

## GTFS - Developer Information

### 1 General

- 1.1 This document describes the structure of the Static Information of the Israel public transportation.
- 1.2 The Static Information are set of files, which describe all planned trips, including the data about: start time, trip route, stations, tariff (fares) etc.
- 1.3 The main package of files is structured at GTFS international format.
- 1.4 In the link: <https://developers.google.com/transit/gtfs/reference> you can find an explanation of the structure and content of the files in GTFS format.
- 1.5 In addition to GTFS files, additional information files are transferred, which include additional and unique information to the State of Israel, as detailed below.
- 1.6 All files are text files, which are viewable by a file editor.
- 1.7 The separator between the fields is a comma (,).
- 1.8 The files are transferred every night to the site: <https://gtfs.mot.gov.il/gtfsfiles>
- 1.9 The files are also at FTP <ftp://gtfs.mot.gov.il> and <ftp://199.203.58.18> **but these services are due to be shut down at 31/12/2022, and only the HTTPS will be available in the future.**
- 1.10 In the above address there are the following compressed files in zip format:
  - 1.10.1 israel-public-transportation.zip file - The main file of the information in GTFS format.
  - 1.10.2 ClusterToLine.zip file - Describes the association of lines to clusters.
  - 1.10.3 TripIdToDate.zip file - Describes the trip ID of each day of the week.
  - 1.10.4 tariff\_2022.zip - Describes the zones according to 2022's fare reform.
  - 1.10.5 zones\_2022.zip – Describes the zones according to 2022's fare reform, as a geographical file.
  - 1.10.6 ChargingRavKav.zip file - Describes the RavKav charging stations ("עמדות לטעינת רב קו"), or "Al-Hakav" stations ("עמדות השירות 'על הקו'")
- 1.11 Revision history:

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Date	Description
20/8/2021	First version of this document at English (previous versions were at Hebrew)
27/7/2021	Changes related to Israel Railways data, starts from 8/8/2021, at sections: 1.11.3, 2.5.6, 2.6.2, 2.8.2, 2.9.2, 4
29/7/2021	Remove comment, that was at 27/7/2021 version, about route_id as section 2.5.6
24/5/2022	Changes related to tariff reform of August 2022
15/6/2022	Changes to tariff_2022 fields Changes to URL of the files at section 1.8-1.10
6/7/2022	Changes to columns of profiles_2022 Changes to columns of tariff_2022 Add temporary files for single ride: <ul style="list-style-type: none"> <li>• stops_reform2022</li> <li>• fare_rules_reform2022</li> <li>• fare_attributes_reform2022</li> </ul>
28/7/2022	<ul style="list-style-type: none"> <li>• Remove stops_reform2022, fare_rules_reform2022, fare_attributes_reform2022</li> <li>• stops, fare_rules, fare_attributes are now with values of tariff reform of August 2022</li> </ul>

## 2 Specify the files in israel-public-transportation

- 2.1 The files in the israel-public-transportation package are compatible with the GTFS format.
- 2.2 It should be emphasized that in the GTFS format, there are files and fields that are optional. Some have already been used and some have not been used at this stage. The developer must consider the possibility that, over time, fields or files that are optional will be added or removed from the israel-public-transportation package.
- 2.3 The following is a list of the files transferred in the israel-public-transportation package:

Filed name	Explanation
agency	Operators file.
routes	Line ID file (all directions, all alternatives).
trips	Trip file - Single trip level.
calendar	Displays the days on which the line operates, and the dates of the activity.
stop_times	Trip times, by stop ("תחנה") order at the line.
stops	Stations file.

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Filed name	Explanation
shapes	Track Line file.
translations	Translation file.
fare_rules	Fare codes between stations.
fare_attributes	Price of fare to fare code.

## 2.4 Explanation of agency file

2.4.1 The file includes details about public transport operators ("מפעילי" "התחבורה הציבורית").

2.4.2 The fields in the file are shown in the following table (and also at <https://developers.google.com/transit/gtfs/reference/#agencytxt>) :

Filed name	Explanation
agency_id	Operator ("מפעיל") code.
agency_name	Operator Name.
agency_url	URL of the operator site.
agency_timezone	Fixed value: Asia / Jerusalem.
agency_lang	Fixed value: he (Hebrew).

