

# Package edu.napier.geo.publicTransport.InformationStorage

## Class Summary

[InformationStorage](#)

[JourneyInformation](#)

edu.napier.geo.publicTransport.InformationStorage

## Class InformationStorage

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.InformationStorage.InformationStorage
```

**All Implemented Interfaces:**

java.io.Serializable

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

```
public class InformationStorage
extends java.lang.Object
implements java.io.Serializable
```

## Fields

### serialVersionUID

```
private static final long serialVersionUID
    2017/02/28
```

### storedJourneysInformation

```
private java.util.ArrayList storedJourneysInformation
```

## Constructors

### InformationStorage

```
public InformationStorage()
```

## Methods

### addRouteLocationsOfString

```
private java.util.ArrayList addRouteLocationsOfString(java.util.ArrayList  
listToAddLocationsTo,  
                                                    java.lang.String string)
```

internal method to add the Locations (which are in a string in the path) to the list of Locations of a route.

**Parameters:**

listToAddLocationsTo - List of Locations, where the Locations of the part should be added to  
string - String of coordinates of the Locations which should be added to the ArrayList.  
Coordinates have to be comma separated as well as locations, "[", "]" and spaces in the string are ignored. Coordinates in format: "lat,lon,lat,lon,..."

**Returns:**

ArrayList of Location objects that has been given. Contains the objects it contained when given + the Locations from the String

---

### getAverageNumberOfLegs

```
public double getAverageNumberOfLegs(edu.napier.geo.common.Location from,  
                                     edu.napier.geo.common.Location to)
```

gives back the average number of Legs of a Journey from and to a Location.

**Parameters:**

from - Location object  
to - Location object

**Returns:**

double of the average number of Legs. Returns -1, if no JourneyInformation object from and to the given Locations in the InformationStorage.

---

### getAverageTimeMSForJourney

```
public double getAverageTimeMSForJourney(edu.napier.geo.common.Location from,  
                                           edu.napier.geo.common.Location to)
```

Gives back the average time for a Journey (in MS) from and to a Location

**Parameters:**

from - Location object  
to - Location object

**Returns:**

double of the average time in MS for the Journey. Returns -1, if no JourneyInformation object from and to the given Locations in the InformationStorage.

## getAverageWalkingDistanceKMForJourney

```
public double  
getAverageWalkingDistanceKMForJourney(edu.napier.geo.common.Location from,  
edu.napier.geo.common.Location to)
```

Gives back the average Walking distance in KM for a Journey from and to a Location

**Parameters:**

from - Location object

to - Location object

**Returns:**

double of the average walking distance in KM. returns -1, if no JourneyInformation for the given Locations in the InformationStorage.

---

## getDistanceOfTflJourney

```
private int getDistanceOfTflJourney(TflJourney tflJourney)
```

Gives back the distance of a given TflJourney

**Parameters:**

tflJourney - TflJourney of which the method should give the distance back

**Returns:**

Integer of the distance of a TflJourney in m

---

## getJourneyInformation

```
public JourneyInformation getJourneyInformation(edu.napier.geo.common.Location  
from,  
edu.napier.geo.common.Location  
to)
```

Gives back the JourneyInformation object for a journey from and to a Location

**Parameters:**

from - Location object

to - Location object

**Returns:**

the JourneyInformation object to a Journey from and to a Location. Returns null, if there is no Journey from and to the given Locations in the InformationStorage.

---

## getRouteLocationsOfJourney

```
public java.util.ArrayList  
getRouteLocationsOfJourney(edu.napier.geo.common.Location from,  
edu.napier.geo.common.Location to)
```

Gives back the Route of a Journey from and to a Location as an ArrayList of Locations

**Parameters:**

from - Location object  
to - Location object

**Returns:**

ArrayList of Location objects of the Route of the Journey. Returns null, if no JourneyInformation object from and to the given Locations in the InformationStorage.

---

## getRouteLocationsOfJourney

```
public java.util.ArrayList getRouteLocationsOfJourney(TflJourney journey)
```

gives back an ArrayList of Locations. Uses Legs (departure and arrival point) and the list of coordinates of the path of the legs.

**Parameters:**

journey - TflJourney

**Returns:**

ArrayList of Locations objects of all Locations of this route incl. Locations in the path.

---

## getStoredJourneyInformation

```
public java.util.ArrayList getStoredJourneyInformation()
```

Gives back all stored JourneyInformation of this InformationStorage as an ArrayList

**Returns:**

ArrayList of JourneyInformation of all JourneyInformation of this InformationStorage

---

## getTflJourneys

```
public java.util.ArrayList getTflJourneys(edu.napier.geo.common.Location from,  
                                           edu.napier.geo.common.Location to)
```

Gives back a ArrayList of TflJourneys of a Journey from and to a Location.

**Parameters:**

from - Location object

to - Location object

**Returns:**

ArrayList of TflJourney objects of the Journey. Returns null, if no JourneyInformation object from and to the given Locations in the InformationStorage.

---

## storeInformation

```
public void storeInformation(ResponseTfL responseTfL)
```

Gets all information of a JourneyInformation out of this object for each journey of the given responseTfl object

**Parameters:**

responseTfL - a responseTfl Object that should be stored in the informationStorage

---

## storeJourney

```
private void storeJourney(TflJourney tflJourney)
```

gets the information from the journey and stores it in the information Storage. If a journey from and to the start and end Locations exists, it adds the information, that are stored in ArrayLists, otherwise it creates a new JourneyInformation object and stores the information in it. RouteLocations are only stored for the first time by calling the constructor. To get the RouteLocations for other journeys, please use the getJourney method and seperate the locations out of it.

**Parameters:**

tflJourney - TflJourney to store

---

## storeJourneys

```
private void  
storeJourneys(edu.napier.geo.publicTransport.Response.TflJourney[]  
tflJourneys)
```

Gets all information of a JourneyInformation out of this objects for each journey of the given Array

**Parameters:**

tflJourneys - Array of TflJourneys to store

---

## toString

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

### Returns:

String of information about this object incl. toString of all the JourneyInformation stored in this object.

### Overrides:

toString in class java.lang.Object

---

edu.napier.geo.publicTransport.InformationStorage

## Class JourneyInformation

```
java.lang.Object
|
+--edu.napier.geo.common.Journey
    |
    +--edu.napier.geo.publicTransport.InformationStorage.JourneyInformation
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class JourneyInformation
extends edu.napier.geo.common.Journey
implements java.io.Serializable
```

## Fields

### averageNumberOfLegs

```
private double averageNumberOfLegs
```

---

### distancesMeter

```
private java.util.ArrayList distancesMeter
```

---

### legs

```
private java.util.ArrayList legs
```

---

## routeLocations

```
private java.util.ArrayList routeLocations
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

---

## tflJourneys

```
private java.util.ArrayList tflJourneys
```

---

## timesMS

```
private java.util.ArrayList timesMS
```

## Constructors

### JourneyInformation

```
public JourneyInformation(edu.napier.geo.common.Location from,  
                           edu.napier.geo.common.Location to,  
                           int timeMinutes,  
                           int numberOfLegs,  
                           int distanceMeter,  
                           TflJourney tflJourney,  
                           java.util.ArrayList routeLocations)
```

Constructor of a JourneyInformation. Used for ccreating a new JourneyInformation. If there is a Journey from and to the same Location, this Location should be used and the information added. A new JourneyInformation should only be created, if there is no Journey from and to the same Location.

#### Parameters:

- from - Location object
- to - Location object
- timeMinutes - Integer of the duration in Minutes.
- numberOfLegs - Integer of the number of legs of this Journey.
- distanceMeter - Integer of the distance in Meter
- tflJourney - TflJourney object of this Journey.
- routeLocations - ArrayList of Locations between the Departure and Arrival Location

## Methods

## addDistance

```
public void addDistance(int distanceMeter)
```

Method to add a distance in meter to the list of distances. Uses the Walking distance of a Journey, because the user needs only the time for using public transport, not the distance a vehicle of public transport goes. Average distance is calculated and updated automatically.

**Parameters:**

distanceMeter - Integer of the walking distance of this Journey in Meter.

---

## addLeg

```
public void addLeg(int numberOfLegs)
```

Method to add a number of legs to the list of number of legs. Average number of legs is calculated and updated automatically.

**Parameters:**

numberOfLegs - int of number of Legs that should be added to the list of all number of legs to create the average

---

## addTime

```
public void addTime(int timeInMinutes)
```

Method to add a duration time to the List of duration times. Average duration is calculated and updated automatically.

**Parameters:**

timeInMinutes - Integer of duration time in minutes

---

## calcAverage

```
private double calcAverage(java.util.ArrayList list)
```

Method to calculate the average of a ArrayList of Integer.

**Parameters:**

list - ArrayList of Integers to calculate its average

**Returns:**

double of the average value of the Integers in the given ArrayList.

---



## getAllNumbersOfLegs

```
public java.util.ArrayList getAllNumbersOfLegs()
```

---

## getAverageNumberOfLegs

```
public double getAverageNumberOfLegs()
```

---

## getAverageTimeMS

```
public double getAverageTimeMS()
```

---

## getDistancesMeter

```
public java.util.ArrayList getDistancesMeter()
```

---

## getFrom

```
public edu.napier.geo.common.Location getFrom()
```

---

## getRouteLocations

```
public java.util.ArrayList getRouteLocations()
```

---

## getSerialversionuid

```
public static long getSerialversionuid()
```

---

## getTflJourneys

```
public java.util.ArrayList getTflJourneys()
```

## getTime

```
public java.util.ArrayList getTime()
```

---

## getTimesMS

```
public java.util.ArrayList getTimesMS()
```

---

## getTo

```
public edu.napier.geo.common.Location getTo()
```

---

## setAverageNumberOfLegs

```
private void setAverageNumberOfLegs(double averageNumberOfLegs)
```

---

## setAverageTimeMS

```
private void setAverageTimeMS(double averageTime)
```

---

## setFrom

```
public void setFrom(edu.napier.geo.common.Location from)
```

---

## setTime

```
public void setTime(java.util.ArrayList time)
```

---

## setTo

```
public void setTo(edu.napier.geo.common.Location to)
```

---

## toString

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

ToString(), includes the following information: from, to, average time, list of all times, average number of legs, list of all number of legs, average distance, all distances, number of TflJourney Objects

**Overrides:**

toString in class edu.napier.geo.common.Journey

# Package

# edu.napier.geo.publicTransport.Response

## Class Summary

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---

edu.napier.geo.publicTransport.Response

## Class AdditionalProperty

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.AdditionalProperty
```

**All Implemented Interfaces:**

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class AdditionalProperty
    extends java.lang.Object
    implements java.io.Serializable
```

## Fields

### category

```
private java.lang.String category
```

---

### key

```
private java.lang.String key
```

---

### modified

```
private java.lang.String modified
```

---

### serialVersionUID

```
private static final long serialVersionUID
```

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Changes: separation of inner classes, adding getter methods and making objects compatible to objects of the public transport project. License:

<https://creativecommons.org/licenses/by-nc-sa/3.0/legalcode> Class based on JSON Response of the TfL API format with a few changes (like storing lon and lat in Locations). See empty example response in documentation.

