`getWorld` in interface `DataSource`

Parameters:
`filename` -
Returns:

---

view

Class DialogView

```
java.lang.Object
  └ view.View
      └ view.DialogView
```

Direct Known Subclasses:
ErrorDialogueView, HelpDialogueView, LoadDialogueView, NewDialogueView

---

```
public abstract class DialogView
extends View
```

Basisklasse für Dialoge

Field Summary

private	

int	**height** Höhe des Dialoges in Prozent
private boolean	**visible**
private int	**width** Breite des Dialoges in Prozent

Constructor Summary

DialogView()

Method Summary

int	**getHeight**()
int	**getWidth**()
void	**hide**() Verbirgt den Dialog
boolean	**isVisible**()
void	**setHeight**(int height)
void	**setVisible**(boolean visible)
void	**setWidth**(int width)
void	**show**() Zeigt den Dialog an

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

visible

```
private boolean visible
```

---

width

```
private int width
```

Breite des Dialoges in Prozent

---

height

```
private int height
```

Höhe des Dialoges in Prozent

Constructor Detail

DialogView

```
public DialogView()
```

Method Detail

isVisible

```
public boolean isVisible()
```

---

setVisible

```
public void setVisible(boolean visible)
```

---

getWidth

```
public int getWidth()
```

---

setWidth

```
public void setWidth(int width)
```

---

getHeight

```
public int getHeight()
```

---

setHeight

```
public void setHeight(int height)
```

---

show

```
public void show()
```

Zeigt den Dialog an

---

hide

```
public void hide()
```

Verbirgt den Dialog

---

view

Class ErrorDialogueView

```
java.lang.Object
  └ view.View
      └ view.DialogView
          └ view.ErrorDialogueView
```

```
public class ErrorDialogueView
extends DialogView
```

View für den Fehler-Dialog

Field Summary

private ErrorDialogueModel	**model**

Constructor Summary

ErrorDialogueView()

Method Summary

void	**setModel**(ErrorDialogueModel model)

Methods inherited from class view.DialogView
getHeight, getWidth, hide, isVisible, setHeight, setVisible, setWidth, show

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

model

```
private ErrorDialogueModel model
```

Constructor Detail

ErrorDialogueView

```
public ErrorDialogueView()
```

Method Detail

setModel

```
public void setModel(ErrorDialogueModel model)
```

---

view

Class HelpDialogueView

```
java.lang.Object
  └ view.View
      └ view.DialogView
          └ view.HelpDialogueView
```

```
public class HelpDialogueView
extends DialogView
```

View für den Hilfe-Dialog

Field Summary

private HelpDialogueModel	**model**

Constructor Summary

HelpDialogueView()

Method Summary

void	**setModel**(HelpDialogueModel model)

Methods inherited from class view.DialogView
getHeight, getWidth, hide, isVisible, setHeight, setVisible, setWidth, show

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

model

```
private HelpDialogueModel model
```

Constructor Detail

HelpDialogueView

```
public HelpDialogueView()
```

Method Detail

setModel

```
public void setModel(HelpDialogueModel model)
```

---

view

Class LoadDialogueView

```
java.lang.Object
  └ view.View
      └ view.DialogView
          └ view.LoadDialogueView
```

```
public class LoadDialogueView
extends DialogView
```

View für den Welt-Laden-Dialog

Field Summary

private LoadDialogueModel	**model**

Constructor Summary

LoadDialogueView()

Method Summary

void	**setModel**(LoadDialogueModel model)

Methods inherited from class view.DialogView
getHeight, getWidth, hide, isVisible, setHeight, setVisible, setWidth, show

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

model

```
private LoadDialogueModel model
```

Constructor Detail

LoadDialogueView

```
public LoadDialogueView()
```

Method Detail

setModel

```
public void setModel(LoadDialogueModel model)
```

---

view

Class MenuView

```
java.lang.Object
  └ view.View
      └ view.MenuView
```

```
public class MenuView
extends View
```

View für das Menü

Field Summary

private MenuItemListModel	**model**

Constructor Summary

MenuView()

Method Summary

void	**setModel**(MenuItemListModel model)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

model

```
private MenuItemListModel model
```

Constructor Detail

MenuView

```
public MenuView()
```

Method Detail

setModel

```
public void setModel(MenuItemListModel model)
```

---

view

Class NewDialogueView

```
java.lang.Object
  └ view.View
      └ view.DialogView
          └ view.NewDialogueView
```

```
public class NewDialogueView
extends DialogView
```

View für den Neue-Welt-Dialog

Field Summary

private	_____

NewDialogueModel	**model**

Constructor Summary

NewDialogueView()

Method Summary

void	**setModel**(NewDialogueModel model)

Methods inherited from class view.DialogView
getHeight, getWidth, hide, isVisible, setHeight, setVisible, setWidth, show