## 2.5 Explanation of routes file

2.5.1 The file contains a row for each line identifier. The meaning of the term "line ID" is the combination of: line-direction-alternative ("קו-כיוון-" "חלופה"), which creates unique identification of the line.

2.5.2 For example: line 86 is from Ariel to Petah Tikva and back. This line has 6 different alternatives ("חלופות"), each has a unique line identifier, as illustrated by the following table:

Route_id	Line	Start	Finish	Direction	Alternative
9141	86	Ariel	Petah Tikva	1	#
9142	86	Ariel	Petah Tikva	1	1
9143	86	Ariel	Petah Tikva	1	2
9146	86	Petah Tikva	Ariel	2	#
9147	86	Petah Tikva	Ariel	2	1
9148	86	Petah Tikva	Ariel	2	2

2.5.3 Each alternative ("חלופה"), gets its own route\_id, and remains constant throughout the lifetime of the alternative.

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2.5.4 For each such alternative, there are three parameters that are unique to the alternative: schedule, sequence of stops, and trip route.

2.5.5 Even when one of these data changes (schedule / stations / route) the record remains with the same route\_id.

2.5.6 The fields in the file are shown in the following table (and also at <https://developers.google.com/transit/gtfs/reference/#routestxt> ):

Field name	Explanation
route_id	A unique and permanent code for a line identifier, as explained above.
agency_id	Operator code, the field linking to the 'agency' file.
route_short_name	This field shows the signs of the line, which usually appear on the sign on the bus itself, which is determined and maintained only by the operator, for example, the line signs can be 86, א86 etc.  For Israel Railways lines, the field is empty.
route_long_name	This field is composed of the following combining: name of departure station + name of departure city + destination station name + destination city name + direction + alternative. Direction - meaning forth (1) or back (2). For example, this field for line 86 from Ariel to Petah Tikva, direction 1 alternative #, would look like this: מגרש כדורגל-אריאל->ז'בוטינסקי/שנקר-פתח תקווה-1#  For Israel Railways lines, this field is composed of the following combining: name of departure station + name of departure city + destination station name + destination city name. example: תל אביב ההגנה-תל אביב יפו->בנימינה-בנימינה גבעת עדה
route_desc	This field contains a chaining of the following 3 items: <ul style="list-style-type: none"> <li>Line catalog number ('מק"ט קו').</li> <li>Line direction ('כיוון').</li> <li>Line alternative ('חלופה').</li> </ul> <p>The 'line catalog number' contains of 5 digits, and is unique for the line, and does not change throughout the life of the line, and constitutes a kind of "identity card" for the line.</p> <p>For example - in line 86 of the Afikim operator, as explained above, for all the alternatives of the line, there is the same 'line catalog number' 32086, and for direction 1 and alternatives #, the field would look like:</p>

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Field name	Explanation
	32086-1-#  For Israel Railways line, this field contains train number
route_type	Existing values: 0 - Light Train (Jerusalem Light Rail - "כפיר") 2 - Israel Railways 3 - Bus 5 - Cable car ("כבל אקספרס", "כרמלית") 8- Taxi ("מוניות שירות") 715 - Flexible Service Line ("קו בשירות גמיש")
route_color	Line color by line uniqueness: Regular Lines - no color Students Lines ("קווי תלמידים") - Orange color (#FF9933) Sea Lines ("קווי ים") - Blue color (#3399FF) Train Lines ("קווי הזנה לרכבת") - Green color (#33CC33) Night Lines ("קווי לילה") - Purple color (#9933FF)

## 2.6 Explanation of trips file

2.6.1 The file contains the single trip. This file is linked to 'routes', 'stop\_times' files.

2.6.2 The fields in the file are shown in the following table (see also <https://developers.google.com/transit/gtfs/reference/#trips.txt>) :

Field name	Explanation
route_id	Field linking to the 'routes' file.
service_id	Field linking to the 'calendar' file.

