

# Semantic Web

Travel information

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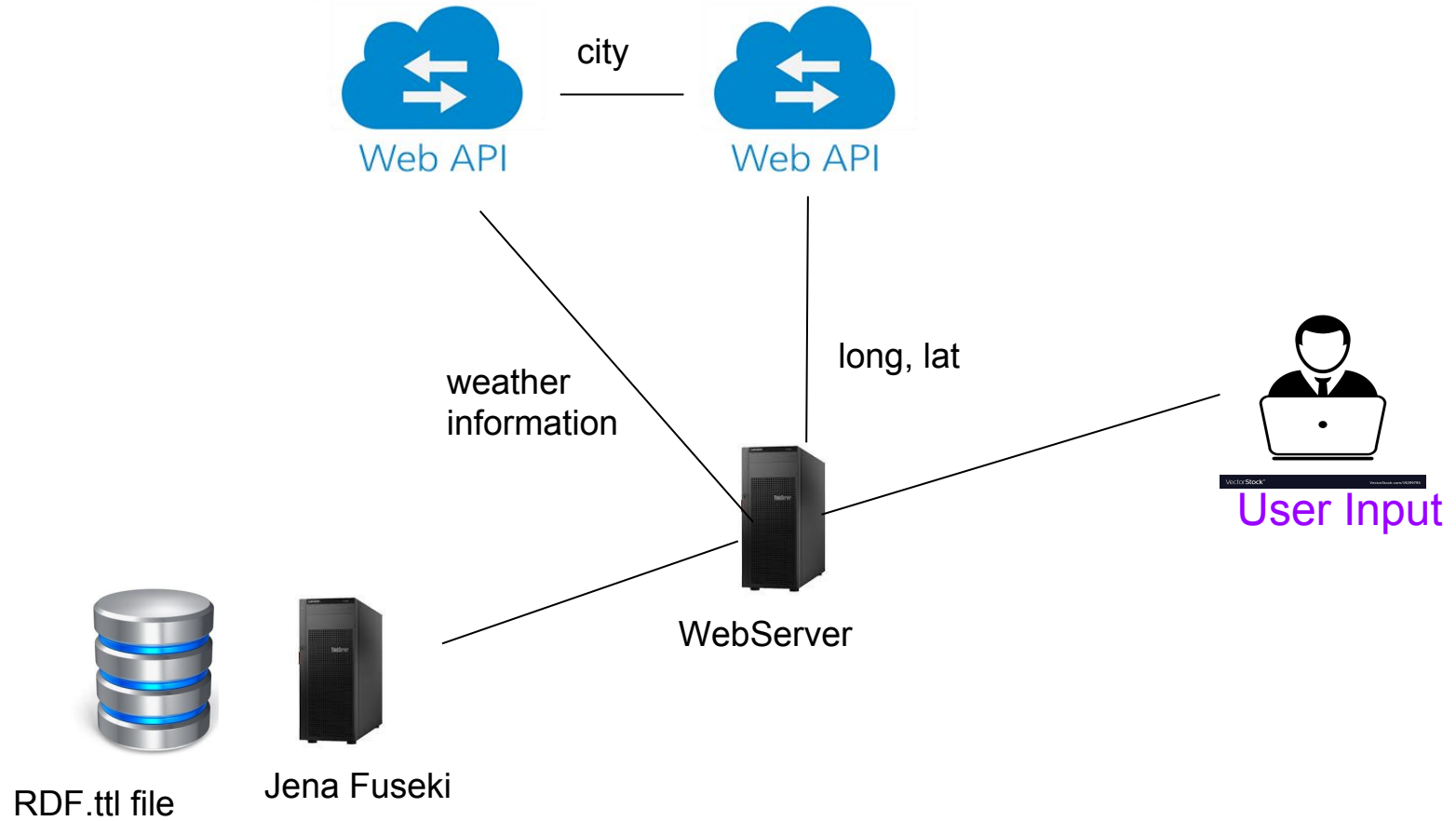
# Train Information