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

model

```
private NewDialogueModel model
```

Constructor Detail

NewDialogueView

```
public NewDialogueView()
```

Method Detail

setModel

```
public void setModel(NewDialogueModel model)
```

---

view

Class SaveDialogueView

```
java.lang.Object
  └ view.SaveDialogueView
```

```
public class SaveDialogueView
```

extends java.lang.Object

View für den Welt-Speichern-Dialog

Field Summary

private SaveDialogueModel	**model**

Constructor Summary

SaveDialogueView()

Method Summary

java.lang.String	**getFilename**() Gibt den ausgewählten Dateinamen zurück
void	**setModel**(SaveDialogueModel model)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

model

private SaveDialogueModel **model**

Constructor Detail

SaveDialogueView

public **SaveDialogueView**()

Method Detail

setModel

public void **setModel**(SaveDialogueModel model)

---

getFilename

public java.lang.String **getFilename**()

Gibt den ausgewählten Dateinamen zurück

Returns:

---

view

Class ToolbarView

```
java.lang.Object
  └ view.View
      └ view.ToolbarView
```

```
public class ToolbarView
extends View
```

View für die Werkzeugleiste

Field Summary

private TileModel[]	**tiles**
private TrashModel	**trash**
private VehicleModel[]	**vehicles**

Constructor Summary

ToolbarView()

Method Summary

void	**setTiles**(TileModel[] tiles)
void	**setTrash**(TrashModel trash)
void	**setVehicles**(VehicleModel[] vehicles)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

trash

```
private TrashModel trash
```

---

tiles

```
private TileModel[] tiles
```

---

vehicles

```
private VehicleModel[] vehicles
```

Constructor Detail

ToolbarView

```
public ToolbarView()
```

Method Detail

setTrash

```
public void setTrash(TrashModel trash)
```

---

setTiles

```
public void setTiles(TileModel[] tiles)
```

---

setVehicles

```
public void setVehicles(VehicleModel[] vehicles)
```

---

view

Class View

```
java.lang.Object
  └ view.View
```

Direct Known Subclasses:
AppView, DialogView, MenuView, ToolbarView, WorldTileView, WorldView

---

```
public abstract class View
extends java.lang.Object
```

Basisklasse für alle Views

Constructor Summary

View()

Method Summary

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

View

public **View**()

---

view

Class WorldTileView

java.lang.Object
  └ view.View
    └ **view.WorldTileView**

---

public class **WorldTileView**
extends View

Verwaltet die Ansicht der einzelnen Kacheln

Wenn die Ampel-Version der Kachel aktiv ist PlacedTileModel.isTrafficlightEnabled() werden zu allen Strecken TileModel.getRoutes(), die über eine Ampel verfügen LocationModel.hasTrafficLight() Ampeln gezeichnet.

Dies geschieht, in dem in Fahrtrichtung Rechts neben den Endpunkt einer Strecke RouteModel die Ampel in der jeweils aktuellen Phase PlacedTrafficlightModel.getPhase() eine Grafik gezeichnet wird PlacedTrafficlightModel.getSourceForCurrentPhase().

Field Summary

private PlacedTileModel	**model**
private PlacedTrafficlightModel[]	**trafficLights**
private WorldView	**world**

Constructor Summary

WorldTileView()

Method Summary

PlacedTileModel	**getModel**()
WorldView	**getWorld**()
void	**setModel**(PlacedTileModel model)
void	**setWorld**(WorldView world)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

world

private WorldView **world**

---

model

private PlacedTileModel **model**

---

trafficLights

private PlacedTrafficlightModel[] **trafficLights**

Constructor Detail

WorldTileView

public **WorldTileView**()

Method Detail

getWorld

public WorldView ()

getWorld

---

setWorld

```
public void setWorld(WorldView world)
```

---

getModel

```
public PlacedTileModel getModel()
```

---

setModel

```
public void setModel(PlacedTileModel model)
```

---

view

Class WorldView

```
java.lang.Object
  └ view.View
      └ view.WorldView
```

```
public class WorldView
extends View
```

Verwaltet die Kartenansicht

Field Summary

private int	**height**
private WorldModel	**model**
private WorldTileView[]	**tiles**
private int	**width**

Constructor Summary

WorldView()

Method Summary

int	**getHeight**()

WorldModel	**getModel**()
int	**getWidth**()
void	**setHeight**(int height)
void	**setModel**(WorldModel model)
void	**setWidth**(int width)

Methods inherited from class java.lang.Object
clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Field Detail

width

private int **width**

---

height

private int **height**

---

model

private WorldModel **model**

---

tiles

private WorldTileView[] **tiles**

Constructor Detail

WorldView

public **WorldView**()

Method Detail

getWidth

```
public int getWidth()
```

---

setWidth

```
public void setWidth(int width)
```

---

getHeight

```
public int getHeight()
```

---

setHeight

```
public void setHeight(int height)
```

---

getModel

```
public WorldModel getModel()
```

---

setModel

```
public void setModel(WorldModel model)
```