---

### sourceSystemKey

```
private java.lang.String sourceSystemKey
```

---

### value

```
private java.lang.String value
```

## Constructors

## AdditionalProperty

```
public AdditionalProperty(java.lang.String category,  
                           java.lang.String key,  
                           java.lang.String sourceSystemKey,  
                           java.lang.String value,  
                           java.lang.String modified)
```

## Methods

### getCategory

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

---

### getKey

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

---

### getModified

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

---

### getSourceSystemKey

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

---

### getValue

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

---

edu.napier.geo.publicTransport.Response

# Class AffectedRoute

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.AffectedRoute
```

All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class AffectedRoute
    extends java.lang.Object
    implements java.io.Serializable
```

## Fields

### destinationName

```
private java.lang.String destinationName
```

---

### direction

```
private java.lang.String direction
```

---

### id

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

---

### lineId

```
private java.lang.String lineId
```

---

### lineString

```
private java.lang.String lineString
```

---

### name

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



---

## originationName

```
private java.lang.String originationName
```

---

## routeCode

```
private java.lang.String routeCode
```

---

## routeSectionNaptanEntrySequence

```
private  
edu.napier.geo.publicTransport.Response.RouteSectionNaptanEntrySequence[]  
routeSectionNaptanEntrySequence
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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Changes: separation of inner classes, adding getter methods and making objects compatible to objects of the public transport project. License:  
<https://creativecommons.org/licenses/by-nc-sa/3.0/legalcode> Class based on JSON Response of the TfL API format with a few changes (like storing lon and lat in Locations). See empty example response in documentation.

## Constructors

### AffectedRoute

```
public AffectedRoute(java.lang.String id,  
                     java.lang.String lineId,  
                     java.lang.String routeCode,  
                     java.lang.String name,  
                     java.lang.String direction,  
                     java.lang.String lineString,  
                     java.lang.String originationName,  
                     java.lang.String destinationName,  
                     edu.napier.geo.publicTransport.Response.RouteSectionNaptanEntrySequence[]  
                     routeSectionNaptanEntrySequence)
```

## Methods

## getDestinationName

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

---

## getDirection

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

---

## getId

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

---

## getLineId

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

---

## getLineString

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

---

## getName

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

---

## getOriginationName

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

---

## getRouteCode

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

---

## getRouteSectionNaptanEntrySequence

```
public
edu.napier.geo.publicTransport.Response.RouteSectionNaptanEntrySequence[]
getRouteSectionNaptanEntrySequence()
```

---

edu.napier.geo.publicTransport.Response

## Class AffectedStop

```
java.lang.Object
|
+--edu.napier.geo.common.Location
    |
    +--edu.napier.geo.publicTransport.Response.AffectedStop
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class AffectedStop
extends edu.napier.geo.common.Location
implements java.io.Serializable
```

## Fields

### accessibilitySummary

```
private java.lang.String accessibilitySummary
```

### additionalProperties

```
private edu.napier.geo.publicTransport.Response.AdditionalProperty[]
additionalProperties
```

### children

```
private edu.napier.geo.publicTransport.Response.Children[] children
```

### childrenUrls

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

---

## commonName

private java.lang.String **commonName**

---

## distance

private long **distance**

---

## fullName

private java.lang.String **fullName**

---

## hubNaptanCode

private java.lang.String **hubNaptanCode**

---

## icsCode

private java.lang.String **icsCode**

---

## id

private java.lang.String **id**

---

## indicator

private java.lang.String **indicator**

---

## lineGroup

private edu.napier.geo.publicTransport.Response.LineGroup[] **lineGroup**

---

## lineModeGroups

private edu.napier.geo.publicTransport.Response.LineModeGroup[] **lineModeGroups**

---

## lines

```
private edu.napier.geo.publicTransport.Response.Line[] lines
```

---

## modes

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

---

## naptanId

```
private java.lang.String naptanId
```

---

## naptanMode

```
private java.lang.String naptanMode
```

---

## placeType

```
private java.lang.String placeType
```

---

## platformName

```
private java.lang.String platformName
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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Changes: separation of inner classes, adding getter methods and making objects compatible to objects of the public transport project. License:  
<https://creativecommons.org/licenses/by-nc-sa/3.0/legalcode> Class based on JSON Response of the TfL API format with a few changes (like storing lon and lat in Locations). See empty example response in documentation.

---

## smsCode

```
private java.lang.String smsCode
```

---

## stationNaptan

```
private java.lang.String stationNaptan
```

---

## status

```
private boolean status
```

---

## stopLetter

```
private java.lang.String stopLetter
```

---

## stopType

```
private java.lang.String stopType
```

---

## url

```
private java.lang.String url
```

## Constructors

## AffectedStop

```
public AffectedStop(java.lang.String naptanId,  
                    java.lang.String platformName,  
                    java.lang.String indicator,  
                    java.lang.String stopLetter,  
                    java.lang.String[] modes,  
                    java.lang.String icsCode,  
                    java.lang.String smsCode,  
                    java.lang.String stopType,  
                    java.lang.String stationNaptan,  
                    java.lang.String accessibilitySummary,  
                    java.lang.String hubNaptanCode,  
                    edu.napier.geo.publicTransport.Response.Line[] lines,  
                    edu.napier.geo.publicTransport.Response.LineGroup[]  
lineGroup,  
                    edu.napier.geo.publicTransport.Response.LineModeGroup[]  
lineModeGroups,  
                    java.lang.String fullName,  
                    java.lang.String naptanMode,  
                    boolean status,  
                    java.lang.String id,  
                    java.lang.String url,  
                    java.lang.String commonName,  
                    long distance,  
                    java.lang.String placeType,  
                    edu.napier.geo.publicTransport.Response.AdditionalProperty[]  
additionalProperties,  
                    edu.napier.geo.publicTransport.Response.Children[]  
children,  
                    java.lang.String[] childrenUrls,  
                    double lat,  
                    double lon)
```

## Methods

### getAccessibilitySummary

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

---

### getAdditionalProperties

```
public edu.napier.geo.publicTransport.Response.AdditionalProperty[]  
getAdditionalProperties()
```

---

## getChildren

```
public edu.napier.geo.publicTransport.Response.Children[] getChildren()
```

---

## getChildrenUrls

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

---

## getCommonName

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

---

## getDistance

```
public long getDistance()
```

---

## getFullName

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

---

## getHubNaptanCode

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

---

## getIcsCode

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

---

## getId

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



## getIndicator

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

---

## getLineGroup

```
public edu.napier.geo.publicTransport.Response.LineGroup[] getLineGroup()
```

---

## getLineModeGroups

```
public edu.napier.geo.publicTransport.Response.LineModeGroup[]  
getLineModeGroups()
```

---

## getLines

```
public edu.napier.geo.publicTransport.Response.Line[] getLines()
```

---

## getModes

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

---

## getNaptanId

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

---

## getNaptanMode

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

---

## getPlaceType

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

---

## getPlatformName

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

---

## getSmsCode

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

---

## getStationNaptan

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

---

## getStopLetter

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

---

## getStopType

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

---

## getUrl

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

---

## isStatus

```
public boolean isStatus()
```

---

edu.napier.geo.publicTransport.Response

# Class Children

```
java.lang.Object
|
+--edu.napier.geo.common.Location
|
+--edu.napier.geo.publicTransport.Response.Children
```

## All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class Children
extends edu.napier.geo.common.Location
implements java.io.Serializable
```

## Fields

### additionalProperties

```
private edu.napier.geo.publicTransport.Response.AdditionalProperty[]
additionalProperties
```

---

### children

```
private edu.napier.geo.publicTransport.Response.Children[] children
```

---

### childrenUrls

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

---

### commonName

```
private java.lang.String commonName
```

---

### distance

```
private long distance
```

---

## id

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

---

## placeType

```
private java.lang.String placeType
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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---

## url

```
private java.lang.String url
```

## Constructors

### Children

```
public Children(java.lang.String id,
                java.lang.String url,
                java.lang.String commonName,
                long distance,
                java.lang.String placeType,
                edu.napier.geo.publicTransport.Response.AdditionalProperty[]
additionalProperties,
                edu.napier.geo.publicTransport.Response.Children[] children,
                java.lang.String[] childrenUrls,
                double lat,
                double lon)
```

## Methods

## getAdditionalProperties

```
public edu.napier.geo.publicTransport.Response.AdditionalProperty[]  
getAdditionalProperties()
```

---

## getChildren

```
public edu.napier.geo.publicTransport.Response.Children[] getChildren()
```

---

## getChildrenUrls

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

---

## getCommonName

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

---

## getDistance

```
public long getDistance()
```

---

## getId

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

---

## getPlaceType

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

---

## getUrl

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

---

edu.napier.geo.publicTransport.Response

## Class Crowding

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.Crowding
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class Crowding
extends java.lang.Object
implements java.io.Serializable
```

## Fields

## passengerFlows

```
private edu.napier.geo.publicTransport.Response.PassengerFlow[] passengerFlows
```

## serialVersionUID

```
private static final long serialVersionUID
```

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Changes: separation of inner classes, adding getter methods and making objects compatible to objects of the public transport project. License: <https://creativecommons.org/licenses/by-nc-sa/3.0/legalcode> Class based on JSON Response of the TfL API format with a few changes (like storing lon and lat in Locations). See empty example response in documentation.

## trainLoadings

```
private edu.napier.geo.publicTransport.Response.TrainLoading[] trainLoadings
```

## Constructors

## Crowding

```
public Crowding(edu.napier.geo.publicTransport.Response.PassengerFlow[]  
passengerFlows, edu.napier.geo.publicTransport.Response.TrainLoading[]  
trainLoadings)
```

## Methods

### getPassengerFlows

```
public edu.napier.geo.publicTransport.Response.PassengerFlow[]  
getPassengerFlows()
```

### getTrainLoadings

```
public edu.napier.geo.publicTransport.Response.TrainLoading[]  
getTrainLoadings()
```

edu.napier.geo.publicTransport.Response

## Class CycleHireDockingStationData

```
java.lang.Object  
|  
+--edu.napier.geo.publicTransport.Response.CycleHireDockingStationData
```

All Implemented Interfaces:

java.io.Serializable

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

```
public class CycleHireDockingStationData  
extends java.lang.Object  
implements java.io.Serializable
```

## Fields

### destinationId

```
private java.lang.String destinationId
```

## destinationNumberOfBikes

```
private long destinationNumberOfBikes
```

**destinationNumberOfEmptySlots**

```
private long destinationNumberOfEmptySlots
```

**originId**

```
private java.lang.String originId
```

## originNumberOfBikes

```
private long originNumberOfBikes
```

## originNumberOfEmptySlots

```
private long originNumberOfEmptySlots
```

## serialVersionUID

```
private static final long serialVersionUID
```

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## Constructors

## CycleHireDockingStationData

[illegible]



## Methods

### getDestinationId

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

---

### getDestinationNumberOfBikes

```
public long getDestinationNumberOfBikes()
```

---

### getDestinationNumberOfEmptySlots

```
public long getDestinationNumberOfEmptySlots()
```

---

### getOriginId

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

---

### getOriginNumberOfBikes

```
public long getOriginNumberOfBikes()
```

---

### getOriginNumberOfEmptySlots

```
public long getOriginNumberOfEmptySlots()
```

---

edu.napier.geo.publicTransport.Response

# Class Disruption

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.Disruption
```

All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class Disruption
    extends java.lang.Object
    implements java.io.Serializable
```

## Fields

### additionalInfo

```
private java.lang.String additionalInfo
```

---

### affectedRoutes

```
private edu.napier.geo.publicTransport.Response.AffectedRoute[] affectedRoutes
```

---

### affectedStops

```
private edu.napier.geo.publicTransport.Response.AffectedStop[] affectedStops
```

---

### category

```
private java.lang.String category
```

---

### categoryDescription

```
private java.lang.String categoryDescription
```

---

### closureText

```
private java.lang.String closureText
```

---

## created

```
private java.lang.String created
```

---

## description

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

---

## isBlocking

```
private boolean isBlocking
```

---

## isWholeLine

```
private boolean isWholeLine
```

---

## lastUpdate

```
private java.lang.String lastUpdate
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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---

## type

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

## Constructors

## Disruption

```
public Disruption(java.lang.String category,
                  java.lang.String type,
                  java.lang.String categoryDescription,
                  java.lang.String description,
                  java.lang.String additionalInfo,
                  java.lang.String created,
                  java.lang.String lastUpdate,
                  edu.napier.geo.publicTransport.Response.AffectedRoute[]
affectedRoutes,
                  edu.napier.geo.publicTransport.Response.AffectedStop[]
affectedStops,
                  boolean isBlocking,
                  boolean isWholeLine,
                  java.lang.String closureText)
```

## Methods

### getAdditionalInfo

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

---

### getAffectedRoutes

```
public edu.napier.geo.publicTransport.Response.AffectedRoute[]
getAffectedRoutes()
```

---

### getAffectedStops

```
public edu.napier.geo.publicTransport.Response.AffectedStop[]
getAffectedStops()
```

---

### getCategory

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

---

## getCategoryDescription

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

---

## getClosureText

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

---

## getCreated

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

---

## getDescription

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

---

## getLastUpdate

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

---

## getType

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

---

## isBlocking

```
public boolean isBlocking()
```

---

## isWholeLine

```
public boolean isWholeLine()
```

edu.napier.geo.publicTransport.Response

# Class Elevation

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.Elevation
```

All Implemented Interfaces:

java.io.Serializable

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