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Field name	Explanation
trip_id	<p>Running number (unique). Field links to 'stop_times' file. For your attention:</p> <ol style="list-style-type: none"> <li>1. For the same trip that repeats itself on each Sunday-Thursday, this field is the same for the same time on all days.</li> <li>2. The dates on which the trip takes place should be taken from 'calendar' file which lists the days of the line and its date range.</li> <li>3. It should be noted that the trip_id field in this file is a running number only. The date field structure (xxxx_ddmmyy) is meaningless to the user in the files, but is intended to create a unique field only.</li> <li>4. It should also be emphasized that this field does not reflect the actual "trip ID" of the public transport operators in Israel. The information for the "trip ID" - the exact day of the week and hour of day, is detailed in the reference file found in the package: 'TripToDate'.</li> </ol>
trip_headsign	<p>For the end stations of the line, besides the name of the official station appearing in the signs, there is also a destination station for publication, which is an intuitive name for the passenger. For example, when a station whose official name is "אגריפס/קניונשוק", appears on the line as the final destination of the line, the name of the destination station for publication will be "שוק מחנה יהודה".</p> <p>In this field, where the locality of origin and destination are the same - the value in this field will be the name of the destination station for publication. In cases where the locality of origin and destination locality of the line are different, the name of the destination city will be added to the name of the target station for publication, as well as the name of the destination city_ (bottom line) and the destination station name of the line.</p> <p>For Israel Railways trips, this field contain train number.</p>
direction_id	<p>The direction of trip can be 0 or 1, in this field we make the following values:</p> <p>0 = 1 or 3 (rounds) in MOT licensing system (forth) 1 = 2 on MOT licensing system (back)</p>
shape_id	<p>Field linking to a 'shapes' file (this field can sometimes remain blank).</p> <p>For Israel Railways trips, this field is empty.</p>

## 2.7 Explanation of calendar file

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2.7.1 The file displays the line activity by date. When a value in a line (station list or schedule) changes, the service\_id changes to a new record with the appropriate dates.

2.7.2 As long as the line behaves in the same way within the date range there will be one row.

2.7.3 As soon as there is a change in the schedule of the line, a new row will be added for a given day or date.

2.7.4 The fields in the file are shown in the following table:

Field name	Explanation
service_id	Running number (unique). Field linking to the 'trips' file.
sunday	0 - Not active on this day 1 - Active on this day
monday	Same as above.
tuesday	Same as above.
wednesday	Same as above.
thursday	Same as above.
friday	Same as above.
saturday	Same as above.
start_date	Start date of record activity The format is a requirement of Google: Format: YYYYMMDD. Meaning start_date is the start date of the record - if the calendar date creation date starts in the middle of the record date range, the date "is cut off" and starts on the same day as the calendar file creation. Example: If record dates are 10/1-15/1 and the file creation date is 12/1 - the starting date will be 12/1.
end_date	Until the record activity date. Format: YYYYMMDD

2.7.5 Example: Throughout the period, the line behaves in the same manner (same schedule) for the days Sunday - Thursday and another schedule for Friday, and is not active on Saturday so it has two lines. (If there was another schedule for the line on Saturday there was another row) If in the same date range there was an event in which the schedule was different, rows were added accordingly.



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service_id	sunday	monday	tuesday	wednesday	thursday	friday	saturday	start_date	end_date
139839	1	1	1	1	1	0	0	20120205	20120216
139840	0	0	0	0	0	1	0	20120205	20120216

## 2.8 Explanation of stop\_times file

2.8.1 The file contains the trip schedule, and the sequence of stops on the route.

2.8.2 The fields in the file are shown in the following table (see also [https://developers.google.com/transit/gtfs/reference/#stop\\_timestxt](https://developers.google.com/transit/gtfs/reference/#stop_timestxt)):

