COMP 353: Homework 1

2022-10-12

Collaborators

- Anshul Narang:
  - Worked on all 6 queries
  - Organized a meeting to work on unsolved queries/review solved queries
- Nick Shannon:
  - Worked on queries 3 and 6; reviewed remaining 4
  - Gathered outputs and created report

Queries

1. Query 1:

```
/* Question 1 */
select co.songcode,s.songTitle, tracknumber
from composedof co ,song s
where s.songcode = co.songcode and cdcode = (
    select cdcode from topcds where year = 2003 and rating = 1
    )
order by tracknumber
```

```
 songcode |         songtitle        | tracknumber
----------+--------------------------+-------------
 S17      | Days Go By               |           1
 S18      | Another Day in Paradise  |           2
 S1       | Sweet Dreams             |           3
 S2       | Goodnight                |           4
 S7       | Breathless               |           5
 S19      | Smile                    |           6
 S8       | My Oh My                 |           7
 S9       | Ooh La La                |           8
 S11      | Hot As *****             |           9
 S12      | Goldilocks               |          10
(10 rows)
```

Figure 1: q1-out

2. Query 2:

```
/* Question 2 */
select mg.groupcode,groupname,count(*) as numberOfTop10CDs
from musicalgroup mg, cd c, topcds tc
where mg.groupcode = c.groupcode and c.cdcode = tc.cdcode and tc.rating <= 10
group by mg.groupcode, mg.groupname
order by numberOfTop10CDs desc
```

```
 groupcode |       groupname       | numberoftop10cds
-----------+-----------------------+------------------
 G4        | Great Snakes          |                4
 G5        | Keith Urban           |                2
 G3        | Thundering Typhoons   |                2
 G2        | Sweet Symphony        |                2
 G1        | Deutsch Moss          |                1
(5 rows)
```

Figure 2: q2-out

3. Query 3:

```
/* Question 3 */
select c.year, max(subquery.numberoftracks) as maxNumber,
min(subquery.numberoftracks) as minNumber,
avg(subquery.numberoftracks) as avgNumber
from cd c,
    (select cdcode, count(*) as numberoftracks
    from composedof
    group by cdcode) subquery
where year >= 2000 and c.cdcode = subquery.cdcode
group by c.year
order by c.year
```

```
 year | maxnumber | minnumber |      avgnumber
------+-----------+-----------+--------------------
 2000 |         7 |         5 | 6.0000000000000000
 2001 |         8 |         1 | 5.0000000000000000
 2002 |         9 |         9 | 9.0000000000000000
 2003 |        10 |         2 | 3.6250000000000000
(4 rows)
```

Figure 3: q3-out

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4. Query 4:

```
/* Question 4 */
select mg.groupcode, mg.groupname, cd.labelid,
rl.labelname, sum(cd.numbersold) as totalNumberSold
from musicalgroup mg, cd, recordinglabel rl
where mg.groupcode = cd.groupcode and cd.labelid = rl.labelid
group by mg.groupcode,mg.groupname, cd.labelid,rl.labelname
order by totalNumberSold DESC
```

```
 groupcode |      groupname      | labelid |     labelname     | totalnumbersold
-----------+---------------------+---------+-------------------+-----------------
 G5        | Keith Urban         | L1      | A&M Records       |         2140000
 G4        | Great Snakes        | L3      | Disney Records    |         1200000
 G6        | Beyond              | L6      | Disney Records    |          800000
 G3        | Thundering Typhoons | L1      | A&M Records       |          800000
 G2        | Sweet Symphony      | L4      | Country Club      |          800000
 G6        | Beyond              | L2      | Reprise Records   |          790000
 G3        | Thundering Typhoons | L3      | Disney Records    |          750000
 G4        | Great Snakes        | L1      | A&M Records       |          600000
 G1        | Deutsch Moss        | L1      | A&M Records       |          500000
 G2        | Sweet Symphony      | L5      | Gray Dot Records  |          450000
 G2        | Sweet Symphony      | L6      | Disney Records    |          100000
 G4        | Great Snakes        | L2      | Reprise Records   |          100000
 G5        | Keith Urban         | L6      | Disney Records    |           99000
 G5        | Keith Urban         | L5      | Gray Dot Records  |           89000
 G6        | Beyond              | L5      | Gray Dot Records  |           75000
 G1        | Deutsch Moss        | L4      | Country Club      |           40000
 G6        | Beyond              | L8      | Universal Records |           34000
 G6        | Beyond              | L4      | Country Club      |           25000
(18 rows)
```

Figure 4: q4-out

5. Query 5:

```
/* Question 5 */
select distinct wr.artistid, art.firstname,art.lastname,art.yearborn
from artist art,writtenby wr, member mb, topsongs ts
where art.artistid = wr.artistid
and ts.songcode = wr.songcode
and ts.rating <=5 and not exists (select *
  from member
  where wr.artistid = member.artistid and member.todate = 0
)
```

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```
artistid | firstname | lastname | yearborn
----------+-----------+----------+----------
 A13      | Jim       | Kate     |     1970
 A2       | Heidi     | Helmut   |     1945
 A8       | Lisa      | Raymond  |     1973
(3 rows)
```

Figure 5: q5-out

6. Query 6:

```
/* Question 6 */
select m.groupCode, m.groupName
from musicalgroup m, cd c, recordinglabel r
where m.groupcode = c.groupcode and c.labelid = r.labelid and r.labelName = 'Country Club'
group by m.groupcode, m.groupName
intersect
select m.groupCode, m.groupName
from musicalgroup m, cd c, recordinglabel r
where m.groupcode = c.groupcode and c.labelid = r.labelid and r.labelName = 'Gray Dot Recor
group by m.groupcode, m.groupName
intersect
select m.groupCode, m.groupName
from musicalgroup m, cd c, recordinglabel r
where m.groupcode = c.groupcode and c.labelid = r.labelid and r.labelName = 'Disney Records'
group by m.groupcode, m.groupName
order by groupname

select mg.groupCode, mg.groupName
from musicalGroup mg, recordingLabel rl, cd
where mg.groupCode = cd.groupCode
    and cd.labelID = rl.labelID
      and rl.location = 'Detroit'
group by mg.groupCode, mg.groupName
having count(*) = (
    select count(*)
    from recordingLabel
    where location = 'Detroit'
    )
order by mg.groupName
```

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