```
public class Elevation
extends java.lang.Object
implements java.io.Serializable
```

## Fields

### distance

```
private long distance
```

### endLat

```
private double endLat
```

### endLon

```
private double endLon
```

### gradient

```
private long gradient
```

### heightFromPreviousPoint

```
private long heightFromPreviousPoint
```

### serialVersionUID

```
private static final long serialVersionUID
```

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---

## startLat

```
private double startLat
```

---

## startLon

```
private double startLon
```

## Constructors

## Elevation

```
public Elevation(long distance,  
                 double startLat,  
                 double startLon,  
                 double endLat,  
                 double endLon,  
                 long heightFromPreviousPoint,  
                 long gradient)
```

## Methods

## getDistance

```
public long getDistance()
```

---

## getEndLat

```
public double getEndLat()
```

---

## getEndLon

```
public double getEndLon()
```

---

## getGradient

```
public long getGradient()
```

---

## getHeightFromPreviousPoint

```
public long getHeightFromPreviousPoint()
```

---

## getStartLat

```
public double getStartLat()
```

---

## getStartLon

```
public double getStartLon()
```

---

---

**edu.napier.geo.publicTransport.Response**

## Class Instruction

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.Instruction
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class Instruction
extends java.lang.Object
implements java.io.Serializable
```



## Fields

### detailed

```
private java.lang.String detailed
```

---

### serialVersionUID

```
private static final long serialVersionUID
```

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---

### steps

```
private edu.napier.geo.publicTransport.Response.Step[] steps
```

---

### summary

```
private java.lang.String summary
```

---

## Constructors

### Instruction

```
public Instruction(java.lang.String summary,  
                  java.lang.String detailed,  
                  edu.napier.geo.publicTransport.Response.Step[] steps)
```

## Methods

### getDetailed

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

---

## getSteps

```
public edu.napier.geo.publicTransport.Response.Step[] getSteps()
```

---

## getSummary

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

---

**edu.napier.geo.publicTransport.Response**

## Class Leg

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.Leg
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class Leg
extends java.lang.Object
implements java.io.Serializable
```

## Fields

### arrivalPoint

```
private edu.napier.geo.common.Location arrivalPoint
```

---

### arrivalTime

```
private java.lang.String arrivalTime
```

---

### departurePoint

```
private edu.napier.geo.common.Location departurePoint
```

---

### departureTime

```
private java.lang.String departureTime
```

---

## disruptions

```
private edu.napier.geo.publicTransport.Response.Disruption[] disruptions
```

---

## distance

```
private long distance
```

---

## duration

```
private int duration
```

---

## hasFixedLocations

```
private boolean hasFixedLocations
```

---

## instruction

```
private Instruction instruction
```

---

## isDisrupted

```
private boolean isDisrupted
```

---

## mode

```
private Mode mode
```

---

## obstacles

```
private edu.napier.geo.publicTransport.Response.Obstacle[] obstacles
```

---

## path

```
private Path path
```

---

## plannedWorks

```
private edu.napier.geo.publicTransport.Response.PlannedWork[] plannedWorks
```

---

## routeOptions

```
private edu.napier.geo.publicTransport.Response.RouteOption[] routeOptions
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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---

## speed

```
private java.lang.String speed
```

## Constructors

### Leg

```
public Leg(int duration,
           java.lang.String speed,
           Instruction instruction,
           edu.napier.geo.publicTransport.Response.Obstacle[] obstacles,
           java.lang.String departureTime,
           java.lang.String arrivalTime,
           edu.napier.geo.common.Location departurePoint,
           edu.napier.geo.common.Location arrivalPoint,
           Path path,
           edu.napier.geo.publicTransport.Response.RouteOption[]
routeOptions,
           Mode mode,
           edu.napier.geo.publicTransport.Response.Disruption[] disruptions,
           edu.napier.geo.publicTransport.Response.PlannedWork[]
plannedWorks,
           long distance,
           boolean isDisrupted,
           boolean hasFixedLocations)
```

## Methods

## getArrivalPoint

```
public edu.napier.geo.common.Location getArrivalPoint()
```

---

## getArrivalTime

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

---

## getDeparturePoint

```
public edu.napier.geo.common.Location getDeparturePoint()
```

---

## getDepartureTime

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

---

## getDisruptions

```
public edu.napier.geo.publicTransport.Response.Disruption[] getDisruptions()
```

---

## getDistance

```
public long getDistance()
```

---

## getDuration

```
public int getDuration()
```

---

## getInstruction

```
public Instruction getInstruction()
```

## getMode

```
public Mode getMode()
```

---

## getObstacles

```
public edu.napier.geo.publicTransport.Response.Obstacle[] getObstacles()
```

---

## getPath

```
public Path getPath()
```

---

## getPlannedWorks

```
public edu.napier.geo.publicTransport.Response.PlannedWork[] getPlannedWorks()
```

---

## getRouteOptions

```
public edu.napier.geo.publicTransport.Response.RouteOption[] getRouteOptions()
```

---

## getSpeed

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

---

## isDisrupted

```
public boolean isDisrupted()
```

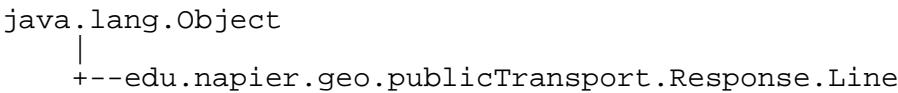
---

# isHasFixedLocations

```
public boolean isHasFixedLocations()
```

edu.napier.geo.publicTransport.Response

## Class Line



All Implemented Interfaces:

java.io.Serializable

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

```
public class Line
extends java.lang.Object
implements java.io.Serializable
```

## Fields

### created

```
private java.lang.String created
```

### crowding

```
private Crowding crowding
```

### disruptions

```
private edu.napier.geo.publicTransport.Response.Disruption[] disruptions
```

### id

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

### lineStatuses

```
private edu.napier.geo.publicTransport.Response.LineStatuse[] lineStatuses
```

---

## modeName

```
private java.lang.String modeName
```

---

## modified

```
private java.lang.String modified
```

---

## name

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

---

## routeSections

```
private edu.napier.geo.publicTransport.Response.RouteSection[] routeSections
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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---

## serviceTypes

```
private edu.napier.geo.publicTransport.Response.ServiceType[] serviceTypes
```

## Constructors



# Line

```
public Line(java.lang.String id,  
            java.lang.String name,  
            java.lang.String modeName,  
            edu.napier.geo.publicTransport.Response.Disruption[] disruptions,  
            java.lang.String created,  
            java.lang.String modified,  
            edu.napier.geo.publicTransport.Response.LineStatuse[]  
lineStatuses,  
            edu.napier.geo.publicTransport.Response.RouteSection[]  
routeSections,  
            edu.napier.geo.publicTransport.Response.ServiceType[]  
serviceTypes,  
            Crowding crowding)
```

## Methods

### getCreated

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

---

### getCrowding

```
public Crowding getCrowding()
```

---

### getDisruptions

```
public edu.napier.geo.publicTransport.Response.Disruption[] getDisruptions()
```

---

### getId

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

---

### getLineStatuses

```
public edu.napier.geo.publicTransport.Response.LineStatuse[] getLineStatuses()
```

---

## getModeName

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

---

## getModified

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

---

## getName

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

---

## getRouteSections

```
public edu.napier.geo.publicTransport.Response.RouteSection[]  
getRouteSections()
```

---

## getServiceTypes

```
public edu.napier.geo.publicTransport.Response.ServiceType[] getServiceTypes()
```

---

**edu.napier.geo.publicTransport.Response**

## Class LineGroup

```
java.lang.Object  
|  
+--edu.napier.geo.publicTransport.Response.LineGroup
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class LineGroup  
extends java.lang.Object  
implements java.io.Serializable
```

## Fields

### lineIdentifier

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

---

### naptanIdReference

```
private java.lang.String naptanIdReference
```

---

### serialVersionUID

```
private static final long serialVersionUID
```

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---

### stationAtcoCode

```
private java.lang.String stationAtcoCode
```

## Constructors

### LineGroup

```
public LineGroup(java.lang.String naptanIdReference,  
                 java.lang.String stationAtcoCode,  
                 java.lang.String[] lineIdentifier)
```

## Methods

### getLineIdentifier

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

---

## getNaptanIdReference

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

## getStationAtcoCode

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

---

edu.napier.geo.publicTransport.Response

# Class LineIdentifier

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.LineIdentifier
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class LineIdentifier
extends java.lang.Object
implements java.io.Serializable
```

## Fields

### crowding

```
private Crowding crowding
```

### fullName

```
private java.lang.String fullName
```

### id

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

### name

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

---

## serialVersionUID

```
private static final long serialVersionUID
```

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---

## type

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

---

## uri

```
private java.lang.String uri
```

---

## Constructors

### LineIdentifier

```
public LineIdentifier(java.lang.String id,  
                     java.lang.String name,  
                     java.lang.String uri,  
                     java.lang.String fullName,  
                     java.lang.String type,  
                     Crowding crowding)
```

## Methods

### getCrowding

```
public Crowding getCrowding()
```

---

### getFullName

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

## getId

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

---

## getName

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

---

## getType

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

---

## getUri

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

---

---

edu.napier.geo.publicTransport.Response

# Class LineModeGroup

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.LineModeGroup
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class LineModeGroup
extends java.lang.Object
implements java.io.Serializable
```

## Fields

### lineIdentifier

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

## modeName

```
private java.lang.String modeName
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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## Constructors

### LineModeGroup

```
public LineModeGroup(java.lang.String modeName,  
                    java.lang.String[] lineIdentifier)
```

## Methods

### getLineIdentifier

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

---

### getModeName

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

---

edu.napier.geo.publicTransport.Response

# Class LineSmallVersionOfClass

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.LineSmallVersionOfClass
```

All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class LineSmallVersionOfClass
    extends java.lang.Object
    implements java.io.Serializable
```

## Fields

### crowding

```
private Crowding crowding
```

---

### fullName

```
private java.lang.String fullName
```

---

### id

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

---

### name

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

---

### serialVersionUID

```
private static final long serialVersionUID
```

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response in documentation.

