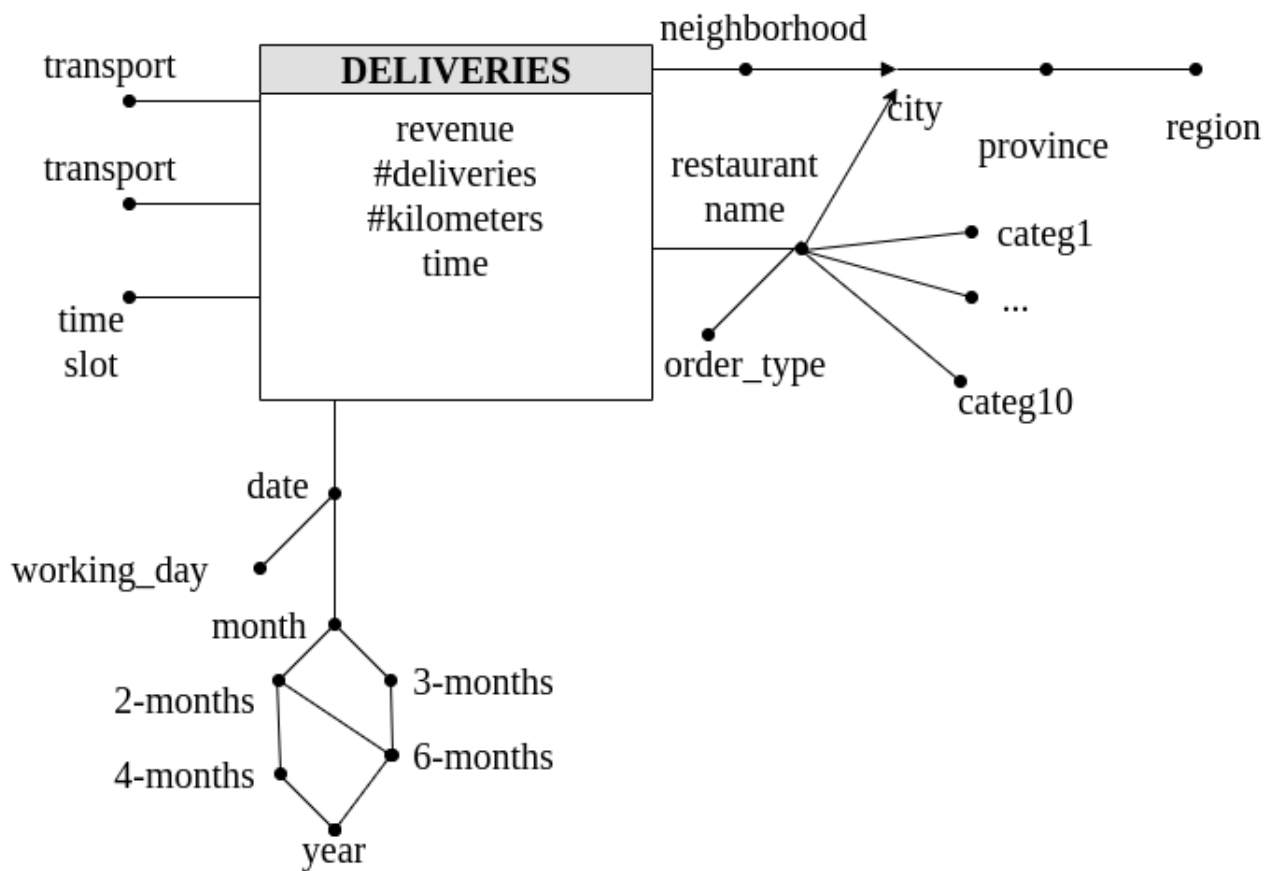


## Data Warehousing

Politecnico di Torino

Food delivery

### Conceptual design



## Logical design

Primary keys are underlined.

DELIVERIES (Rid, Nld, Dld, paymentMethod, transport, timeSlot, revenue, #deliveries, #kilometers, time)

Restaurant (Rid, Lld, orderType, name, categ1, categ2, ..., categ10)

Location (Lld, city, province, region)

Date(Dld, date, month, 2-months, trimester, 4-months, 6-months, year, workingDay)

Neighborhood(Nld, neighborhood, Lld)

### Alternative solution

DELIVERIES (Rid, Lld, Dld, paymentMethod, transport, timeSlot, revenue, #deliveries, #kilometers, time)

Restaurant (Rid, Lld, orderType, name, categ1, categ2, ..., categ10)

Location (Lld, city, province, region, neighborhood,)

Date(Dld, date, month, 2-months, trimester, 4-months, 6-months, year, workingDay)

## Queries

### Query A

Consider the orders with type "Partner order". Separately for mean of transport and trimester, analyze: the average delivery time, the average number of deliveries per time slot (the average number of deliveries made in an hour), assign a rank to the trimesters based on decreasing number of kilometers run on average in a minute, separately by mean of transport.

```
SELECT transport, trimester,
       SUM(#time)/SUM(#deliveries),
       SUM(#deliveries)/COUNT(DISTINCT timeSlot)
       RANK() OVER (ORDER BY SUM(#kilometers)/SUM(#time) DESC PARTITION BY
transport)
FROM Time T, Deliveries D, Restaurant Rs
WHERE d.rid = rs.rid and d.did = t.did
       AND orderType='Partner order'
GROUP BY transport, trimester
```

## Query B

Consider the restaurants which have “pizza” among the associated categories. Carry out the analysis separately for payment method, delivery city and month.

Analyze: the cumulative monthly revenue from the beginning of each trimester, the average revenue per delivery, the percentage of revenue with respect to the total revenue considering all the payment methods

```
SELECT paymentM, dCity, month, trimester
      SUM(SUM(revenue)) OVER(PARTITION BY trimester, paymentM, dCity
                             ORDER BY month ROWS UNBOUNDED PRECEDING)
      SUM(revenue)/SUM(#deliveries)
      100*SUM(revenue)/SUM(SUM(revenue)) OVER(PARTITION BY month, dCity)

FROM Time T, Deliveries D, Restaurant R, Location L
WHERE      d.did = t.did and d.rid = rs.rid and d.lid = l.lid
and r.pizza=true
GROUP BY month, trimester, paymentMethod, deliveryCity
```