From:	Gare de Wallers	Departure Date:	2019-01-24
To _ :	Gare de Montigny en Ostre	Arrival Date __ :	2019-01-24
<input type="button" value="Search"/>			

Name of Route	LILLE-DOUAI-VALENCIENNES-CAMBRAI	LILLE-DOUAI-VALENCIENNES-CAMBRAI	LILLE-DOUAI-VALENCIENNES-CAMBRAI	LENS-DOUAI-VALENCIENNES	LILLE-DOUAI-VALENCIENNES-CAMBRAI	LILLE-DOUAI-VALENCIENNES-CAMBRAI	LENS-DOUAI-VALENCIENNES	LILLE-DOUAI-VALENCIENNES-CAMBRAI	LILLE-DOUAI-VALENCIENNES-CAMBRAI	LILLE-DOUAI-VALENCIENNES-CAMBRAI	LILLE-DOUAI-VALENCIENNES-CAMBRAI
Arival Time	06:25:00	07:24:00	08:24:00	08:57:00	09:23:00	12:24:00	12:57:00	13:24:00	14:24:00	15:24:00	16:18:00
Departure Time	06:12:00	07:10:00	08:08:00	08:45:00	09:10:00	12:10:00	12:44:00	13:10:00	14:10:00	15:10:00	16:04:00