---

## type

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

---

## uri

```
private java.lang.String uri
```

---

## Constructors

### LineSmallVersionOfClass

```
public LineSmallVersionOfClass(java.lang.String id,  
                               java.lang.String name,  
                               java.lang.String uri,  
                               java.lang.String fullName,  
                               java.lang.String type,  
                               Crowding crowding)
```

## Methods

### getCrowding

```
public Crowding getCrowding()
```

---

### getFullName

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

---

### getId

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

---

## getName

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

---

## getType

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

---

## getUri

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

---

edu.napier.geo.publicTransport.Response

# Class LineStatuse

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.LineStatuse
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class LineStatuse
extends java.lang.Object
implements java.io.Serializable
```

## Fields

### created

```
private java.lang.String created
```

---

### disruption

```
private Disruption disruption
```

---

## id

```
private long id
```

---

## lineId

```
private java.lang.String lineId
```

---

## modified

```
private java.lang.String modified
```

---

## reason

```
private java.lang.String reason
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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---

## statusSeverity

```
private long statusSeverity
```

---

## statusSeverityDescription

```
private java.lang.String statusSeverityDescription
```

---

## validityPeriods

```
private edu.napier.geo.publicTransport.Response.ValidityPeriod[]  
validityPeriods
```

## Constructors

### LineStatuse

```
public LineStatuse(long id,  
                   java.lang.String lineId,  
                   long statusSeverity,  
                   java.lang.String statusSeverityDescription,  
                   java.lang.String reason,  
                   java.lang.String created,  
                   java.lang.String modified,  
                   edu.napier.geo.publicTransport.Response.ValidityPeriod[]  
validityPeriods,  
                   Disruption disruption)
```

## Methods

### getCreated

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

---

### getDisruption

```
public Disruption getDisruption()
```

---

### getId

```
public long getId()
```

---

### getLineId

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

---

### getModified

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

---

## getReason

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

---

## getStatusSeverity

```
public long getStatusSeverity()
```

---

## getStatusSeverityDescription

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

---

## getValidityPeriods

```
public edu.napier.geo.publicTransport.Response.ValidityPeriod[]  
getValidityPeriods()
```

---

**edu.napier.geo.publicTransport.Response**

## Class Mode

```
java.lang.Object  
|  
+--edu.napier.geo.publicTransport.Response.Mode
```

### All Implemented Interfaces:

```
java.io.Serializable
```

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class Mode  
extends java.lang.Object  
implements java.io.Serializable
```

## Fields

## crowding

```
private Crowding crowding
```

## fullName

```
private java.lang.String fullName
```

---

## id

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

---

## name

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

---

## serialVersionUID

```
private static final long serialVersionUID
```

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---

## type

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

---

## uri

```
private java.lang.String uri
```

## Constructors

### Mode

```
public Mode(java.lang.String id,  
            java.lang.String name,  
            java.lang.String uri,  
            java.lang.String fullName,  
            java.lang.String type,  
            Crowding crowding)
```

## Methods

### getCrowding

```
public Crowding getCrowding()
```

---

### getFullName

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

---

### getId

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

---

### getName

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

---

### getType

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

---

### getUri

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

---

edu.napier.geo.publicTransport.Response

# Class Obstacle

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.Obstacle
```

## All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class Obstacle
extends java.lang.Object
implements java.io.Serializable
```

## Fields

### incline

```
private java.lang.String incline
```

---

### position

```
private java.lang.String position
```

---

### serialVersionUID

```
private static final long serialVersionUID
```

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---

### stopId

```
private long stopId
```

---

### type



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

## Constructors

### Obstacle

```
public Obstacle(java.lang.String type,  
                 java.lang.String incline,  
                 long stopId,  
                 java.lang.String position)
```

## Methods

### getIncline

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

---

### getPosition

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

---

### getStopId

```
public long getStopId()
```

---

### getType

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

---

edu.napier.geo.publicTransport.Response

# Class PassengerFlow

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.PassengerFlow
```

## All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class PassengerFlow
    extends java.lang.Object
    implements java.io.Serializable
```

## Fields

### serialVersionUID

```
private static final long serialVersionUID
```

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### timeSlice

```
private java.lang.String timeSlice
```

### value

```
private long value
```

## Constructors

### PassengerFlow

```
public PassengerFlow(java.lang.String timeSlice,
                     long value)
```

## Methods

### getTimeSlice

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

### getValue

```
public long getValue()
```

edu.napier.geo.publicTransport.Response

## Class Path

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.Path
```

All Implemented Interfaces:

java.io.Serializable

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

```
public class Path
extends java.lang.Object
implements java.io.Serializable
```

## Fields

### elevation

```
private edu.napier.geo.publicTransport.Response.Elevation[] elevation
```

### lineString

```
private java.lang.String lineString
```

### serialVersionUID

```
private static final long serialVersionUID
```

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objects of the public transport project. License:  
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the TfL API format with a few changes (like storing lon and lat in Locations). See empty example  
response in documentation.

---

## stopPoints

```
private edu.napier.geo.publicTransport.Response.StopPointInPath[] stopPoints
```

## Constructors

### Path

```
public Path(java.lang.String lineString,  
            edu.napier.geo.publicTransport.Response.StopPointInPath[]  
stopPoints,  
            edu.napier.geo.publicTransport.Response.Elevation[] elevation)
```

## Methods

### getElevation

```
public edu.napier.geo.publicTransport.Response.Elevation[] getElevation()
```

### getLineString

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

### getStopPoints

```
public edu.napier.geo.publicTransport.Response.StopPointInPath[]  
getStopPoints()
```

---

edu.napier.geo.publicTransport.Response

# Class PathAttribute

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.PathAttribute
```

## All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class PathAttribute
    extends java.lang.Object
    implements java.io.Serializable
```

## Fields

### name

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

---

### serialVersionUID

```
private static final long serialVersionUID
```

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---

### value

```
private java.lang.String value
```

## Constructors

### PathAttribute

```
public PathAttribute(java.lang.String name,
                     java.lang.String value)
```

## Methods

### getName

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

---

### getValue

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

---

edu.napier.geo.publicTransport.Response

## Class PlannedWork

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.PlannedWork
```

#### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class PlannedWork
  extends java.lang.Object
  implements java.io.Serializable
```

## Fields

### createdDateTime

```
private java.lang.String createdDateTime
```

---

### description

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

---

### id

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

## lastUpdateDateTime

```
private java.lang.String lastUpdateDateTime
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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## Constructors

### PlannedWork

```
public PlannedWork(java.lang.String id,  
                    java.lang.String description,  
                    java.lang.String createdDateTime,  
                    java.lang.String lastUpdateDateTime)
```

## Methods

### getCreatedDateTime

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

---

### getDescription

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

---

### getId

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

---

## getLastUpdateDateTime

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

---

edu.napier.geo.publicTransport.Response

## Class ResponseTfL

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.ResponseTfL
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class ResponseTfL
extends java.lang.Object
implements java.io.Serializable
```

## Fields

### cycleHireDockingStationData

```
private CycleHireDockingStationData cycleHireDockingStationData
```

### journeys

```
private edu.napier.geo.publicTransport.Response.TfLJourney[] journeys
```

### lines

```
private edu.napier.geo.publicTransport.Response.Line[] lines
```

### recommendedMaxAgeMinutes

```
private long recommendedMaxAgeMinutes
```

### searchCriteria



```
private SearchCriteria searchCriteria
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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---

## stopMessages

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

---

## tflJourneyVector

```
private TflJourneyVector tflJourneyVector
```

---

## Constructors

### ResponseTfL

```
public ResponseTfL(edu.napier.geo.publicTransport.Response.TflJourney[] journeys,  
                    edu.napier.geo.publicTransport.Response.Line[] lines,  
                    CycleHireDockingStationData cycleHireDockingStationData,  
                    java.lang.String[] stopMessages,  
                    long recommendedMaxAgeMinutes,  
                    SearchCriteria searchCriteria,  
                    TflJourneyVector tflJourneyVector)
```

## Methods

### getCycleHireDockingStationData

```
public CycleHireDockingStationData getCycleHireDockingStationData()
```

---

## getLines

```
public edu.napier.geo.publicTransport.Response.Line[] getLines()
```

---

## getRecommendedMaxAgeMinutes

```
public long getRecommendedMaxAgeMinutes()
```

---

## getSearchCriteria

```
public SearchCriteria getSearchCriteria()
```

---

## getStopMessages

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

---

## getTflJourneyVector

```
public TflJourneyVector getTflJourneyVector()
```

---

## getTflJourneys

```
public edu.napier.geo.publicTransport.Response.TflJourney[] getTflJourneys()
```

---

## x

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

---

**edu.napier.geo.publicTransport.Response**

# Class RouteOption

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.RouteOption
```

**All Implemented Interfaces:**

java.io.Serializable

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

```
public class RouteOption
    extends java.lang.Object
    implements java.io.Serializable
```

## Fields

### directions

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

### id

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

### lineIdentifier

```
private LineIdentifier lineIdentifier
```

### name

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

### serialVersionUID

```
private static final long serialVersionUID
```

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response in documentation.

## Constructors

### RouteOption

```
public RouteOption(java.lang.String id,  
                   java.lang.String name,  
                   java.lang.String[] directions,  
                   LineIdentifier lineIdentifier)
```

## Methods

### getDirections

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

---

### getId

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

---

### getLineIdentifier

```
public LineIdentifier getLineIdentifier()
```

---

### getName

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

---

edu.napier.geo.publicTransport.Response

# Class RouteSection

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.RouteSection
```

**All Implemented Interfaces:**

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class RouteSection
    extends java.lang.Object
    implements java.io.Serializable
```

## Fields

### destination

```
private java.lang.String destination
```

---

### destinationName

```
private java.lang.String destinationName
```

---

### direction

```
private java.lang.String direction
```

---

### name

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

---

### originationName

```
private java.lang.String originationName
```

---

### originator

```
private java.lang.String originator
```

## routeCode

```
private java.lang.String routeCode
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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---

## serviceType

```
private java.lang.String serviceType
```

## Constructors

### RouteSection

```
public RouteSection(java.lang.String routeCode,  
                    java.lang.String name,  
                    java.lang.String direction,  
                    java.lang.String originationName,  
                    java.lang.String destinationName,  
                    java.lang.String originator,  
                    java.lang.String destination,  
                    java.lang.String serviceType)
```

## Methods

### getDestination

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

---

## getDestinationName

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

---

## getDirection

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

---

## getName

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

---

## getOriginationName

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

---

## getOriginator

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

---

## getRouteCode

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

---

## getServiceType

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

---

## edu.napier.geo.publicTransport.Response

## Class RouteSectionNaptanEntrySequence

```
java.lang.Object
|
|--edu.napier.geo.publicTransport.Response.RouteSectionNaptanEntrySequence
```

**All Implemented Interfaces:**  
java.io.Serializable

< Fields > < Constructors > < Methods >

```
public class RouteSectionNaptanEntrySequence
extends java.lang.Object
implements java.io.Serializable
```

## Fields

## ordinal

```
private long ordinal
```

## serialVersionUID

```
private static final long serialVersionUID
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    the TfL API format with a few changes (like storing lon and lat in Locations). See empty example
    response in documentation.
```

## stopPoint

```
private StopPoint stopPoint
```

## Constructors

## RouteSectionNaptanEntrySequence

[illegible]



## Methods

### getOrdinal

```
public long getOrdinal()
```

### getStopPoint

```
public StopPoint getStopPoint()
```

---

**edu.napier.geo.publicTransport.Response**

## Class SearchCriteria

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.SearchCriteria
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class SearchCriteria
extends java.lang.Object
implements java.io.Serializable
```

## Fields

### dateTime

```
private java.lang.String dateTime
```

### dateTimeType

```
private java.lang.String dateTimeType
```

### serialVersionUID

```
private static final long serialVersionUID
```

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Changes: separation of inner classes, adding getter methods and making objects compatible to  
objects of the public transport project. License:  
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the TfL API format with a few changes (like storing lon and lat in Locations). See empty example  
response in documentation.

---

## timeAdjustments

```
private TimeAdjustments timeAdjustments
```

## Constructors

### SearchCriteria

```
public SearchCriteria(java.lang.String dateTime,  
                      java.lang.String dateTimeType,  
                      TimeAdjustments timeAdjustments)
```

## Methods

### getDateTime

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

---

### getDateTimeType

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

---

### getTimeAdjustments

```
public TimeAdjustments getTimeAdjustments()
```

---

edu.napier.geo.publicTransport.Response

# Class ServiceType

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.ServiceType
```

## All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class ServiceType
    extends java.lang.Object
    implements java.io.Serializable
```

## Fields

### name

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

---

### serialVersionUID

```
private static final long serialVersionUID
```

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---

### uri

```
private java.lang.String uri
```

## Constructors

### ServiceType

```
public ServiceType(java.lang.String name,
                   java.lang.String uri)
```

## Methods

### getName

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

---

### getUri

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

---

edu.napier.geo.publicTransport.Response

## Class Step

```
java.lang.Object
|
+--edu.napier.geo.common.Location
|
+--edu.napier.geo.publicTransport.Response.Step
```

#### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class Step
extends edu.napier.geo.common.Location
implements java.io.Serializable
```

## Fields

### cumulativeDistance

```
private long cumulativeDistance
```

---

### cumulativeTravelTime

```
private long cumulativeTravelTime
```

---

### descriptionHeading

```
private java.lang.String descriptionHeading
```

---

## distance

```
private long distance
```

---

## location

```
private edu.napier.geo.common.Location location
```

---

## pathAttribute

```
private PathAttribute pathAttribute
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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---

