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LAB – 04

The screenshot displays the Microsoft SQL Server Management Studio interface. The main window shows a query titled "Standard deviation of ages, along with max and min age". The query is as follows:

```
SELECT
    MAX(u.age) AS max_age,
    MIN(u.age) AS min_age,
    STDEV(u.age) AS std_dev_age
FROM
    Users u

--Q1
--highest followers
SELECT
    u.UserName,
    COUNT(f.FollowerUserName) AS NumberOfFollowers
FROM
    Users u
JOIN
    Following f ON u.UserName = f.FollowerUserName
GROUP BY
    u.UserName
HAVING
    COUNT(f.FollowerUserName) = (
        SELECT MAX(FollowerCounts.NumberOfFollowers)
        FROM (
            SELECT
                FollowerUserName,
                COUNT(FollowerUserName) AS NumberOfFollowers
            FROM
                Following
            GROUP BY
                FollowerUserName
```

The results pane shows the following output:

max_age	min_age	std_dev_age
60	18	15.431299362011

The status bar at the bottom indicates "Query executed successfully." and "DESKTOP-9NCPQBQ\SQLEXPRESS01 | DESKTOP-9NCPQBQ\hp (51) | twitter | 00:00:00 | 1 rows".

DB- lab04.sql - DESKTOP-9NCPQBQ\SQLEXPRESS01.twitter (DESKTOP-9NCPQBQ\hp (51)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Object Explorer

DESKTOP-9NCPQBQ\SQLEXPRESS01

Databases

Security

Server Objects

Replication

Management

XEvent Profiler

Query Editor

```

--q4
--list names of all the users who have never tweeted.
SELECT
  u.UserName
FROM
  Users u
LEFT JOIN
  Tweets t ON u.UserName = t.UserName
WHERE
  t.TweetID IS NULL;

--q5
--List all the hashtags and usernames and number of times that user used that hashtag.

```

Results

UserName
1 Ayisha
2 Natasha
3 Samuel

Query executed successfully.

DESKTOP-9NCPQBQ\SQLEXPRESS01... DESKTOP-9NCPQBQ\hp (51) twitter 00:00:00 3 rows

DB- lab04.sql - DESKTOP-9NCPQBQ\SQLEXPRESS01.twitter (DESKTOP-9NCPQBQ\hp (54)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Object Explorer

Connect

DESKTOP-9NCPQBQ\SQLEXPRESS01

System Databases

Database Snapshots

ATM

DBAssignment01

DBMSAssignment01

DBMSlab04

i22-7902 DB LAB02

SchoolDB

twitter

Database Diagrams

Tables

Views

External Resources

Synonyms

Programmability

Query Store

Service Broker

Storage

Security

Server Objects

Replication

Query Editor

```

SELECT
  U.UserName,
  H.Hashtag,
  (
    SELECT COUNT(*)
    FROM Tweets T
    WHERE T.UserName = U.UserName
    AND T.Text LIKE '% ' + H.Hashtag + '%'
  ) AS NumberOfTimesUsed
FROM
  Users U
  JOIN
  Hashtags H
  ON
  (
    SELECT COUNT(*)
    FROM Tweets T
    WHERE T.UserName = U.UserName
    AND T.Text LIKE '% ' + H.Hashtag + '%'
  ) > 0
ORDER BY
  U.UserName, NumberOfTimesUsed DESC;

```

Results

UserName	Hashtag	NumberOfTimesUsed
1 Ali123	#Census	1
2 Alza	#MasseCritique	1
3 DonaldTrump	#MasseCritique	2
4 DonaldTrump	#DrugMovies	1
5 ImranKhan	#Census	2
6 ImranKhan	#DrugMovies	1
7 ImranKhan	#MasseCritique	1
8 Sara	#Census	2
9 Sara	#DrugMovies	1
10 Sara	#piralage	1

Query executed successfully.

DESKTOP-9NCPQBQ\SQLEXPRESS01... DESKTOP-9NCPQBQ\hp (54) twitter 00:00:00 10 rows

DB- lab04.sql - DESKTOP-9NCPQBQ\SQLEXPRESS01.twitter (DESKTOP-9NCPQBQ\hp (51)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Object Explorer

- DESKTOP-9NCPQBQ\SQLEXPRESS01
 - Databases
 - Security
 - Server Objects
 - Replication
 - Management
 - XEvent Profiler

Hashtags h ON t.Text LIKE '% ' + h.Hashtag + ' %'

GROUP BY

u.UserName, h.Hashtag

ORDER BY

u.UserName, NumberOfTimesUsed DESC;

---q6

---- find users who have never used the hashtag #Census,

SELECT DISTINCT UserName

FROM Tweets where UserName NOT IN (SELECT UserName from Tweets where text LIKE '%#Census%');

---check 66666

--- q7

----List all the usernames that have never been followed. Using Set operation

SELECT UserName

FROM Users

104 %

Results Messages

UserName
1 Aliza
2 DonaldTrump

Query executed successfully. DESKTOP-9NCPQBQ\SQLEXPRESS01... DESKTOP-9NCPQBQ\hp (51) | twitter | 00:00:00 | 2 rows

