

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 separate 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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[AffectedStop](#)

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[CycleHireDockingStationData](#)

[Disruption](#)

[Elevation](#)

[Instruction](#)

[Leg](#)

[Line](#)

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[TrainLoading](#)

[ValidityPeriod](#)

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

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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

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

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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<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.

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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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()
```

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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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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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.

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

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

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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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.

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.facade

Class Summary

[PublicTransportFacade](#)

edu.napier.geo.publicTransport.facade

Class PublicTransportFacade

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

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

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

Author:

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

Fields

publicTransport

```
private PublicTransport publicTransport
```

Constructors

PublicTransportFacade

```
public PublicTransportFacade()
```

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

getResponseJsonObject

```
public ResponseTfl getResponseJsonObject()
```

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