Field name	Explanation
trip_id	Field linking to the 'trips' file
arrival_time	<p>Stop arrival time - a field calculated according to departure time and approximate trip time.</p> <p><b>Emphasis on the logic of night lines dictated by the protocol:</b></p> <p>A trip that begins before midnight and continues after midnight - all of its stations will appear on the same calendar day it began.</p> <p>A trip that starts after midnight (even if the MOT licensing system it registered on the same day at 25:00, 26:00, etc.) passes to the next calendar day.</p> <p><b>Example from MOT licensing system:</b> Egged Transport, Line 18, Direction 3, Alternative #, (catalog number 21018).</p> <p><b>MOT Licensing system</b> - The line is active on Thursday from 23:30 until 27:59</p> <p><b>GTFS</b> - the first trip is shown on Thursday, at all its stations, at 23:30, 24, 25 and 26 because it is a trip that begins before midnight and continues into the next day.</p> <p>While subsequent trips that begin after midnight will appear on the following day (Friday).</p> <p><b>As far as the developer is concerned:</b> once the developer understands the above logic, he can define in the application itself that every trip that appears between 00:00 and 04:00 will be displayed as the night line.</p> <p>It should be remembered that regular public transport trips begin at 4:00 am, except in rare cases.</p>



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Field name	Explanation
departure_time	Departure time from the stop. (Field calculated according to departure time and approximate trip time). The fields: departure_time and arrival_time are the same unless there is regular break at the stop (e.g for letting the driver and passengers to get down and rest for some minutes).
stop_id	Running number of the stop in the MOT licensing system. Field linking to the 'stops' file.
stop_sequence	Displays the sequence (order) of the stops on the line.
pickup_type	Displays activity at the stop: 0 = Pickup (allowed to pickup passengers at this stop) 1 = Drop off only (no pickup at this stop)
drop_off_type	Displays activity at the station: 0 = Drop off (allowed to drop off passengers at this station) 1 = Pickup Only (No drop off at this station)
shape_dist_traveled	Distance from the origin stop. For Israel Railways trips, this field is empty.

## 2.9 Explanation of stops file

2.9.1 The file contains the infrastructure of **all** stations in Israel.

2.9.2 The fields in the file are shown in the following table (see also <https://developers.google.com/transit/gtfs/reference/#stopstxt>):

Field name	Explanation
stop_id	Running number of the stop in the MOT licensing system. Field linking to 'stop_times' file
stop_code	Stop code (the number of the stop that appears on the physical station in the zone).
stop_name	Stop name.
stop_desc	Stop description: Street: @Street + @House number City: @City platform: @Platform floor: @Floor. Note: All words of the description will always appear, even if there is no value (the title will appear without content).  For Israel Railways stops, this field is empty.
stop_lat	Coordinate latitude of location of the stop, at WGS 84 coordinates.
stop_lon	Coordinate longitude of location of the stop, at WGS 84 coordinates.

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Field name	Explanation
location_type	Values are passed: 1 = if it is a central station (“תחנה מרכזית”). 0 = if this is a regular stop (whether it is a regular stop or a platform within station).
parent_station	This field can have 3 modes: 1. regular stop, not in a central station: no value will be transferred. 2. stop which is platform within central bus station: the value shall be transferred: stop_id of the central bus station on which the platform is located. Highlight: the stop_id to which the link should be placed, must have location_type = 1 (central station). 3. Central Station: no value will be transferred in this field.
zone_id	Associate the station within a tariff zone. The field is linked to the fields: origin_id / destination_id in the ‘fare_rules’ file.  For Israel Railways stops, this field is empty.

## 2.10 Explanation of shapes file

2.10.1 The file contains the route shape points by latitude and longitude, and with the information in the file you can view the shape of route on a map.

2.10.2 **There are no route shape points for Israel Railway routes.**

2.10.3 The fields in the file are shown in the following table (see also <https://developers.google.com/transit/gtfs/reference/#shapestxt>):

Field name	Explanation
shape_id	Field links to ‘trips’ file.
shape_pt_lat	Coordinate latitude, at WGS 84 coordinates
shape_pt_lon	Coordinate longitude, at WGS 84 coordinates
shape_pt_sequence	Associates the latitude and longitude of a shape point with its sequence order along the shape. The first points get a value of 1.

## 2.11 Explanation of fare\_rules

2.11.1 The files: fare\_rules, fare\_attributes allow you to locate the single ride fare (“מחיר נסיעה בודדת”) from each source stop (“תחנת עליה”) to each destination station (“תחנה ירידה”) of the active lines at the same time.