Trip information

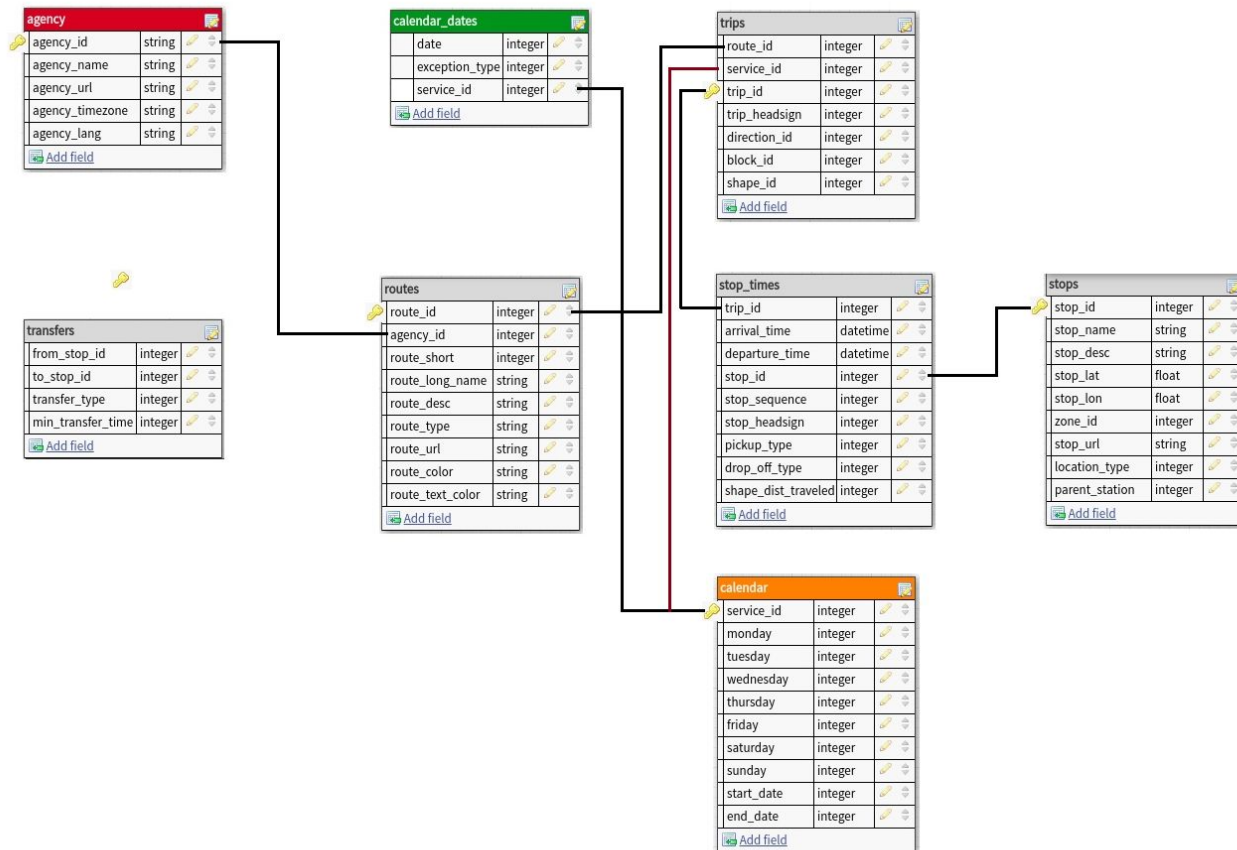


## List of files used for project

### TER dataset

- agency.txt
- calendar.txt
- calendar\_dates.txt
- routes.txt
- stop\_times.txt
- stops.txt
- stops.txt

