TASK :- 1

1.Table:-

Create table Camper(CamperID INT PRIMARY KEY, FirstName VARCHAR(50), MiddleName VARCHAR(50), LastName VARCHAR(50), Gender VARCHAR(10), DateOfBirth DATE, PersonalPhone VARCHAR(15), Email VARCHAR(100));

2.Table :-

Create table Camp(CampID INT PRIMARY KEY AUTO_INCREMENT, CampTitle VARCHAR(100), StartDate DATE, EndDate DATE, Capacity INT, Price DECIMAL(10,2));

3. Table:-

Create table VisitRecord(VisitID INT PRIMARY KEY AUTO_INCREMENT, CamperID INT, CampID INT, VisitDate DATE, FOREIGN KEY (CamperID) REFERENCES, Camper(CamperID), FOREIGN KEY (CampID) REFERENCES Camp(CampID));

Query to find how many times a teenager Lakshmi visited the camp in the last 3 years.

Solution:-

select COUNT(*) AS VisitCount from Camper c JOIN VisitRecord vr ON c.CamperID = vr.CamperID WHERE c.FirstName = 'Lakshmi' AND vr.VisitDate >=CURDATE()-INTERVAL 3 YEAR;

TASK 2:

Step 1: Create the Camper table if it doesn't exist

```
CREATE TABLE IF NOT EXISTS Camper ( CamperID INT AUTO_INCREMENT PRIMARY KEY, FirstName VARCHAR(50), Gender VARCHAR(10), Age INT );
```

Step 2: Insert 65% of 5000 as female campers

```
INSERT INTO Camper (FirstName, Gender, Age)
select CONCAT('Girl_', LPAD(FLOOR(RAND() * 5000), 4, '0')) AS FirstName,'Female' AS Gender,
CASE
WHEN RAND() < 0.18 THEN FLOOR(RAND() * 6) + 7
WHEN RAND() < 0.27 THEN FLOOR(RAND() * 2) + 13
WHEN RAND() < 0.20 THEN FLOOR(RAND() * 3) + 15
ELSE FLOOR(RAND() * 2) + 18 END AS Age
FROM (SELECT 1 FROM information_schema.columns LIMIT 3250);
```

Step 3: Insert 35% of 5000 as male campers

```
INSERT INTO Camper (FirstName, Gender, Age)
select CONCAT('Boy_', LPAD(FLOOR(RAND() * 5000), 4, '0')) AS FirstName, 'Male' AS Gender,
  CASE
    WHEN RAND() < 0.18 THEN FLOOR(RAND() * 6) + 7
    WHEN RAND() < 0.27 THEN FLOOR(RAND() * 2) + 13
    WHEN RAND() < 0.20 THEN FLOOR(RAND() * 3) + 15
    ELSE FLOOR(RAND() * 2) + 18  END AS Age
    FROM (SELECT 1 FROM information_schema.columns LIMIT 1750);
```

Step 4: Verify the number of records inserted

```
SELECT Gender, Age, COUNT(*) AS Total FROM Camper GROUP BY Gender, Age;
```

Task:- 3

```
Select CASE  WHEN TIMESTAMPDIFF(YEAR,  DateOfBirth,  CURDATE() ) BETWEEN 7 AND 12 THEN 'Gen Alpha'  WHEN TIMESTAMPDIFF(YEAR,  DateOfBirth, CURDATE() ) BETWEEN 13 AND 17 THEN 'Gen Z' WHEN TIMESTAMPDIFF(YEAR,  DateOfBirth, CURDATE() ) BETWEEN 18 AND 23 THEN 'Millennials'
   -> ELSE 'Gen X'
   ->  END AS Generation,
   -> Gender, COUNT(*) AS Count
   -> FROM Camper
   -> GROUP BY
   -> CASE
   ->  WHEN TIMESTAMPDIFF(YEAR, DateOfBirth, CURDATE()) BETWEEN 7 AND 12 THEN 'Gen Alpha'
   ->  WHEN TIMESTAMPDIFF(YEAR, DateOfBirth, CURDATE()) BETWEEN 13 AND 17 THEN 'Gen Z'
   -> WHEN TIMESTAMPDIFF(YEAR, DateOfBirth, CURDATE()) BETWEEN 18 AND 23 THEN  'Millennials'
   ->  ELSE 'Gen X'
   -> END,Gender;
```

OR

```
Select CASE  WHEN TIMESTAMPDIFF(YEAR, DateOfBirth, CURDATE()) BETWEEN 7 AND 12 THEN 'Gen Alpha' WHEN TIMESTAMPDIFF(YEAR, DateOfBirth, CURDATE()) BETWEEN 13 AND 14 THEN 'Gen Z' WHEN TIMESTAMPDIFF(YEAR, DateOfBirth, CURDATE()) BETWEEN 15 AND 17 THEN 'Gen Z'
   -> ELSE 'Others'
   -> END AS Generation,
   -> Gender, COUNT(*) AS Count
   -> FROM Camper
   -> GROUP BY
   -> Generation, Gender;
```