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The fare\_rules file includes only the codes within the date range of the information in the GTFS files

2.11.2 The files contain the single ride fare of all public transport operators.

2.11.3 In case that route has a single fare: route\_id will have a value, and origin\_id, destination\_id will be empty.

2.11.4 In case that route has more than one fare: route\_id will empty, and origin\_id, destination\_id will have value. The reason is that after the tariff reform of August 2022 the fare between 2 stops is the same for all routes.

2.11.5 see also

[https://developers.google.com/transit/gtfs/reference/#fare\\_rulestxt](https://developers.google.com/transit/gtfs/reference/#fare_rulestxt).

Field name	Explanation
fare_id	Fare code, field linking to 'fare_attributes' file.
route_id	Route id, field linking to 'routes' file.
origin_id	Origin zone code linked to station zone code field: zone_id field in the 'stops' file.
destination_id	Destination zone code linked to station zone code field: zone_id field in the 'stops' file.
contains_id	Optional field - the field is passed with a null value.

## 2.12 Explanation of fare\_attributes file

2.12.1 The file contains the individual fare.

2.12.2 see also

[https://developers.google.com/transit/gtfs/reference/#fare\\_attributestxt](https://developers.google.com/transit/gtfs/reference/#fare_attributestxt).

Field name	Explanation
fare_id	Fare code, field linking to the fare_rules table.
price	Price at new Israel Shekel ₪
currency_type	ILS
payment_method	Form of payment - fixed value = 0 (Meaning = payment for pickup).
Transfers	Transition between buses. Fixed value = 0, meaning no transition.
agency_id	Optional field - currently not passed, the field is passed with a null value.

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Field name	Explanation
transfer_duration	Optional field - currently not passed, the field is passed with a null value.

## 2.13 Explanation of translations file

2.13.1 The file includes translation of station names into English and Arabic.

2.13.2 Details about this file are available at:

<https://support.google.com/transitpartners/answer/2450962?hl=en>

2.13.3 The fields in the file are shown in the following table:

Field name	Explanation
trans_id	For each stop that has an English translation, the name of the stop appears. For each rail line appears a chaining of: Stop name + destination city name + destination stop name + destination city name.
lang	EN = English line HE = Hebrew line AR = Arabic line
translation	The English or Arabic translation or the Hebrew text respectively.

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### 3 Specify the files in ClusterToLine package

- 3.1 The package includes a single file named ClusterToLine that shows the association of the line to the cluster (“אשכול”).
- 3.2 Public transport lines are grouped in clusters according to geographic regions, and/or according to MOT tenders.
- 3.3 The file contains the data available in the MOT licensing system, as of the issue date. Therefore, in cases where a line passes from cluster to cluster, it may appear for a certain time period twice, once to the outgoing cluster and once to the new cluster.
- 3.4 The fields in the file are shown in the following table:

Field name	Explanation
OperatorName	Operator name.
OfficeLineId	Line code. Field linking to the ‘routes’ file, field: route_desc. Explanation: The field: route_desc, contains the following: -mect-line-direction-alternative. The first 5 digits of the line cut must be taken from the string.
OperatorLineId	Line numer.
ClusterName	The name of the cluster to which the line belongs.
FromDate	From date - Displays from the date the line belongs to the cluster.
ToDate	To date - usually up to 2200, unless the line goes to another cluster.
ClusterId	Cluster code.
LineType	Line Type code.
LineTypeDesc	Description Line type "עירוני" - Urban. "בינעירוני" – Intercity. "אזורי" – Regional.
ClusterSubDesc	A sub-cluster name to which the line is associated.

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#### 4 Specify the files in TripldToDate package

- 4.1 The package includes a single file called TripldToDate that allows you to associate a single tripld according to the day of the week of the trip.
- 4.2 In the GTFS files, in the case of the same trip on Sundays through Thursdays (for example - A trip at 06:45), the trip appears once in the trips file.
- 4.3 In practice for the same trip that repeats itself on Sundays through Thursdays, there is a different "tripld" different for each day.
- 4.4 The purpose of the file is to present the exact tripld as it actually exists to every public transportation operator in Israel, on any day of the week and at any hour of the day.
- 4.5 The Tripld filed links to DatedVehicleJourney at the SIRI-SM feed.
- 4.6 The file does not include trips of Israel Railways.
- 4.7 The fields in the file are shown in the following table:

