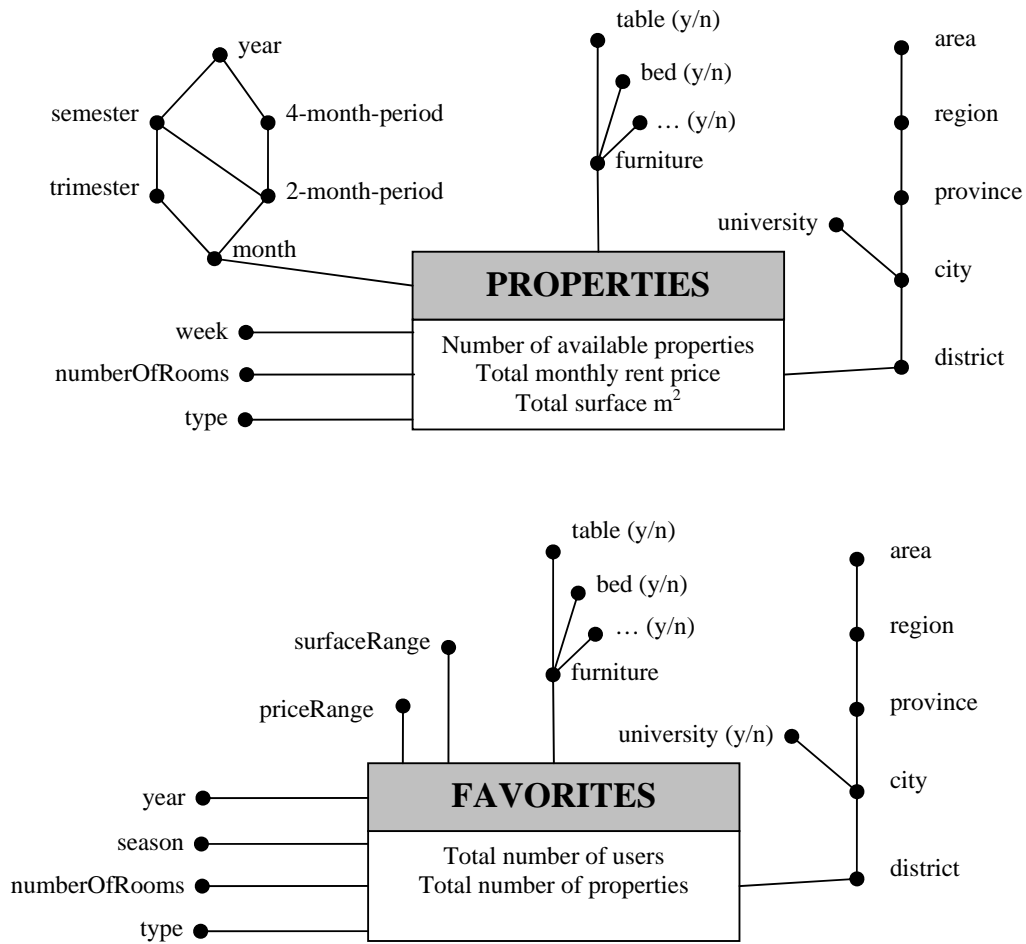


Progetto di un data warehouse – BOZZA di Soluzione

Sito internet cerca_la_tua_casa.it

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
```