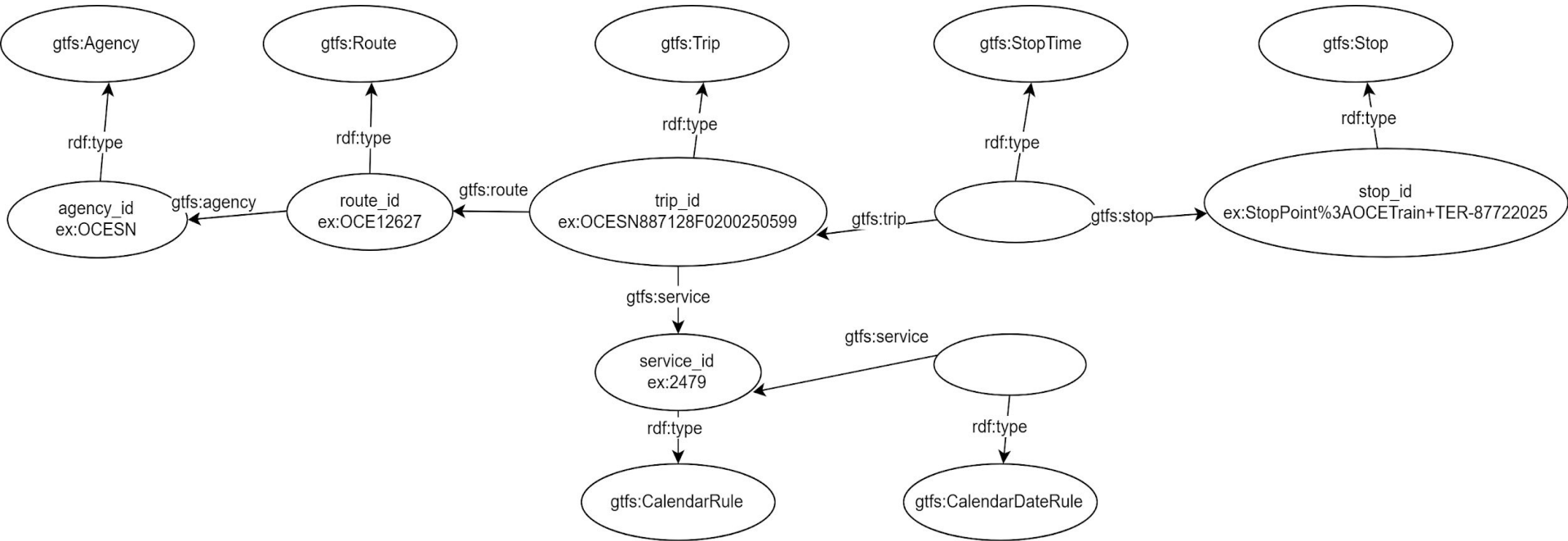
## Database Structure



**How we extracted the train data from SNCF  
open data to RDF?**

<https://github.com/OpenTransport/linked-gtfs/blob/master/spec.md>

gtfs: <http://vocab.gtfs.org/terms#>





## Enter Stop name, date

### All the possible routes from particular station and date

```
12
13 SELECT DISTINCT ?longName ?stop_end_name ?arrTime ?depTime
14 WHERE
15 {
16   ?stop_id foaf:name "Gare de Wallers"@fr.
17   [ a          gtfs:StopTime ;
18     gtfs:arrivalTime ?arrTime;|
19     gtfs:departureTime ?depTime;
20     gtfs:stop         ?stop_id;
21     gtfs:trip         ?trip_id;
22     gtfs:stopSequence ?stop_seq
23   ] .
24   ?trip_id gtfs:route      ?route_id;
25           gtfs:service    ?service_id;
26           gtfs:direction  ?direction.
27   ?route_id gtfs:longName  ?longName.
28   ?service_id a          gtfs:CalendarRule;
29               gtfs:wednesday true ;
30               schema:endDate ?end_date ;
31               schema:startDate ?start_date.
32   {
33     [ a          gtfs:StopTime ;
34       gtfs:trip      ?trip_id;
35       gtfs:stopSequence ?stop_seq_end;
36       gtfs:stop      ?stop_id_end;
37     ] .
38     ?stop_id_end foaf:name ?stop_end_name.
39   }
40   FILTER (?stop_seq_end > ?stop_seq)
41   FILTER ( "2019-01-23"^^xsd:date >= ?start_date && "2019-01-23"^^xsd:date <= ?end_date )
42 }
43 ORDER BY ASC (?depTime)
44
```

## Enter headsign train number and date Information about the train

```
16 SELECT ?longName ?stop_name ?arrTime ?depTime
17 WHERE
18 {
19     ?trip_id      gtfs:headsign    "837585";
20                  gtfs:route      ?route_id;
21                  gtfs:direction  ?direction;
22                  gtfs:service    ?service_id.
23     [ a            gtfs:StopTime ;
24       gtfs:arrivalTime ?arrTime;
25       gtfs:departureTime ?depTime;
26       gtfs:stop        ?stop_id;
27       gtfs:trip        ?trip_id;
28       gtfs:stopSequence ?stop_seq
29     ] .
30     ?route_id gtfs:longName ?longName.
31     ?service_id a      gtfs:CalendarRule;
32                 gtfs:wednesday true ;
33                 schema:endDate ?end_date ;
34                 schema:startDate ?start_date.
35     ?stop_id foaf:name ?stop_name.
36     FILTER ( "2019-01-23"^^xsd:date >= ?start_date && "2019-01-23"^^xsd:date <= ?end_date )
37 }
38 ORDER BY ASC (?depTime)
```

# Enter your station name, date and station that you want to go

## All the possible trains from station to station

```
16 SELECT DISTINCT ?longName ?train_number ?depTime ?arrTime
17 WHERE
18 {
19   ?stop_id foaf:name      "Gare de Wallers"@fr.
20   [ a          gtfs:StopTime ;
21     gtfs:departureTime ?depTime;
22     gtfs:stop          ?stop_id;
23     gtfs:trip           ?trip_id;
24     gtfs:stopSequence  ?stop_seq
25   ] .
26   ?trip_id gtfs:route ?route_id;
27           gtfs:service ?service_id;
28           gtfs:headsign ?train_number;
29           gtfs:direction ?direction.
30
31   ?route_id gtfs:longName ?longName.
32   ?service_id a          gtfs:CalendarRule;
33               gtfs:thursday true ;
34               schema:endDate ?end_date ;
35               schema:startDate ?start_date.
36   {
37     [ a          gtfs:StopTime ;|
38       gtfs:arrivalTime ?arrTime;
39       gtfs:trip         ?trip_id;
40       gtfs:stopSequence ?stop_seq_end;
41       gtfs:stop         ?stop_id_end;
42     ] .
43     ?stop_id_end foaf:name      "Gare de Montigny en Ostrevent"@fr.
44   }
45   FILTER (?stop_seq_end > ?stop_seq)
46   FILTER ( "2019-01-24"^^xsd:date >= ?start_date && "2019-01-24"^^xsd:date <= ?end_date )
47 }
48 ORDER BY ASC (?depTime)
```

**Thank you!**

