Name: Chitradevi Maruthavanan

Week -4 Video Activity

Activity 7.1 – Subqueries with =

1. **Write a SQL query to find the name(s) and age(s) of the youngest author(s)**

   Answer:

   SELECT A1.name, A1.age

   FROM authors A1

   WHERE A1.age = (SELECT MIN(age) FROM authors A2);

2. **Try inserting another author with the same youngest age (31 in the original database) and rerun the query**

   Answer:

   If you insert a second author with the same lowest age, the above query should now return two rows.

   Output

   Insert into authors values(100,'Mary',31);

```
su22adb20=> SELECT A1.name, A1.age
su22adb20-> FROM authors A1
su22adb20-> WHERE A1.age = (SELECT MIN(age) FROM authors A2);
     name        | age
-------------+-----
 Brit Bennett |  31
 Mary         |  31
(2 rows)
```

Activity 7.2 – Subqueries with IN

1. **Find the titles of books published by Viking. Use a subquery**

   Answer:

   SELECT b2.title

   FROM books b2

   WHERE b2.id IN (SELECT B1.id

   FROM books b1,publishers p

   WHERE b1.pubid = p.id

   AND p.name = 'Viking');

2. **Find the authors that have a book with a title that begins with the letter I. (Use Like 'I%' to find titles that begin with I.)**

   Answer:

   SELECT A.name FROM authors A

   WHERE A.id IN (SELECT B.authorid FROM books B

   WHERE B.title LIKE 'I%');

3. **Redo 1 and 2 as joins**

Answer FOR que 1:

SELECT b.title FROM

books b JOIN publishers p

ON b.pubid = p.id

AND p.name = 'Viking';

Answer FOR que 2:

SELECT A.name FROM authors A JOIN books B

ON A.id = B.authorid

AND B.title LIKE 'I%';

Activity 7.3 – A mix of queries

1. **Find the number of books published/written by each author, publisher pair**

   Answer:

   SELECT A.name, P.name as publishername, COUNT(*) as numbooks

   FROM authors A, books B, publishers P

   WHERE A.id = B.authorid AND B.pubid = P.id

   GROUP BY (A.name, P.name);

2. **Find the name of all authors who have published a book with putnam**

   Answer:

   SELECT A.name FROM authors A, books B, publishers P

   WHERE A.id = B.authorid AND B.pubid = P.id

   AND P.name = 'Putnam';

3. **Find the names of authors who have written more than 1 book**

   Answer:

   SELECT A.name FROM authors A, books B

   WHERE A.id =B.authorid

   GROUP BY A.name

   HAVING COUNT(*) > 1;

4. **Find the names of authors who have published more than 1 book with AndrewsMcMeel**

   Answer:

   SELECT A.name FROM authors A, books B, publishers P

   WHERE A.id =B.authorid AND B.pubid = P.id

   AND P.name = 'AndrewsMcMeel'

   GROUP BY A.name

   HAVING COUNT(*) > 1;

5. **Find all publishers who haven't published a book**

   Answer:

   (SELECT P.name FROM publishers P) EXCEPT

    (SELECT P.name FROM publishers P, books b WHERE P.id = b.pubid);

   OR

   SELECT P.name FROM publishers P LEFT OUTER JOIN books b

   ON P.id = b.pubid

   WHERE b.id IS NULL;

6. **Make a list of publishers who haven't published a book and authors who haven't written a book(result is a one-column list of names)**

   Answer:

   (SELECT P.name FROM Publishers P)EXCEPT

   (SELECT P.name FROM Publishers P,books B WHERE P.id= B.pubid)

   UNION

   (SELECT A.name FROM authors A) EXCEPT

   (SELECT A.name FROM authors a, books B WHERE A.id = B.authorid);

7. **Find the name(s) of the publisher(s) who have published the most books**

   Answer:

   SELECT P.name FROM publishers P, books B

   WHERE P.id = B.pubid

   GROUP BY P.id

   HAVING COUNT(*) = (SELECT MAX(count)

FROM(SELECT COUNT(*) as count

FROM books B GROUP BY pubid)

AS countbooks);

8. **Find the number of authors who have published more than 1 book with AndrewMcMeel**

   Answer:

   SELECT COUNT(*) FROM authors A, books B, publishers P

   WHERE A.id =B.authorid AND B.pubid = P.id

   AND P.name = 'AndrewsMcMeel'

   GROUP BY A.name

   HAVING COUNT(*) > 1;

9. **Find the name(s) of the youngest author(s) by publisher, include author name and publisher name in your result**

   Answer:

   SELECT DISTINCT A2.name, A2.age, P2.name

   FROM authors A2, publishers P2, books b2

   WHERE A2.id = B2.authorid AND B2.pubid = P2.id

   AND A2.age = (SELECT MIN(age) FROM authors A1, books B1

   WHERE A1.id = B1.authorid AND B1.pubid = b2.pubid);

Activity 8.1 – Write some views

1. **Write a view that lists only horror books**

   Answer:

   CREATE VIEW HorrorBooks AS

   SELECT * FROM books B

   WHERE genre = 'Horror';

2. **Write a view that lists books published by Viking**

   Answer:

   CREATE VIEW VikingPubs AS

   SELECT * FROM books b INNER JOIN publishers p

   ON p.id = b.pubid and p.name='Viking';

3. **Which of the two views from 1. and 2. above can be updated?**

   Answer:

   HorrorBook View (Q.1) can be updated.

   VikingPubs view (Q2) can not be updated.