## skyDirection

```
private long skyDirection
```

---

## skyDirectionDescription

```
private java.lang.String skyDirectionDescription
```

---

## streetName

```
private java.lang.String streetName
```

---

## trackType

```
private java.lang.String trackType
```

## turnDirection

private java.lang.String **turnDirection**

## Constructors

### Step

```
public Step(java.lang.String description,  
            java.lang.String turnDirection,  
            java.lang.String streetName,  
            long distance,  
            long cumulativeDistance,  
            long skyDirection,  
            java.lang.String skyDirectionDescription,  
            long cumulativeTravelTime,  
            double lat,  
            double lon,  
            PathAttribute pathAttribute,  
            java.lang.String descriptionHeading,  
            java.lang.String trackType)
```

## Methods

### getCumulativeDistance

```
public long getCumulativeDistance()
```

---

### getCumulativeTravelTime

```
public long getCumulativeTravelTime()
```

---

### getDescription

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

#### Overrides:

getDescription in class edu.napier.geo.common.Location

---

## getDescriptionHeading

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

---

## getDistance

```
public long getDistance()
```

---

## getLocation

```
public edu.napier.geo.common.Location getLocation()
```

---

## getPathAttribute

```
public PathAttribute getPathAttribute()
```

---

## getSkyDirection

```
public long getSkyDirection()
```

---

## getSkyDirectionDescription

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

---

## getStreetName

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

---

## getTrackType

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

## getTurnDirection

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

---

edu.napier.geo.publicTransport.Response

## Class StopPoint

```
java.lang.Object
|
+--edu.napier.geo.common.Location
|
+--edu.napier.geo.publicTransport.Response.StopPoint
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class StopPoint
extends edu.napier.geo.common.Location
implements java.io.Serializable
```

## Fields

### accessibilitySummary

```
private java.lang.String accessibilitySummary
```

### additionalProperties

```
private edu.napier.geo.publicTransport.Response.AdditionalProperty[]
additionalProperties
```

### children

```
private edu.napier.geo.publicTransport.Response.Children[] children
```

### childrenUrls

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

---



## commonName

```
private java.lang.String commonName
```

---

## distance

```
private long distance
```

---

## fullName

```
private java.lang.String fullName
```

---

## hubNaptanCode

```
private java.lang.String hubNaptanCode
```

---

## icsCode

```
private java.lang.String icsCode
```

---

## id

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

---

## indicator

```
private java.lang.String indicator
```

---

## lineGroup

```
private edu.napier.geo.publicTransport.Response.LineGroup[] lineGroup
```

---

## lineModeGroups

```
private edu.napier.geo.publicTransport.Response.LineModeGroup[] lineModeGroups
```

---

## lines

```
private edu.napier.geo.publicTransport.Response.Line[] lines
```

---

## modes

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

---

## naptanId

```
private java.lang.String naptanId
```

---

## naptanMode

```
private java.lang.String naptanMode
```

---

## placeType

```
private java.lang.String placeType
```

---

## platformName

```
private java.lang.String platformName
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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---

## smsCode

```
private java.lang.String smsCode
```

---

## stationNaptan

```
private java.lang.String stationNaptan
```

---

## status

private boolean **status**

---

## stopLetter

private java.lang.String **stopLetter**

---

## stopType

private java.lang.String **stopType**

---

## url

private java.lang.String **url**

## Constructors

---

## StopPoint

```
public StopPoint(java.lang.String naptanId,  
                 java.lang.String platformName,  
                 java.lang.String indicator,  
                 java.lang.String stopLetter,  
                 java.lang.String[] modes,  
                 java.lang.String icsCode,  
                 java.lang.String smsCode,  
                 java.lang.String stopType,  
                 java.lang.String stationNaptan,  
                 java.lang.String accessibilitySummary,  
                 java.lang.String hubNaptanCode,  
                 edu.napier.geo.publicTransport.Response.Line[] lines,  
                 edu.napier.geo.publicTransport.Response.LineGroup[]  
lineGroup,  
                 edu.napier.geo.publicTransport.Response.LineModeGroup[]  
lineModeGroups,  
                 java.lang.String fullName,  
                 java.lang.String naptanMode,  
                 boolean status,  
                 java.lang.String id,  
                 java.lang.String url,  
                 java.lang.String commonName,  
                 long distance,  
                 java.lang.String placeType,  
                 edu.napier.geo.publicTransport.Response.AdditionalProperty[]  
additionalProperties,  
                 edu.napier.geo.publicTransport.Response.Children[] children,  
                 java.lang.String[] childrenUrls,  
                 double lat,  
                 double lon)
```

## Methods

### getAccessibilitySummary

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

---

### getAdditionalProperties

```
public edu.napier.geo.publicTransport.Response.AdditionalProperty[]  
getAdditionalProperties()
```

---

### getChildren

```
public edu.napier.geo.publicTransport.Response.Children[] getChildren()
```

## getChildrenUrls

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

---

## getCommonName

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

---

## getDistance

```
public long getDistance()
```

---

## getFullName

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

---

## getHubNaptanCode

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

---

## getIcsCode

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

---

## getId

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

---

## getIndicator

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

---

## getLineGroup

```
public edu.napier.geo.publicTransport.Response.LineGroup[] getLineGroup()
```

---

## getLineModeGroups

```
public edu.napier.geo.publicTransport.Response.LineModeGroup[]  
getLineModeGroups()
```

---

## getLines

```
public edu.napier.geo.publicTransport.Response.Line[] getLines()
```

---

## getModes

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

---

## getNaptanId

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

---

## getNaptanMode

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

---

## getPlaceType

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

---

## getPlatformName

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

---

## getSmsCode

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

---

## getStationNaptan

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

---

## getStopLetter

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

---

## getStopType

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

---

## getUrl

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

---

## isStatus

```
public boolean isStatus()
```

---

edu.napier.geo.publicTransport.Response

# Class StopPointInPath

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.StopPointInPath
```

## All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class StopPointInPath
extends java.lang.Object
implements java.io.Serializable
```

## Fields

### crowding

```
private Crowding crowding
```

---

### fullName

```
private java.lang.String fullName
```

---

### id

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

---

### name

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

---

### serialVersionUID

```
private static final long serialVersionUID
```

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the TfL API format with a few changes (like storing lon and lat in Locations). See empty example response in documentation.

---

## type

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

---

## uri

```
private java.lang.String uri
```

## Constructors

### StopPointInPath

```
public StopPointInPath(java.lang.String id,  
                        java.lang.String name,  
                        java.lang.String uri,  
                        java.lang.String fullName,  
                        java.lang.String type,  
                        Crowding crowding)
```

## Methods

### getCrowding

```
public Crowding getCrowding()
```

---

### getFullName

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

---

### getId

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

---

## getName

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

## getType

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

## getUri

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

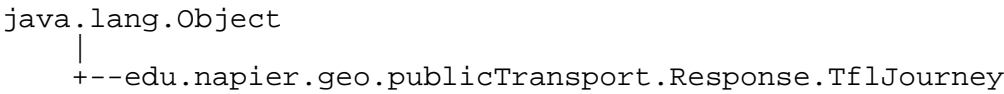
## toString

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

**Overrides:**  
toString in class java.lang.Object

edu.napier.geo.publicTransport.Response

# Class TflJourney



**All Implemented Interfaces:**  
java.io.Serializable

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

```
public class TflJourney
extends java.lang.Object
implements java.io.Serializable
```

## Fields

## arrivalDateTime

```
private java.lang.String arrivalDateTime
```

---

## duration

```
private int duration
```

---

## legs

```
private edu.napier.geo.publicTransport.Response.Leg[] legs
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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<https://creativecommons.org/licenses/by-nc-sa/3.0/legalcode> Class based on JSON Response of the TfL API format with a few changes (like storing lon and lat in Locations). See empty example response in documentation.

---

## startDateTime

```
private java.lang.String startDateTime
```

## Constructors

### TflJourney

```
public TflJourney(java.lang.String startDateTime,  
                  int duration,  
                  java.lang.String arrivalDateTime,  
                  edu.napier.geo.publicTransport.Response.Leg[] legs)
```

## Methods

### getArrivalDateTime

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

---

## getDurationMinutes

```
public int getDurationMinutes()
```

## getLegs

```
public edu.napier.geo.publicTransport.Response.Leg[] getLegs()
```

## getStartDateTime

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

edu.napier.geo.publicTransport.Response

# Class TflJourneyVector

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.TflJourneyVector
```

### All Implemented Interfaces:

java.io.Serializable

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

```
public class TflJourneyVector
extends java.lang.Object
implements java.io.Serializable
```

## Fields

### from

```
private java.lang.String from
```

## serialVersionUID

```
private static final long serialVersionUID
```

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Changes: separation of inner classes, adding getter methods and making objects compatible to

objects of the public transport project. License:  
<https://creativecommons.org/licenses/by-nc-sa/3.0/legalcode> Class based on JSON Response of the TfL API format with a few changes (like storing lon and lat in Locations). See empty example response in documentation.

---

## to

```
private java.lang.String to
```

---

## uri

```
private java.lang.String uri
```

---

## via

```
private java.lang.String via
```

## Constructors

### TflJourneyVector

```
public TflJourneyVector(java.lang.String from,  
                        java.lang.String to,  
                        java.lang.String via,  
                        java.lang.String uri)
```

## Methods

### getFrom

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

---

### getTo

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

---

## getUri

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

---

## getVia

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

---

**edu.napier.geo.publicTransport.Response**

# Class Time

```
java.lang.Object  
|  
+--edu.napier.geo.publicTransport.Response.Time
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class Time  
extends java.lang.Object  
implements java.io.Serializable
```

## Fields

### date

```
private java.lang.String date
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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Changes: separation of inner classes, adding getter methods and making objects compatible to objects of the public transport project. License: <https://creativecommons.org/licenses/by-nc-sa/3.0/legalcode> Class based on JSON Response of the TfL API format with a few changes (like storing lon and lat in Locations). See empty example response in documentation.

---

## time

```
private java.lang.String time
```

---

## timels

```
private java.lang.String timeIs
```

---

## uri

```
private java.lang.String uri
```

## Constructors

### Time

```
public Time(java.lang.String date,  
            java.lang.String time,  
            java.lang.String timeIs,  
            java.lang.String uri)
```

## Methods

### getDate

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

---

### getTime

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

---

### getTimels

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

---

## getUri

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

---

## print

```
public void print()
```

---

**edu.napier.geo.publicTransport.Response**

# Class TimeAdjustments

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.TimeAdjustments
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class TimeAdjustments
  extends java.lang.Object
  implements java.io.Serializable
```

## Fields

### earlier

```
private Time earlier
```

---

### earliest

```
private Time earliest
```

---

### later

```
private Time later
```

---

### latest



```
private Time latest
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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## Constructors

### TimeAdjustments

```
public TimeAdjustments(Time earliest,  
                       Time earlier,  
                       Time later,  
                       Time latest)
```

## Methods

### getEarlier

```
public Time getEarlier()
```

---

### getEarliest

```
public Time getEarliest()
```

---

### getLater

```
public Time getLater()
```

---

## getLatest

```
public Time getLatest()
```

---

edu.napier.geo.publicTransport.Response

# Class TrainLoading

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.TrainLoading
```

### All Implemented Interfaces:

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class TrainLoading
extends java.lang.Object
implements java.io.Serializable
```

## Fields

### direction

```
private java.lang.String direction
```

---

### line

```
private java.lang.String line
```

---

### lineDirection

```
private java.lang.String lineDirection
```

---

### naptanTo

```
private java.lang.String naptanTo
```

---

### platformDirection

```
private java.lang.String platformDirection
```

---

## serialVersionUID

```
private static final long serialVersionUID
```

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---

## timeSlice

```
private java.lang.String timeSlice
```

---

## value

```
private long value
```

## Constructors

### TrainLoading

```
public TrainLoading(java.lang.String line,  
                    java.lang.String lineDirection,  
                    java.lang.String platformDirection,  
                    java.lang.String direction,  
                    java.lang.String naptanTo,  
                    java.lang.String timeSlice,  
                    long value)
```

## Methods

### getDirection

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

---

## getLine

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

---

## getLineDirection

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

---

## getNaptanTo

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

---

## getPlatformDirection

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

---

## getTimeSlice

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

---

## getValue

```
public long getValue()
```

---

**edu.napier.geo.publicTransport.Response**

# Class ValidityPeriod

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.Response.ValidityPeriod
```

**All Implemented Interfaces:**

java.io.Serializable

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

```
public class ValidityPeriod  
extends java.lang.Object  
implements java.io.Serializable
```

## Fields

### fromDate

```
private java.lang.String fromDate
```

### isNow

```
private boolean isNow
```

### serialVersionUID

```
private static final long serialVersionUID
```

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Changes: separation of inner classes, adding getter methods and making objects compatible to objects of the public transport project. License:  
<https://creativecommons.org/licenses/by-nc-sa/3.0/legalcode> Class based on JSON Response of the TfL API format with a few changes (like storing lon and lat in Locations). See empty example response in documentation.

### toDate

```
private java.lang.String toDate
```

## Constructors

### ValidityPeriod

```
public ValidityPeriod(java.lang.String fromDate,  
                      java.lang.String toDate,  
                      boolean isNow)
```

## Methods

## getFromDate

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

---

## getToDate

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

---

## isNow

```
public boolean isNow()
```

# Package edu.napier.geo.publicTransport.fascade

## Class Summary

[PublicTransportFascade](#)

edu.napier.geo.publicTransport.fascade

## Class PublicTransportFascade

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.fascade.PublicTransportFascade
```

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

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

### Author:

Jan-Niklas Keiner 2017/03/10 Fascade Class for the Public Transport API

## Fields

### publicTransport

```
private PublicTransport publicTransport
```

## Constructors

### PublicTransportFascade

```
public PublicTransportFascade()
```

Constructor to create an object of this class

## Methods

## createNewPublicTransport

```
public void createNewPublicTransport(boolean resetInformationStorage)
```

Method to create a new Object of PublicTransport, which is set as publicTransport object in this class. Uses the default InformationStorage Filepath of the PublicTransport class.