Field name	Explanation	Comment
LineDetailRecordId	Unique identifier for alternative	Field linking to the 'trips' file: LineDetailRecordId= route_id
OfficeLineId	Line ID	
Direction	Direction	
LineAlternative	Alternative	
fromDate	From date	Note, that in this file, the dates are the full record dates entered by the operator, while on the calendar the dates are always from the date of issue and 60 days ahead. That is, a record that began in January 2015 without any change. Will appear here 1/1/15 – 1/1/2200, while on the calendar will appear each time for a 60-day date period.
Todate	To date	
Tripld	Unique Trip ID	As long as the schedule of the line is unchanged - the tripld on the same day and at the same time - also unchanged. When the schedule changes - the tripld changes, but may return after an event. Example: Schedule from 1/1/15 - 1/1/2200

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Field name	Explanation	Comment
		<p>On 5/3/15 there was "Purim" and on this day the line was different. Therefore, a record that began on 1/1/15, "will close" on 4/3/15.</p> <p>A new entry will open for the date 5/3/15 Then, may return the previous record, meaning that the tripid that were in the past will repeat, again from 6/3/15 - 1/1/2200</p>
DayInWeek	Day in the week	
DepartureTime	Trip time	



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**5 Specify the files in Tariff package**

5.1 The package is not relevant anymore.

**6 Specify the files in zones package**

6.1 The package is not relevant anymore.

## Specify the files in Tariff2022 package

6.2 The package includes three files:

6.2.1 tariff\_2022.csv: Describes the rates of trip according to travel distance and validity zoned.

6.2.2 profiles\_2022.csv: Describes the discounts for each profile ("הנחה לפי" פרופילים")

6.2.3 zones\_2022.kml Describes the zones. Links to tariff\_2022.csv.

### 6.3 Explanation of tariff\_2022.csv file

6.3.1 The developer should screen rows in the file, and check that all conditions are met for the requested trip.

6.3.2 The price is the lowest one among rows that comply to all conditions.

6.3.3 The flow should be done separately for each of one single trip, daily pass and monthly pass.

6.3.4 The zones are according to zones\_2022.kml.

6.3.5 To comply with the zones criteria, origin zone should reside in the FromZones field, and destination zone should reside in the ToZones field.

6.3.6 In order to match a station to a zone, the developer should match the station location with zones\_2022.kml. No allocation data between stations and zones is provided.

6.3.7 The fields in the tariff\_2022.csv file is shown in the following table:

Field name	Explanation	Comment
PredefinedCode	Pre-defined code	קוד שיתוף
PredefinedCodeDesc	Description of pre-defined code.	תיאור של קוד השיתוף
ETT		קוד ETT כפי שנכתב לכרטיס הרב קו
ETTDesc		תאור קוד ETT כפי שנכתב לכרטיס הרב קו
FareCode		קוד כרטיס
FareCodeDesc		תיאור קוד כרטיס
OutterRing	Outter ring	Valid only if the maximum travel distance, at Kilometers, is lower that this value.

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Field name	Explanation	Comment
Transportation		One of: Bus, Carmelit, Racbalit, LightRail, Train
Price		Price of single trip or daily\monthly pass
PrePaid		Valid for payment with RavKav, just if the value of the field is 'true', else the value is 'false'.
PostPaid		Valid for payment with app, just if the value of the field is 'true', else the value is 'false'.
FromDate	From date	Valid just if the travel date is greater than this field
ToDate	To date	Valid just if the travel date is smaller than this field
FromZones		Valid if origin zone at the zones list. The zones are separated by ; The zones are according to zones_2022.kml
ToZones		Valid if destination zone at the zones list. The zones are separated by ; The zones are according to zones_2022.kml
ColorCode		Color code that is associated to the distance, as HTML RGB like #ffd800
ColorName		Color name that is associated to the distance

#### 6.4 Explanation of profiles\_2022.csv file

- 6.4.1 After getting the requested fare from tariff\_2022.csv, the discount is calculated with the data from profiles\_2022.csv.
- 6.4.2 The developer should screen rows in the file, that all conditions are met for the requested trip.
- 6.4.3 The discount is defined as percentage. Value of 100 means no charge for trip.
- 6.4.4 Black cell means that there is no discount.

