Progetto di un data warehouse – BOZZA di Soluzione

*Sito internet cerca_la_tua_casa.it*

**Modello Concettuale**

![Diagram](image.png)
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 f.locationID=l.locationID and f.yearID=y.yearID and f.typeID=t.typeID and f.furnitureID=f.furnitureID 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, province
```

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
```