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DBMS Laboratory Assignment-2 Report

Commands Used:

CREATE TABLE for creating various relations in the database, specifying attributes of each field along with PRIMARY KEY or FOREIGN KEY to maintain integrity.
INSERT INTO (TABLE) VALUES to insert records into relations.
SELECT to query according to need taking help from WHERE, JOIN clauses and COUNT function along with DISTINCT, LIMIT, GROUP BY and ORDER BY.

Records Inserted:

Schema:
STUDENT

Name	VARCHAR	
Roll	CHAR	PRIMARY KEY
Dept	VARCHAR	
RID	INT	FOREIGN KEY(ROLE.RID)

ROLE

RID	INT	PRIMARY KEY
Rname	VARCHAR	
Description	VARCHAR	

EVENT

EID	INT	PRIMARY KEY
EName	VARCHAR	
Date	Date	
Type	VARCHAR	

VOLUNTEER

Roll	CHAR	PRIMARY KEY
Dept	VARCHAR	

PARTICIPANT

PID	INT	PRIMARY KEY
Name	VARCHAR	
College_Name	VARCHAR	
College_Loc	TEXT	

MANAGE

Roll	CHAR	
EID	INT	FOREIGN KEY(EVENT.EID)

EVENT_PART

EID	INT	FOREIGN KEY(EVENT.EID)
PID	INT	FOREIGN KEY(PARTICIPANT.PID)

EVENT_VOL

EID	INT	FOREIGN KEY(EVENT.EID)

Roll   CHAR   FOREIGN KEY(VOLUNTEER.Roll)

ROLE

```
21CS10005=> SELECT * FROM ROLE;
 rid |   rname    |                           description
-----+------------+---------------------------------------------------------------------
   1 | President  | Responsible and a representative for the overall festival.
   2 | Secretary  | Answerable to President and link between team and President.
   3 | DesignTeam | Responsible for aesthetics of the festival.
   4 | WebTeam    | Responsible for the digital part of the festival.
   5 | Associate  | Responsible for the ground work, management of participants and venues.
(5 rows)
```

STUDENT

```
21CS10005=> SELECT * FROM STUDENT;
  name    |    roll    | dept | rid
----------+------------+------+-----
 Tanishq  | 20CS30054  | CSE  |   1
 Krish    | 21CS10037  | CSE  |   2
 Rahul    | 21EE10040  | EE   |   3
 Rohan    | 22EE10045  | EE   |   4
 Shefali  | 22BT10048  | BT   |   5
 Manik    | 21MA10045  | MA   |   2
(6 rows)
```

EVENT

```
21CS10005=> SELECT * FROM EVENT;
 eid |    ename     |    date    |    type
-----+--------------+------------+-------------
   1 | Megaevent    | 2024-01-29 | Celebrity
   2 | RapBattle    | 2024-01-28 | Competitive
   3 | DanceBattle  | 2024-01-29 | Competitive
   4 | Singing      | 2024-01-28 | Competitive
   5 | GuestLecture | 2024-01-28 | GuestLecture
(5 rows)
```

VOLUNTEER

```
21CS10005=> SELECT * FROM VOLUNTEER;
   roll    | dept
-----------+------
 23CH10029 | CH
 23CY10020 | CY
 23CS30033 | CSE
 23AE30028 | AE
 23CS10056 | CSE
(5 rows)
```

PARTICIPANT

```
21CS10005=> SELECT * FROM PARTICIPANT;
 pid |  name   | college_name | college_location
-----+---------+--------------+------------------
   1 | Manya   | IITB         | Bombay
   2 | Tanya   | IITM         | Madras
   3 | Mohit   | IITB         | Bombay
   4 | Rohit   | IITD         | Delhi
   5 | Rishul  | IITK         | Kanpur
(5 rows)
```

MANAGE

```
21CS10005=> SELECT * FROM MANAGE;
   roll     | eid
-----------+-----
 21CS10037 |   1
 21MA10045 |   1
 21CS10037 |   2
 22BT10048 |   3
 22BT10048 |   4
(5 rows)
```

EVENT_PART

```
21CS10005=> SELECT * FROM EVENT_PART;
 eid | pid
-----+-----
   1 |   1
   1 |   2
   1 |   3
   1 |   4
   1 |   5
   2 |   1
   2 |   3
   2 |   5
   3 |   1
   3 |   5
   4 |   1
   5 |   3
(12 rows)
```

EVENT_VOL

```
21CS10005=> SELECT * FROM EVENT_VOL;
 eid | vol_roll
-----+-----------
   1 | 23CS30033
   2 | 23CS30033
   3 | 23CS30033
   2 | 23CS10056
   4 | 23CS10056
   1 | 23AE30028
(6 rows)
```