Field name	Explanation	Comment
ProfileCode		קוד פרופיל.
ProfileName		שם הפרופיל.
FreeCertificate		האם הפרופיל זכאי לתעודת נסיעה חופשי.

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Field name	Explanation	Comment
SingleRideDiscount		הנחה לנסיעה בודדת.
StoredValue		הנחה לערך צבור
DailyDiscount		הנחה לחוזה חופשי יומי, או תקרת תשלום יומית.
MonthlyDiscount		הנחה לחוזה חופשי חודשי, או תקרת תשלום חודשית.
SemesterDiscount		הנחה לחוזה סמסטריאלי.
YearlyDiscount		הנחה לחוזה שנתי.
PrePaid		Valid for payment with RavKav, just if the value of the field is 'true', else the value is 'false'.
PostPaid		Valid for payment with app, just if the value of the field is 'true', else the value is 'false'.
FromDate	From date	Valid just if the travel date is greater than this field
ToDate	To date	Valid just if the travel date is smaller than this field

## 7 Specify the files in zones\_2022 package

### 7.1 Explanation of zones\_2022.kml file

7.1.1 The files contain the polygons of tariff reform of August 2022.

7.1.2 The zone id is at the 'zone' field.

7.1.3 The zone\_id is linked to the fields FromZones and ToZones at  
tariff\_reform\_2022.csv

## 8 Specify the files in ChargingRavKav package

- 8.1 The package contains files that define parameters for RavKav charging stations ("עמדות לטעינת רב קו"), or "Al-Hakav" stations ("עמדות השירות 'על הקו'"). The information includes details about: the location of the office, its address, opening hours and more.
- 8.2 The package replaces the data at <https://data.gov.il/dataset/alhakav> that will not be updated anymore.
- 8.3 The file type is a text file, with .csv extension.
- 8.4 The delimiter of the file is colon ("פסיק").
- 8.5 In case a field contains sub-field, the delimiter of the sub-fields is semi-colon ("נקודה פסיק").
- 8.6 The file encoding is UTF-8.
- 8.7 The name of each file is XXX-ChrgingRavKav.csv. (XXX=company name)
- 8.8 The fields in the file are shown in the following table:

Field name	Mandatory	Valid values	Explanation
NameOfStationHeb	Yes	String	Name of the station in Hebrew. The name can be after the shop name, like: "סופר יודה אבן גבירול", "עולם הפיצוחים".
NameOfStationEng	No	String	Name of the station in English.
NameOfStationArb	No	String	Name of the station in Arabic.
AgencyHeb	No	String	Name, in Hebrew, of the public transportation operator of the station (like: "אגד", "דן"). The name should match the name at the 'agency_name' field in agency.txt. The field can be the owner of the station, like: "דואר", "סופר פארם", "קופיקס", "תל אופן", "כספונט", "ישראל".
AgencyEng	No	String	Name, in English, of the public transportation operator of the station. The field may be empty if the station is not operated by a public transportation operator.

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Field name	Mandatory	Valid values	Explanation
AgencyArb	No	String	Name, in Arabic, of the public transportation operator of the station. The field may be empty if the station is not operated by a public transportation operator.
ChargingCompanyHeb	No	String	The name, in Hebrew, of the charging company, like: "בנק הדואר", "הופאון", "רב קו אונליין".
ChargingCompanyEng	No	String	The name, in English, of the charging company.
ChargingCompanyArb	No	String	The name, in Arabic, of the charging company.
CityHeb	Yes	String	The name of the city, in Hebrew, where the station is located.
CityEng	No	String	The name of the city, in English, where the station is located.
CityArb	No	String	The name of the city, in Arabic, where the station is located.
AddressHeb	Yes	String	The address, in Hebrew, where the station is located, like: "אבן גבירול; 50".
AddressEng	No	String	The address, in English, where the station is located.
AddressArb	No	String	The address, in Arabic, where the station is located.
PlaceHeb	No	String	A description, in Hebrew of the place where the station is located. Like: "קומה 6", "בצומת ירקונים לכיוון צפון", "ליד המודיעין".
PlaceEng	No	String	A description, in Hebrew of the place where the station is located.
PlaceArb	No	String	A description, in Hebrew of the place where the station is located.
PhoneNumber	No	String	A phone number, one or many, that is relevant to the station. Several phone numbers are separated by a semi-colon (";"). For one phone number, the format is: "039566645". For many phone numbers, the format is "039566645;0525664236".
Latitude	Yes	Decimal	Coordinate latitude of location of the station, at WGS 84 coordinates, like "31.841236".
Longitude	Yes	Decimal	Coordinate longitude of location of the stop, at WGS 84 coordinates, like "35.250285".
AcceptCash	Yes	Boolean	true: the station accept cash for charging the RavKav. false: the station does <u>not</u> accept cash for charging the RavKav.



