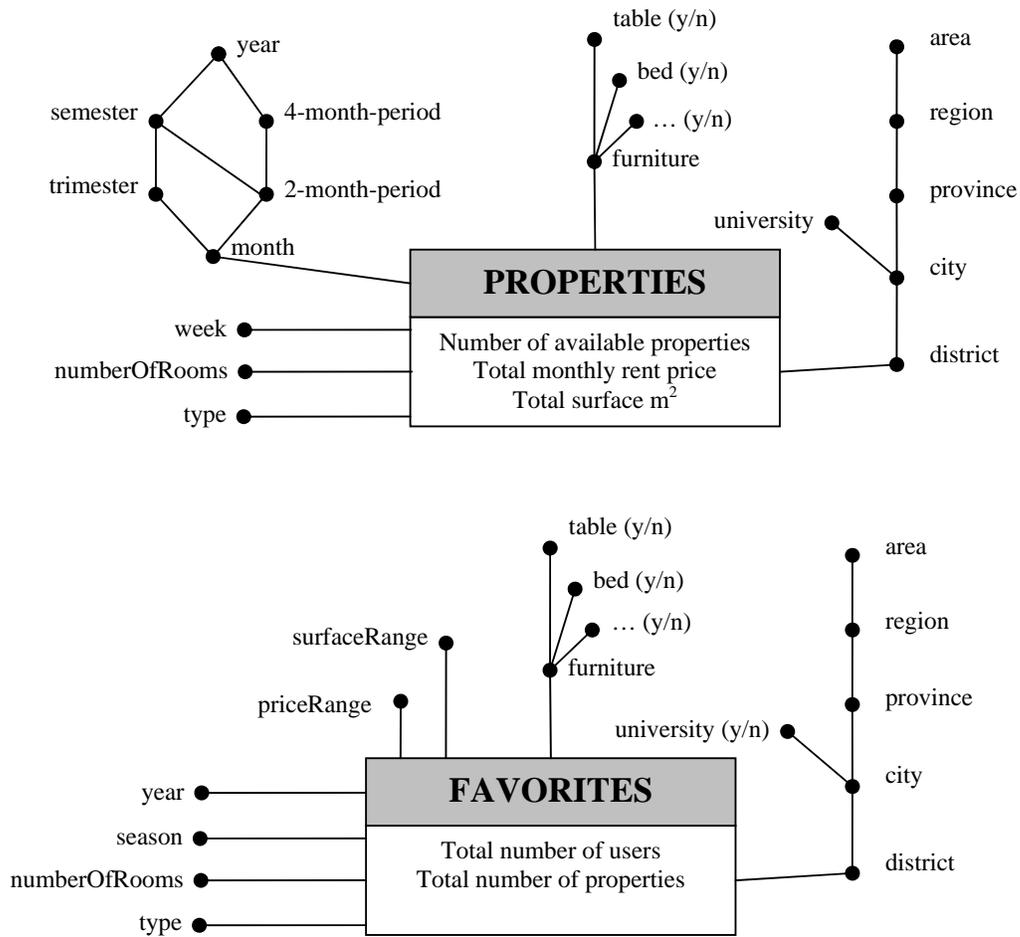


**Progetto di un data warehouse – BOZZA di Soluzione**

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**Modello Concettuale**



# Modello Logico

Primary keys are underlined.

## Facts

PROPERTIES (monthID, weekID, typeID, roomsID, furnitureID, locationID, numProperties, totPrice, totSurface)

FAVORITES (yearID, seasonID, typeID, roomsID, furnitureID, locationID, surfaceRangeID, priceRangeID, numUsers, numProperties)

## Dimensions

WEEK (weekID, week)

→ only for Properties fact

MONTH (monthID, month, 2m-period, trimester, 4m-period, semester, year)

→ only for Properties fact

TYPE (typeID, type)

→ shared both facts

ROOMS (roomsID, numberOfRooms)

→ shared both facts

FURNITURE (furnitureID, table, bed, ...)

→ shared both facts

LOCATION (locationID, district, city, university, province, region, area)

→ shared both facts

SEASON (seasonID, season)

→ only for Favorites fact

YEAR (yearID, year)

→ only for Favorites fact

PRICE\_RANGE (priceID, priceMin, priceMax)

→ only for Favorites fact

SURFACE\_RANGE (surfaceID, surfaceMin, surfaceMax)

→ only for Favorites fact

Some dimensions could have been directly stored into the fact table, such as the Room dimension.

Since this is a draft, some tables and columns have the same names, but keep in mind that this is discouraged to avoid confusions.

## Query A

```
select
  city, month, sum(totPrice)/sum(numProperties),
  ( sum(sum(totPrice)) / sum(sum(numProperties)) ) over (partition by city order by month rows unbounded preceding)
from
  properties p, location l, month m
where
  p.locationID=l.locationID and p.monthID=m.monthID and
  year=2004 and university='y'
group by
  city, month;
```

## Query B

```
select
  city, week, sum(numProperties),
  sum(numProperties) / ( sum(sum(numProperties)) over (partition by week) ),
  rank() over (order by sum(numProperties) desc) as position
from
  properties p, location l, month m, week w
where
  p.locationID=l.locationID and p.monthID=m.monthID and p.weekID=w.weekID and
  year=2004 and month='September' and province='Turin'
group by
  city, week
order by
  position;
```

## Query C

```
select
  district, surfaceMin, surfaceMax, sum(numUsers) / sum(numProperties) as avgInterestedUsers,
  ( sum(sum(numUsers)) / sum(sum(numProperties)) ) over (partition by district)
from
  favorites f, location l, season s, year y, furniture f, type t, price_range pr
where
  ...JOINS... and season='summer' and year=2005 and type='attic' and city='Rome' and bed='y' and fridge='y' and table='y'
group by
  district, surfaceMin, surfaceMax
order by
  district, avgInterestedUsers;
```

## Query D

```
select
  city, month, year,
  sum(totPrice) / sum(numProperties),
  sum(totPrice) / sum(totSurface),
  ( sum(sum(totPrice)) / sum(sum(numProperties)) ) over (partition by city, year order by month rows unbounded preceding)
from
  properties p, location l, month m, furniture f
where
  ...JOINS... and
  bed='y' and table='y' and university='y'
group by
  city, month, year
```

## Query E

```
select
  city, sum(totPrice) / sum(numProperties),
  ( sum(sum(totPrice)) / sum(sum(numProperties)) ) over (partition by province)
from
  properties p, location l, month m
where
  ...JOINS... and year=2004 and month>=9 and month<=11 and region='Piedmont'
group by
  city
```

## Query F

```
select
  city, month,
  sum(totPrice) / sum(numProperties),
  sum(totPrice) / sum(totSurface),
from
  properties p, location l, month m, furniture f
where
  ...JOINS... and year=2004 and university='y' and bed='y' and table='y'
group by
  city, month
```