**Parameters:**

resetInformationStorage - boolean, if old the InformationStorage should be loaded or a new empty one should be created. true=reset and create new one

---

## createNewPublicTransport

```
public void createNewPublicTransport(boolean resetInformationStorage,  
                                     java.lang.String  
informationStorageFilePath)
```

Method to create a new Object of PublicTransport, which is set as publicTransport object in this class

**Parameters:**

resetInformationStorage - boolean, if old the InformationStorage should be loaded or a new empty one should be created. true=reset and create new one  
informationStorageFilePath - Filepath of the InformtionStorage object, which should be loaded and where the new one should be stored.

---

## createResponseJavaObject

```
public void createResponseJavaObject(double fromLat,  
                                     double fromLon,  
                                     double toLat,  
                                     double toLon)  
    throws java.lang.Exception
```

creates the POJO response Object for a Journey from and to the given coordinates. Then it sets the response object of this object to the new given response object from TfL.

**Parameters:**

fromLat - decimal  
fromLon - decimal  
toLat - decimal  
toLon - decimal

**Throws:**

java.lang.Exception - Exception of setResponseJavaObject()

---



## createResponseJavaObject

```
public void createResponseJavaObject(double fromLat,  
                                     double fromLon,  
                                     double toLat,  
                                     double toLon,  
                                     java.util.ArrayList userPreferences)  
    throws java.lang.Exception
```

creates the POJO response Object for a Journey from and to the given coordinates and with an ArrayList of Strings with the user preferences (must be in the format, that TfL requires: "variable=value". All Variables that TfL provides can be used. Then it sets the response object of this object to the new given response object from TfL.

### Parameters:

fromLat - decimal  
fromLon - decimal  
toLat - decimal  
toLon - decimal  
userPreferences - ArrayList of Strings in the format that the TfL API requires. One String per parameter

### Throws:

java.lang.Exception - Exception of setResponseJavaObject()

---

## createResponseJavaObject

```
public void createResponseJavaObject(edu.napier.geo.common.Location from,  
                                     edu.napier.geo.common.Location to)  
    throws java.lang.Exception
```

creates the POJO (plain old Java object) response object for a Journey from and to a given Location. Then it sets the response object of this object to the new given response object from TfL.

### Parameters:

from - Location object  
to - Location object

### Throws:

java.lang.Exception - Exception of setResponseJavaObject()

---

## createResponseJavaObject

```
public void createResponseJavaObject(edu.napier.geo.common.Location from,  
                                     edu.napier.geo.common.Location to,  
                                     java.util.ArrayList userPreferences)  
    throws java.lang.Exception
```

This method creates a POJO (Plain old java object) ResponseTfl for Journeys from and to a Location and with an ArrayList of Strings with the user preferences (must be in the format, that TfL requires: "variable=value" for most variables. All Variables that TfL provides can be used. Then it sets the response object of this object to the new given response object from TfL.

### Parameters:

from - Location object  
to - Location object  
userPreferences - Strings must be in the format that the TfL API requires ("variable=value" for most of the variables).

### Throws:

java.lang.Exception - Exception of setResponseJavaObject()

---

## getAllJourneys

```
public edu.napier.geo.publicTransport.Response.TflJourney[] getAllJourneys()
```

Gives back an Array of all TfLJourneys of the actual ResponseTfl Object

### Returns:

an Array of TfLJourney Objects of all TfLJourneys of the actual ResponseTfl Object

---

## getArrivalPointOfFirstJourney

```
public edu.napier.geo.common.Location getArrivalPointOfFirstJourney()
```

This method gives back the Arrival Point of the first Journey of the actual ResponseTfl Object

### Returns:

Location Object of the Arrival Point of the first Journey of the actual ResponseTfl Object

---

## getArrivalPointOfJourney

```
public edu.napier.geo.common.Location getArrivalPointOfJourney(TflJourney tflJourney)
```

Gives back the Arrival Point of a given TflJourney Object

**Parameters:**

tflJourney - TflJourney object

**Returns:**

Location Object of the Arrival Point of a given TflJourney Object

---

## getArrivalPointOfJourney

```
public edu.napier.geo.common.Location getArrivalPointOfJourney(int journeyNumber)
```

Gives back the Arrival Point of the Journey with the given index.

**Parameters:**

journeyNumber - index of the Journey in the response Object

**Returns:**

Location Object of the Arrival Point of the Journey with the given index.

---

## getArrivalTimeOfFirstJourney

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

Method to get the Arrival Time of the First Journey of the actual response object

**Returns:**

String ArrivalTime

---

## getArrivalTimeOfJourney

```
public java.lang.String getArrivalTimeOfJourney(TflJourney tflJourney)
```

Gives back the Arrival Time of a given TflJourney object

**Parameters:**

tflJourney - TflJourney object

**Returns:**

String of Arrival Time

---

## getArrivalTimeOfJourney

```
public java.lang.String getArrivalTimeOfJourney(int journeyNumber)
```

Gives back the Arrival Time of a Journey with a given index.

**Parameters:**

journeyNumber - index of the Journey in the Response Object

**Returns:**

String of Arrival Time

---

## getAverageDistanceWalkingKM

```
public double getAverageDistanceWalkingKM(edu.napier.geo.common.Location from,  
                                             edu.napier.geo.common.Location to)
```

Gives back the Average walking distance of all in the persistent InformationStorage stored Journeys from and to Locations in KM Uses the data of the persistent InformationStorage

**Parameters:**

from - Location object

to - Location object

**Returns:**

double of the Average walking distance of all in the persistent InformationStorage stored Journeys from and to Locations in KM

---

## getAverageDurationMSForJourney

```
public double getAverageDurationMSForJourney(edu.napier.geo.common.Location  
from,  
                                             edu.napier.geo.common.Location  
to)
```

Gives back the average duration of a Journey in ms Uses the data of the persistent InformationStorage

**Parameters:**

from - Location (Lon + Lat is compared)

to - Location (Lon + Lat is compared)

**Returns:**

double of the average walking time for a Journey from and to a given Location (Lat+Lon) in ms

---

## getAverageNumberOfLegs

```
public double getAverageNumberOfLegs(edu.napier.geo.common.Location from,  
                                         edu.napier.geo.common.Location to)
```

Gives back the average number of Legs of all stored Journeys from and to given Locations Uses the data of the persistent InformationStorage

**Parameters:**

from - Location  
to - Location

**Returns:**

double of the average number of Legs of a Journey from and to a Location

---

## getDeparturePointOfFirstJourney

```
public edu.napier.geo.common.Location getDeparturePointOfFirstJourney()
```

gives back a publicTransport-Location of the departure Point of the first Journey (Data of the Response Object). returns null, if response Object is null.

**Returns:**

Location of Departure of the first Journey

---

## getDeparturePointOfJourney

```
public edu.napier.geo.common.Location getDeparturePointOfJourney(TflJourney  
tflJourney)
```

Gives back the Departure Point of a given TflJourney Object

**Parameters:**

tflJourney - TflJourney object

**Returns:**

Location Object of the Departure Point of a given TflJourney Object

---

## getDeparturePointOfJourney

```
public edu.napier.geo.common.Location getDeparturePointOfJourney(int  
journeyNumber)
```

Gives back the Departure Point of a Journey with a given index.

**Parameters:**

journeyNumber - index of the Journey in the response Object

**Returns:**

Location Object of the Departure Point of a Journey with a given index.

## getDepartureTimeOfFirstJourney

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

Method to get the Departure Time of the First Journey of the actual response object

**Returns:**

String DepartureTime

---

## getDepartureTimeOfJourney

```
public java.lang.String getDepartureTimeOfJourney(TflJourney tflJourney)
```

Gives back the Departure Time of a given TflJourney object

**Parameters:**

tflJourney - TflJourney object

**Returns:**

String of Departure Time

---

## getDepartureTimeOfJourney

```
public java.lang.String getDepartureTimeOfJourney(int journeyNumber)
```

Gives back the Departure Time of a Journey with a given index.

**Parameters:**

journeyNumber - index of the Journey in the Response Object

**Returns:**

String of Departure Time

---

## getDurationMinutesOfFirstJourney

```
public int getDurationMinutesOfFirstJourney()
```

This method gives back the duration of the first Journey of the actual ResponseTfl Object in minutes. returns -1, if Response Object is null.

**Returns:**

Duration of the first Journey of the actual ResponseTfL Object in minutes

---

## getDurationMinutesOfJourney

```
public int getDurationMinutesOfJourney(TflJourney tflJourney)
```

Gives back the duration of a TflJourney

**Parameters:**

tflJourney - TflJourney object

**Returns:**

Integer of the duration of the given TflJourney Object

---

## getDurationMinutsOfJourney

```
public int getDurationMinutsOfJourney(int journeyNumber)
```

Gives back the duration of a given Journey in minutes

**Parameters:**

journeyNumber - index of the Journey in the Response Object

**Returns:**

Integer of the duration of the given Journey in minutes

---

## getFirstJourney

```
public TflJourney getFirstJourney()
```

Gives back the first Journey of the actual Response Object

**Returns:**

TflJourney Object of the first Journey of the actual Response Object

---

## getInformationStorage

```
public InformationStorage getInformationStorage()
```

gives back the informationStorage object of this class

**Returns:**

InformationStorage object of this class

---

## getJSON

```
public static java.lang.String getJSON(double fromLat,
                                         double fromLon,
                                         double toLat,
                                         double toLon)
                                         throws java.io.IOException
```

this method gives back a string of the JSON response from TfL for request for a Journey from and to coordinates (decimal) without further user Preferences

### Parameters:

fromLat - decimal  
 fromLon - decimal  
 toLat - decimal  
 toLon - decimal

### Returns:

String of the TfL Response (in JSON format)

### Throws:

java.io.IOException - IOException of getJSON(lat, lon, lat, lon, preferences)

## getJSON

```
public static java.lang.String getJSON(double fromLat,
                                         double fromLon,
                                         double toLat,
                                         double toLong,
                                         java.lang.String preferences)
                                         throws java.net.MalformedURLException,
                                         java.net.ProtocolException,
                                         java.io.IOException
```

this method gives back a String of the JSON response from TfL for a request for a Journey from and to coordinates and with all preferences in one String (separated by the and symbol).

### Parameters:

fromLat - decimal  
 fromLon - decimal  
 toLat - decimal  
 toLong - decimal  
 preferences - ArrayList of Strings with the user preferences (must be in the format, that TfL requires: "variable=value". All Variables that TfL provides can be used.