DB- lab04.sql - DESKTOP-9NCPQBQ\SQLEXPRESS01.twitter (DESKTOP-9NCPQBQ\hp (51)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Object Explorer

- DESKTOP-9NCPQBQ\SQLEXPRESS01
 - Databases
 - Security
 - Server Objects
 - Replication
 - Management
 - XEvent Profiler

FROM Tweets where UserName NOT IN (SELECT UserName from Tweets where text LIKE '%#Census%');

---check 66666

--- q7

----List all the usernames that have never been followed. Using Set operation

SELECT UserName

FROM Users

EXCEPT

SELECT DISTINCT FollowedUserName

FROM Following;

---q8

-----List all the usernames that have never been followed. Using EXIT CLAUSE

SELECT UserName

104 %

Results Messages

UserName
1 Aliza
2 Aysha
3 Natasha
4 Samuel
5 Sara

Query executed successfully. DESKTOP-9NCPQBQ\SQLEXPRESS01... DESKTOP-9NCPQBQ\hp (51) | twitter | 00:00:00 | 5 rows

DB- lab04.sql - DESKTOP-9NCPQBQ\SQLEXPRESS01.twitter (DESKTOP-9NCPQBQ\hp (51)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Object Explorer

- Connect
- DESKTOP-9NCPQBQ\SQLEXPRESS01
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 - Server Objects
 - Replication
 - Management
 - XEvent Profiler

Query Editor

```

SELECT DISTINCT FollowedUserName
FROM Following;

----Q8
-----List all the usernames that have never been followed. Using EXIT CLAUSE
SELECT UserName
FROM Users U
WHERE NOT EXISTS (
    SELECT 1
    FROM Following F
    WHERE F.FollowedUserName = U.UserName
);

---Q9
--most common interest
SELECT TOP 1 InterestID, Description AS Most_Common_Interest, CountInterest
FROM (

```

Results

UserName
1 Aliza
2 Aysha
3 Natasha
4 Samuel
5 Sara

Query executed successfully. DESKTOP-9NCPQBQ\SQLEXPRESS01... DESKTOP-9NCPQBQ\hp (51) | twitter | 00:00:00 | 5 rows

DB- lab04.sql - DESKTOP-9NCPQBQ\SQLEXPRESS01.twitter (DESKTOP-9NCPQBQ\hp (51)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Object Explorer

- Connect
- DESKTOP-9NCPQBQ\SQLEXPRESS01
 - Databases
 - Security
 - Server Objects
 - Replication
 - Management
 - XEvent Profiler

Query Editor

```

WHERE F.FollowedUserName = U.UserName
);

---Q9
--most common interest
SELECT TOP 1 InterestID, Description AS Most_Common_Interest, CountInterest
FROM (
    SELECT I.InterestID, I.Description, COUNT(*) AS CountInterest
    FROM Interests I
    JOIN UserInterests UI ON I.InterestID = UI.InterestID
    GROUP BY I.InterestID, I.Description
) AS InterestCounts
ORDER BY CountInterest DESC;

--- least common interest
SELECT InterestID, Description AS Least_Common_Interest, CountInterest
FROM (
    SELECT I.InterestID, I.Description, COUNT(*) AS CountInterest

```

Results

InterestID	Most_Common_Interest	CountInterest
1 T0	Politics	3

Query executed successfully. DESKTOP-9NCPQBQ\SQLEXPRESS01... DESKTOP-9NCPQBQ\hp (51) | twitter | 00:00:00 | 1 rows

DB- lab04.sql - DESKTOP-9NCPQBQ\SQLEXPRESS01.twitter (DESKTOP-9NCPQBQ\hp (54)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Object Explorer

- Connect
- DESKTOP-9NCPQBQ\SQLEXPRESS01
 - Databases
 - Security
 - Server Objects
 - Replication
 - Management
 - XEvent Profiler

Query Editor

```
DB- lab04.sql - D...P-9NCPQBQ\hp (54)) SQLQuery1.sql - not connected*
ORDER BY CountInterest DESC;
--- Least common interest
SELECT InterestID, Description AS Least_Common_Interest, CountInterest
FROM (
    SELECT I.InterestID, I.Description, COUNT(*) AS CountInterest
    FROM Interests I
    JOIN UserInterests UI ON I.InterestID = UI.InterestID
    GROUP BY I.InterestID, I.Description
) AS InterestCounts
WHERE CountInterest = (
    SELECT MIN(CountInterest)
    FROM (
        SELECT COUNT(*) AS CountInterest
        FROM Interests I
        JOIN UserInterests UI ON I.InterestID = UI.InterestID
        GROUP BY I.InterestID, I.Description
    ) AS SubQuery
);
```

Results

	InterestID	Least_Common_Interest	CountInterest
1	11	Sports	2
2	13	Education	2
3	14	Video Games	2

Query executed successfully. DESKTOP-9NCPQBQ\SQLEXPRESS01... DESKTOP-9NCPQBQ\hp (54) twitter 00:00:00 3 rows

Ready Ln 140 Col 1 Ch 1 INS

20° ENG INTL 7:52 PM 07/03/2024