Query Outputs:

Q1

```
21CS10005=> SELECT STUDENT.Name, STUDENT.Roll FROM STUDENT JOIN MANAGE ON STUDENT.Roll = MANAGE.Roll JOIN
EVENT ON EVENT.EID = MANAGE.EID WHERE EVENT.EName = 'Megaevent';
 name  |   roll
-------+-----------
 Krish | 21CS10037
 Manik | 21MA10045
(2 rows)
```

Q2

```
21CS10005=> SELECT STUDENT.Name, STUDENT.Roll FROM STUDENT JOIN MANAGE ON STUDENT.Roll = MANAGE.Roll JOIN
EVENT ON EVENT.EID = MANAGE.EID JOIN ROLE ON ROLE.RID = STUDENT.RID WHERE EVENT.EName = 'Megaevent' AND RO
LE.RName = 'Secretary';
 name  |   roll
-------+-----------
 Krish | 21CS10037
 Manik | 21MA10045
(2 rows)
```

Q3

```
21CS10005=> SELECT PARTICIPANT.Name FROM PARTICIPANT JOIN EVENT_PART ON PARTICIPANT.PID = EVENT_PART.PID J
OIN EVENT ON EVENT.EID = EVENT_PART.EID WHERE EVENT.EName = 'Megaevent' AND PARTICIPANT.College_Name = 'II
TB';
 name
-------
 Manya
 Mohit
(2 rows)
```

Q4

```
21CS10005=> SELECT DISTINCT PARTICIPANT.College_Name FROM PARTICIPANT JOIN EVENT_PART ON PARTICIPANT.PID =
 EVENT_PART.PID JOIN EVENT ON EVENT.EID = EVENT_PART.EID WHERE EVENT.EName = 'Megaevent';
 college_name
--------------
 IITB
 IITM
 IITK
 IITD
(4 rows)
```

Q5

```
21CS10005=> SELECT DISTINCT EVENT.EName FROM EVENT JOIN MANAGE ON EVENT.EID = MANAGE.EID JOIN STUDENT ON S
TUDENT.Roll=MANAGE.Roll JOIN ROLE ON ROLE.RID = STUDENT.RID WHERE ROLE.RName = 'Secretary';
   ename
-----------
 Megaevent
 RapBattle
(2 rows)
```

Q6

```
21CS10005=> SELECT VOLUNTEER.Roll FROM VOLUNTEER JOIN EVENT_VOL ON EVENT_VOL.Vol_Roll = VOLUNTEER.Roll JOI
N EVENT ON EVENT.EID = EVENT_VOL.EID WHERE VOLUNTEER.Dept = 'CSE' AND EVENT.EName = 'Megaevent';
   roll
-----------
 23CS30033
(1 row)
```

Q7

```
21CS10005=> SELECT DISTINCT EVENT.EName FROM EVENT JOIN EVENT_VOL ON EVENT.EID=EVENT_VOL.EID JOIN VOLUNTEE
R ON EVENT_VOL.Vol_Roll=VOLUNTEER.Roll WHERE VOLUNTEER.Dept = 'CSE';
    ename
--------------
 DanceBattle
 Megaevent
 RapBattle
 Singing
(4 rows)
```

Q8

```
21CS10005=> SELECT PARTICIPANT.College_Name FROM PARTICIPANT JOIN EVENT_PART ON EVENT_PART.PID=PARTICIPANT
.PID JOIN EVENT ON EVENT.EID=EVENT_PART.EID WHERE EVENT.EName='Megaevent' GROUP BY PARTICIPANT.College_Nam
e ORDER BY COUNT(PARTICIPANT.PID) DESC LIMIT 1;
 college_name
--------------
 IITB
(1 row)
```

Q9

```
21CS10005=> SELECT College_Name From PARTICIPANT GROUP BY College_Name ORDER BY COUNT(PID) DESC LIMIT 1;
 college_name
--------------
 IITB
(1 row)
```

Q10

```
21CS10005=> SELECT VOLUNTEER.Dept FROM VOLUNTEER JOIN EVENT_VOL ON EVENT_Vol.Vol_Roll=VOLUNTEER.Roll JOIN
EVENT_PART ON EVENT_PART.EID=EVENT_VOL.EID JOIN PARTICIPANT ON PARTICIPANT.PID=EVENT_PART.PID WHERE PARTIC
IPANT.College_Name = 'IITB' GROUP BY VOLUNTEER.Dept ORDER BY COUNT(DISTINCT VOLUNTEER.Roll) DESC LIMIT 1;
 dept
------
 CSE
(1 row)
```