### Returns:

String of the TfL Response (in JSON format)

### Throws:

java.net.MalformedURLException - MalformedURLException of URL  
 java.net.ProtocolException - ProtocolException of HttpURLConnection  
 connection.setRequestMethod(GET)  
 java.io.IOException - IOException of url.openConnection



## getJSON

```
public static java.lang.String getJSON(double fromLat,  
                                         double fromLong,  
                                         double toLat,  
                                         double toLong,  
                                         java.util.ArrayList preferences)  
    throws java.io.IOException
```

this method gives back a string of the JSON response from TfL for request for a Journey from and to coordinates (decimal) with user Preferences

**Parameters:**

fromLat - decimal  
fromLong - decimal  
toLat - decimal  
toLong - decimal  
preferences - ArrayList of Strings with the user preferences (must be in the format, that TfL requires: "variable=value". All Variables that TfL provides can be used.

**Returns:**

String of the TfL Response (in JSON format)

**Throws:**

java.io.IOException - IOException of getJSON(lat, lon, lat, lon, preferences)

---

## getJSON

```
public static java.lang.String getJSON(edu.napier.geo.common.Location from,  
                                         edu.napier.geo.common.Location to)  
    throws java.io.IOException
```

this method gives back a string of the JSON response from TfL for request for a Journey from and to a Location

**Parameters:**

from - Location object  
to - Location object

**Returns:**

String of the TfL Response (in JSON format)

**Throws:**

java.io.IOException - IOException of getJSON(lat, lon, lat, lon, userPreferences)

---

## getJSON

```
public static java.lang.String getJSON(edu.napier.geo.common.Location from,  
                                         edu.napier.geo.common.Location to,  
                                         java.util.ArrayList preferences)  
    throws java.io.IOException
```

this method gives back a string of the JSON response from TfL for request for a Journey from and to a Location with user Preferences

**Parameters:**

from - Location object  
to - Location object  
preferences - ArrayList of Strings with the user Preferences in the format that the TfL API requires

**Returns:**

String of the TfL Response (in JSON format)

**Throws:**

java.io.IOException - IOException of getJSON(lat, lon, lat, lon, userPreferences)

---

## getJourney

```
public TflJourney getJourney(int journeyNumber)
```

Gives back a TflJourney of the response object with a given index.

**Parameters:**

journeyNumber - index of the Journey in the response Object

**Returns:**

a TflJourney Object of the response object with a given index.

---

## getNumberOfLegsOfFirstJourney

```
public int getNumberOfLegsOfFirstJourney()
```

Gives back the number of Legs of the first Journey of the actual ResponseTfL Object returns -1, if response Object is null.

**Returns:**

Integer of the number of Legs of the first Journey of the actual ResponseTfL Object

---

## getNumberOfLegsOfJourney

```
public int getNumberOfLegsOfJourney(TflJourney tflJourney)
```

Gives back the number of Legs of a given TflJourney Object

**Parameters:**

tflJourney - TflJourney object

**Returns:**

Integer of the number of Legs of a given TflJourney Object

---

## getNumberOfLegsOfJourney

```
public int getNumberOfLegsOfJourney(int journeyNumber)
```

Gives back the number of Legs of a Journey with a given index.

**Parameters:**

journeyNumber - index of the Journey in the response Object

**Returns:**

Integer of the number of Legs of a Journey with a given index.

---

## getPublicTransport

```
public PublicTransport getPublicTransport()
```

Method to get back the PublicTransport Object

**Returns:**

PublicTransport Object

---

## getResponseJavaObject

```
public ResponseTfl getResponseJavaObject()
```

---

## getRouteLocationsOfJourney

```
public java.util.ArrayList  
getRouteLocationsOfJourney(edu.napier.geo.common.Location from,  
edu.napier.geo.common.Location to)
```

Gives back an ArrayList of all Locations on the way of the Journey Uses the data of the persistent InformationStorage

**Parameters:**

from - Location object  
to - Location object

**Returns:**

ArrayList of all Locations on the way of the Journey

---

## getSource

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

Gives back the Source String, which is used to identify this API as source for Objects like Location

**Returns:**

String with this API name

---

## getTflJourneys

```
public java.util.ArrayList getTflJourneys(edu.napier.geo.common.Location from,  
edu.napier.geo.common.Location to)
```

Gives back an ArrayList of TflJourneys Objects of a Journey from and to a Location. Uses the data of the persistent InformationStorage

**Parameters:**

from - Location object  
to - Location object

**Returns:**

ArrayList of TflJourney Objects of a Journey from and to a Location

---

## resetInformationStorage

```
public void resetInformationStorage()
```

This method could be used to replace the InformationStorage Object of this Object with a new empty InformationStorage Object

---

## setPublicTransport

```
public void setPublicTransport(PublicTransport publicTransport)
```

Method to set the PublicTransport Object

**Parameters:**

publicTransport - Object of PublicTransport

---

## setResponseJavaObject

```
public void setResponseJavaObject(ResponseTfL responseJavaObject)
```

sets the ResponseJavaObject of this object to the given ResponseTfl Object

**Parameters:**

responseJavaObject - Object of ResponseTfl type (Response from TfL (JSON) converted to POJO object)

---

## storeInformationStoragePersistent

```
public void storeInformationStoragePersistent()  
    throws java.io.IOException,  
           java.io.FileNotFoundException
```

updates the local persistent file of the stored Information (InformationStorage). Is automatically called, when a new Response object is set as response object in an object of this class after automatically updating the InformationStorage. Not necessary for normal usage, but public provided for possible special use of a User.

**Throws:**

java.io.IOException - of ObjectOutputStream  
java.io.FileNotFoundException - of FileOutputStream

# Package edu.napier.geo.publicTransport.main

## Class Summary

### [PublicTransport](#)

This API uses only Latitude and Longitude for Locations and no Altitude.

### [RequestAndGetJsonFromServer](#)

---

edu.napier.geo.publicTransport.main

## Class PublicTransport

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.main.PublicTransport
```

---

< [Fields](#) > < [Constructors](#) > < [Methods](#) >

---

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

This API uses only Latitude and Longitude for Locations and no Altitude.

## Fields

### gson

```
private com.google.gson.Gson gson
```

### informationStorage

```
private InformationStorage informationStorage
```

### informationStorageFilePath

```
java.lang.String informationStorageFilePath
```

### informationStorageFilePathDefault

```
public static java.lang.String informationStorageFilePathDefault
```

## responseJsonObject

```
private ResponseTfL responseJsonObject
```

---

## source

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

## Constructors

### PublicTransport

```
public PublicTransport(boolean resetInformationStorage)
```

---

### PublicTransport

```
public PublicTransport(boolean resetInformationStorage,  
                        java.lang.String informationStorageFilePath)
```

\* Constructor for an Object of PublicTransport. This object will be necessary to use all functions of the PublicTransport API.

**Parameters:**

resetInformationStorage - if true, the persistent stored InformationStorage is not loaded and the new generated object of this class generates a new empty InformationStorage object, which will be written to the file of the old one, when the first responseObject of a response from a public transport provider API is set.  
informationStorageFilePath - path of the file of the InformationStorage object to import

## Methods

## createResponseJavaObject

```
public void createResponseJavaObject(double fromLat,  
                                     double fromLon,  
                                     double toLat,  
                                     double toLon)  
    throws java.lang.Exception
```

creates the POJO response Object for a Journey from and to the given coordinates. Then it sets the response object of this object to the new given response object from TfL.

### Parameters:

fromLat - decimal  
fromLon - decimal  
toLat - decimal  
toLon - decimal

### Throws:

java.lang.Exception - Exception of setResponseJavaObject()

---

## createResponseJavaObject

```
public void createResponseJavaObject(double fromLat,  
                                     double fromLon,  
                                     double toLat,  
                                     double toLon,  
                                     java.util.ArrayList userPreferences)  
    throws java.lang.Exception
```

creates the POJO response Object for a Journey from and to the given coordinates and with an ArrayList of Strings with the user preferences (must be in the format, that TfL requires: "variable=value". All Variables that TfL provides can be used. Then it sets the response object of this object to the new given response object from TfL.

### Parameters:

fromLat - decimal  
fromLon - decimal  
toLat - decimal  
toLon - decimal  
userPreferences - ArrayList of Strings in the format that the TfL API requires. One String per parameter

### Throws:

java.lang.Exception - Exception of setResponseJavaObject()

---



## createResponseJavaObject

```
public void createResponseJavaObject(edu.napier.geo.common.Location from,  
                                     edu.napier.geo.common.Location to)  
    throws java.lang.Exception
```

creates the POJO (plain old Java object) response object for a Journey from and to a given Location. Then it sets the response object of this object to the new given response object from TfL.

**Parameters:**

from - Location object  
to - Location object

**Throws:**

java.lang.Exception - Exception of setResponseJavaObject()

---

## createResponseJavaObject

```
public void createResponseJavaObject(edu.napier.geo.common.Location from,  
                                     edu.napier.geo.common.Location to,  
                                     java.util.ArrayList userPreferences)  
    throws java.lang.Exception
```

This method creates a POJO (Plain old java object) ResponseTfl for Journeys from and to a Location and with an ArrayList of Strings with the user preferences (must be in the format, that TfL requires: "variable=value" for most variables. All Variables that TfL provides can be used. Then it sets the response object of this object to the new given response object from TfL.

**Parameters:**

from - Location object  
to - Location object  
userPreferences - Strings must be in the format that the TfL API requires ("variable=value" for most of the variables).

**Throws:**

java.lang.Exception - Exception of setResponseJavaObject()

---

## getAllJourneys

```
public edu.napier.geo.publicTransport.Response.TflJourney[] getAllJourneys()
```

Gives back an Array of all TfLJourneys of the actual ResponseTfl Object

**Returns:**

an Array of TfLJourney Objects of all TfLJourneys of the actual ResponseTfl Object

---

## getArrivalPointOfFirstJourney

```
public edu.napier.geo.common.Location getArrivalPointOfFirstJourney()
```

This method gives back the Arrival Point of the first Journey of the actual ResponseTfL Object

**Returns:**

Location Object of the Arrival Point of the first Journey of the actual ResponseTfL Object

---

## getArrivalPointOfJourney

```
public edu.napier.geo.common.Location getArrivalPointOfJourney(TflJourney tflJourney)
```

Gives back the Arrival Point of a given TflJourney Object

**Parameters:**

tflJourney - TflJourney object

**Returns:**

Location Object of the Arrival Point of a given TflJourney Object

---

## getArrivalPointOfJourney

```
public edu.napier.geo.common.Location getArrivalPointOfJourney(int journeyNumber)
```

Gives back the Arrival Point of the Journey with the given index.

**Parameters:**

journeyNumber - index of the Journey in the response Object

**Returns:**

Location Object of the Arrival Point of the Journey with the given index.

---

## getArrivalTimeOfFirstJourney

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

Method to get the Arrival Time of the First Journey of the actual response object

**Returns:**

String ArrivalTime

---

## getArrivalTimeOfJourney

```
public java.lang.String getArrivalTimeOfJourney(TflJourney tflJourney)
```

Gives back the Arrival Time of a given TflJourney object

**Parameters:**

tflJourney - TflJourney object

**Returns:**

String of Arrival Time

---

## getArrivalTimeOfJourney

```
public java.lang.String getArrivalTimeOfJourney(int journeyNumber)
```

Gives back the Arrival Time of a Journey with a given index.

**Parameters:**

journeyNumber - index of the Journey in the Response Object

**Returns:**

String of Arrival Time

---

## getAverageDistanceWalkingKM

```
public double getAverageDistanceWalkingKM(edu.napier.geo.common.Location from,  
                                             edu.napier.geo.common.Location to)
```

Gives back the Average walking distance of all in the persistent InformationStorage stored Journeys from and to Locations in KM Uses the data of the persistent InformationStorage

**Parameters:**

from - Location object

to - Location object

**Returns:**

double of the Average walking distance of all in the persistent InformationStorage stored Journeys from and to Locations in KM

---

## getAverageDurationMSForJourney

```
public double getAverageDurationMSForJourney(edu.napier.geo.common.Location  
from,                                     edu.napier.geo.common.Location  
to)
```

Gives back the average duration of a Journey in ms Uses the data of the persistent InformationStorage

**Parameters:**

from - Location (Lon + Lat is compared)  
to - Location (Lon + Lat is compared)

**Returns:**

double of the average walking time for a Journey from and to a given Location (Lat+Lon) in ms

---

## getAverageNumberOfLegs