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Field name	Mandatory	Valid values	Explanation
AcceptCreditCard	Yes	Boolean	true: the station accept credit card for charging the RavKav. false: the station does <u>not</u> accept credit card for charging the RavKav.
Manned	Yes	Boolean	true: there is a person that charges the RavKav for the passenger, or at least there is a person near an automated machine. false: the station is an automated machine, without any personal assistance.
RavKavServices	Yes	Boolean	true: the station has a capability to issue a new RavKav ("יכולת הנפקה ושחזור של כרטיס"). false: the station does not have a capability to issue a new RavKav.
AnonymousCard	Yes	Boolean	true: the station has a capability to sell anonymous RavKav. false: the station does not have a capability to sell anonymous RavKav.
Accessible	No	Boolean	true: the station is accessible for wheel chair. false: the station is not accessible for wheel chair. empty if the information is unknown.
SundayHours	No	List of hours range	The opening hours range, one or many. For one opening hours range, the format is: "08:00-17:00". For many opening hours ranges, the format is "08:00-13:00;15:00-19:00".
MondayHours	No	List of hours range	Same as definition as SundayHours field, but for Monday
TuesdayHours	No	List of hours range	Same as definition as SundayHours field, but for Tuesday
WednesdayHours	No	List of hours range	Same as definition as SundayHours field, but for Wednesday
ThursdayHours	No	List of hours range	Same as definition as SundayHours field, but for Thursday
FridayHours	No	List of hours range	Same as definition as SundayHours field, but for Friday and holiday evening.
SaturdayHours	No	List of hours range	Same as definition as SundayHours field, but for Saturday



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Field name	Mandatory	Valid values	Explanation
NotesHeb	No	String	Any other relevant information, in Hebrew, like: "מאויש בשעות הפתיחה ופעיל בשירות עצמי בשאר היום", "טעינה בקופה ראשית בלבד", "היום".
NotesEng	No	String	Any other information, in English.
NotesArb	No	String	Any other information, in Arabic.

## 9 Questions and Answers

9.1 **Question:** I cannot extract properly the information in Hebrew from the files.

**Answer:** all tables files (\*.txt, \*.csv) are at UTF-8 format with BOM.

See [https://en.wikipedia.org/wiki/Byte\\_order\\_mark#UTF-8](https://en.wikipedia.org/wiki/Byte_order_mark#UTF-8)

9.2 **Question:** There are cases in which the field arrival\_time at 'stop\_times' file are above 24 hours, for example: 25:31:00

**Answer:** This is not an error. The logic of the field arrival\_time is dictated by the GTFS protocol and is carried out as follows:

A trip that begins before midnight and continues after midnight - all of its station's timing will appear on the same calendar day it started, and the hours are 24, 25, 26, etc ... A trip that begins after midnight, passes to the next calendar day. And the hours will be 1 2, 3 ... etc.

In terms of the key, after understanding the above logic, you can define in the app itself that every trip that appears between 00:00 and 04:00 will be displayed as the night line.

It should be noted that regular public transportation starts at 04:00 in the morning, except in rare cases.

9.3 **Question:** How do I get a list of the Trip ID of all the bus lines passing through the station at a specified time window?

**Answer:** The 'trips' file should be linked to 'calendar' file using the service\_id field and filtered by the date you want and the day of the week.

The filtered result should be linked to the 'stop\_times' file using the trip\_id field and filter accordingly.

Select the desired stop by the stop\_id field and select a range of hours according to the desired field, arrival\_time or departure\_time.