```
public double getAverageNumberOfLegs(edu.napier.geo.common.Location from,  
                                     edu.napier.geo.common.Location to)
```

Gives back the average number of Legs of all stored Journeys from and to given Locations Uses the data of the persistent InformationStorage

**Parameters:**

from - Location  
to - Location

**Returns:**

double of the average number of Legs of a Journey from and to a Location

---

## getDeparturePointOfFirstJourney

```
public edu.napier.geo.common.Location getDeparturePointOfFirstJourney()
```

gives back a publicTransport-Location of the departure Point of the first Journey (Data of the Response Object). returns null, if response Object is null.

**Returns:**

Location of Departure of the first Journey

---

## getDeparturePointOfJourney

```
public edu.napier.geo.common.Location getDeparturePointOfJourney(TflJourney tflJourney)
```

Gives back the Departure Point of a given TflJourney Object

**Parameters:**

tflJourney - TflJourney object

**Returns:**

Location Object of the Departure Point of a given TflJourney Object

---

## getDeparturePointOfJourney

```
public edu.napier.geo.common.Location getDeparturePointOfJourney(int journeyNumber)
```

Gives back the Departure Point of a Journey with a given index.

**Parameters:**

journeyNumber - index of the Journey in the response Object

**Returns:**

Location Object of the Departure Point of a Journey with a given index.

---

## getDepartureTimeOfFirstJourney

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

Method to get the Departure Time of the First Journey of the actual response object

**Returns:**

String DepartureTime

---

## getDepartureTimeOfJourney

```
public java.lang.String getDepartureTimeOfJourney(TflJourney tflJourney)
```

Gives back the Departure Time of a given TflJourney object

**Parameters:**

tflJourney - TflJourney object

**Returns:**

String of Departure Time

---

## getDepartureTimeOfJourney

```
public java.lang.String getDepartureTimeOfJourney(int journeyNumber)
```

Gives back the Departure Time of a Journey with a given index.

**Parameters:**

journeyNumber - index of the Journey in the Response Object

**Returns:**

String of Departure Time

---

## getDurationMinutesOfFirstJourney

```
public int getDurationMinutesOfFirstJourney()
```

This method gives back the duration of the first Journey of the actual ResponseTfl Object in minutes. returns -1, if Response Object is null.

**Returns:**

Duration of the first Journey of the actual ResponseTfL Object in minutes

---

## getDurationMinutesOfJourney

```
public int getDurationMinutesOfJourney(TflJourney tflJourney)
```

Gives back the duration of a TfLJourney

**Parameters:**

tflJourney - TflJourney object

**Returns:**

Integer of the duration of the given TfLJourney Object

---

## getDurationMinutsOfJourney

```
public int getDurationMinutsOfJourney(int journeyNumber)
```

Gives back the duration of a given Journey in minutes

**Parameters:**

journeyNumber - index of the Journey in the Response Object

**Returns:**

Integer of the duration of the given Journey in minutes

---

## getFirstJourney

```
public TflJourney getFirstJourney()
```

Gives back the first Journey of the actual Response Object

**Returns:**

TflJourney Object of the first Journey of the actual Response Object

---

## getInformationStorage

```
public InformationStorage getInformationStorage()
```

gives back the informationStorage object of this class

**Returns:**

InformationStorage object of this class

---

## getInformationStorageFilePath

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

Gives back the File Path of the informationStorage

**Returns:**

File path as String

---

## getJourney

```
public TflJourney getJourney(int journeyNumber)
```

Gives back a TflJourney of the response object with a given index.

**Parameters:**

journeyNumber - index of the Journey in the response Object

**Returns:**

a TflJourney Object of the response object with a given index.

---

## getNumberOfLegsOfFirstJourney

```
public int getNumberOfLegsOfFirstJourney()
```

Gives back the number of Legs of the first Journey of the actual ResponseTfl Object returns -1, if response Object is null.

**Returns:**

Integer of the number of Legs of the first Journey of the actual ResponseTfl Object

## getNumberOfLegsOfJourney

```
public int getNumberOfLegsOfJourney(TflJourney tflJourney)
```

Gives back the number of Legs of a given TflJourney Object

**Parameters:**

tflJourney - TflJourney object

**Returns:**

Integer of the number of Legs of a given TflJourney Object

---

## getNumberOfLegsOfJourney

```
public int getNumberOfLegsOfJourney(int journeyNumber)
```

Gives back the number of Legs of a Journey with a given index.

**Parameters:**

journeyNumber - index of the Journey in the response Object

**Returns:**

Integer of the number of Legs of a Journey with a given index.

---

## getResponseJavaObject

```
public ResponseTfl getResponseJavaObject()
```

---

## getResponseObjectFromJSONString

```
private ResponseTfl getResponseObjectFromJSONString(java.lang.String string)
                                                    throws
java.io.IOException,
java.io.FileNotFoundException,
com.google.gson.JsonSyntaxException
```

**/\*\***

**Parameters:**

string - of the JSON response from the API of the Tfl public Transport API

**Returns:**

ResponseTfl object of all information in the JSON creates Response object out of JSON String and gives the new object to the informationStorage to update it.

**Throws:**

java.io.IOException -  
java.io.FileNotFoundException -  
com.google.gson.JsonSyntaxException -



## getRouteLocationsOfJourney

```
public java.util.ArrayList  
getRouteLocationsOfJourney(edu.napier.geo.common.Location from,  
edu.napier.geo.common.Location to)
```

Gives back an ArrayList of all Locations on the way of the Journey Uses the data of the persistent InformationStorage

**Parameters:**

from - Location object  
to - Location object

**Returns:**

ArrayList of all Locations on the way of the Journey

---

## getSource

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

Gives back the Source String, which is used to identify this API as source for Objects like Location

**Returns:**

String with this API name

---

## getTflJourneys

```
public java.util.ArrayList getTflJourneys(edu.napier.geo.common.Location from,  
edu.napier.geo.common.Location to)
```

Gives back an ArrayList of TflJourneys Objects of a Journey from and to a Location. Uses the data of the persistent InformationStorage

**Parameters:**

from - Location object  
to - Location object

**Returns:**

ArrayList of TflJourney Objects of a Journey from and to a Location

---

## printAllJourneyInformation

```
public void printAllJourneyInformation()
```

Method for demonstration only This method prints out all Journeys of the InformationStorage object.

---

## resetInformationStorage

```
public void resetInformationStorage()
```

This method could be used to replace the InformationStorage Object of this Object with a new empty InformationStorage Object

---

## setInformationStorageFilePath

```
public void setInformationStorageFilePath(java.lang.String  
informationStorageFilePath)
```

Sets the informationStorage File path

**Parameters:**

informationStorageFilePath - File Path as String

---

## setResponseJavaObject

```
public void setResponseJavaObject(ResponseTfL responseJavaObject)
```

sets the ResponseJavaObject of this object to the given ResponseTfl Object

**Parameters:**

responseJavaObject - Object of ResponseTfl type (Response from TfL (JSON) converted to POJO object)

---

## setSource

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

Sets the Source String

**Parameters:**

source - String which describes the object of this class, when a new Location objet is created.

---

## storeInformationStoragePersistent

```
public void storeInformationStoragePersistent()
    throws java.io.IOException,
           java.io.FileNotFoundException
```

updates the local persistent file of the stored Information (InformationStorage). Is automatically called, when a new Response object is set as response object in an object of this class after automatically updating the InformationStorage. Not necessary for normal usage, but public provided for possible special use of a User.

### Throws:

java.io.IOException - of ObjectOutputStream  
 java.io.FileNotFoundException - of FileOutputStream

---

edu.napier.geo.publicTransport.main

## Class RequestAndGetJsonFromServer

```
java.lang.Object
|
+--edu.napier.geo.publicTransport.main.RequestAndGetJsonFromServer
```

---

< [Constructors](#) > < [Methods](#) >

---

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

### Author:

Jan-Niklas Keiner 2017/02/28 This class has static methods for giving back JSON Strings from TfL for requests with the different static methods

## Constructors

### RequestAndGetJsonFromServer

```
public RequestAndGetJsonFromServer()
```

## Methods

## getJSON

```
public static java.lang.String getJSON(double fromLat,
                                         double fromLon,
                                         double toLat,
                                         double toLon)
                                         throws java.io.IOException
```

this method gives back a string of the JSON response from TfL for request for a Journey from and to coordinates (decimal) without further user Preferences

### Parameters:

fromLat - decimal  
 fromLon - decimal  
 toLat - decimal  
 toLon - decimal

### Returns:

String of the TfL Response (in JSON format)

### Throws:

java.io.IOException - IOException of getJSON(lat, lon, lat, lon, preferences)

---

## getJSON

```
public static java.lang.String getJSON(double fromLat,
                                         double fromLon,
                                         double toLat,
                                         double toLong,
                                         java.lang.String preferences)
                                         throws java.net.MalformedURLException,
                                         java.net.ProtocolException,
                                         java.io.IOException
```

this method gives back a String of the JSON response from TfL for a request for a Journey from and to coordinates and with all preferences in one String (separated by the and symbol).

### Parameters:

fromLat - decimal  
 fromLon - decimal  
 toLat - decimal  
 toLong - decimal  
 preferences - ArrayList of Strings with the user preferences (must be in the format, that TfL requires: "variable=value". All Variables that TfL provides can be used.

### Returns:

String of the TfL Response (in JSON format)

### Throws:

java.net.MalformedURLException - MalformedURLException of URL  
 java.net.ProtocolException - ProtocolException of HttpURLConnection  
 connection.setRequestMethod(GET)  
 java.io.IOException - IOException of url.openConnection

---

## getJSON

```
public static java.lang.String getJSON(double fromLat,  
                                         double fromLong,  
                                         double toLat,  
                                         double toLong,  
                                         java.util.ArrayList preferences)  
    throws java.io.IOException
```

this method gives back a string of the JSON response from TfL for request for a Journey from and to coordinates (decimal) with user Preferences

**Parameters:**

fromLat - decimal  
fromLong - decimal  
toLat - decimal  
toLong - decimal  
preferences - ArrayList of Strings with the user preferences (must be in the format, that TfL requires: "variable=value". All Variables that TfL provides can be used.

**Returns:**

String of the TfL Response (in JSON format)

**Throws:**

java.io.IOException - IOException of getJSON(lat, lon, lat, lon, preferences)

---

## getJSON

```
public static java.lang.String getJSON(edu.napier.geo.common.Location from,  
                                         edu.napier.geo.common.Location to)  
    throws java.io.IOException
```

this method gives back a string of the JSON response from TfL for request for a Journey from and to a Location

**Parameters:**

from - Location object  
to - Location object

**Returns:**

String of the TfL Response (in JSON format)

**Throws:**

java.io.IOException - IOException of getJSON(lat, lon, lat, lon, userPreferences)

---

## getJSON

```
public static java.lang.String getJSON(edu.napier.geo.common.Location from,  
                                         edu.napier.geo.common.Location to,  
                                         java.util.ArrayList preferences)  
    throws java.io.IOException
```

this method gives back a string of the JSON response from TfL for request for a Journey from and to a Location with user Preferences

**Parameters:**

from - Location object

to - Location object

preferences - ArrayList of Strings with the user Preferences in the format that the TfL API requires

**Returns:**

String of the TfL Response (in JSON format)

**Throws:**

java.io.IOException - IOException of getJSON(lat, lon, lat, lon, userPreferences)

---

## locationLonAndLatNotNull

```
private static boolean locationLonAndLatNotNull(edu.napier.geo.common.Location  
location)
```

Method to check, if Longitude and Latitude of a Location are not null

**Parameters:**

location - Location object

**Returns:**

Boolean. true, if both values are not 0.0, else false

---

## userPreferencesToString

```
private static java.lang.String userPreferencesToString(java.util.ArrayList  
preferences)
```

This method is used for converting the ArrayList of Strings with the user preferences to one long String, separated by and symbol

**Parameters:**

preferences - UserPreferences in the Format that TfL API requires

**Returns:**

String in URL format