

TASK DOCUMENT – DATA SCIENCE POSITION

TASK 1

Description:

You are given three tables: Students, Friends and Packages. Students contain two columns: ID and Name. Friends contains two columns: ID and Friend_ID (ID of the ONLY best friend). Packages contain two columns: ID and Salary (offered salary in \$ thousands per month).

→

```
CREATE TABLE Students (  
  ID INT PRIMARY KEY,  
  Name VARCHAR(50)  
);
```

```
INSERT INTO Students (ID, Name) VALUES  
(1, 'Ashley'),  
(2, 'Samantha'),  
(3, 'Julia'),  
(4, 'Scarlet');
```

```
CREATE TABLE Packages (  
  ID INT PRIMARY KEY,  
  Salary DECIMAL(5, 2)  
);
```

```
INSERT INTO Packages (ID, Salary) VALUES  
(1, 15.2),  
(2, 10.06),  
(3, 11.55),  
(4, 12.12);
```

```
CREATE TABLE Friends (  
  ID INT PRIMARY KEY,  
  Friend_ID INT,  
  FOREIGN KEY (ID) REFERENCES Students(ID),  
  FOREIGN KEY (Friend_ID) REFERENCES Students(ID)  
);
```

```
INSERT INTO Friends (ID, Friend_ID) VALUES
```

(1, 2),
(2, 3),
(3, 4),
(4, 1);

```
WITH SalaryComparison AS (  
    SELECT CASE  
        WHEN pa.salary > p.salary THEN s.name  
        END AS name_salary, pa.salary  
    FROM Students AS s  
    INNER JOIN Friends AS f ON s.id = f.id  
    INNER JOIN Packages AS p ON s.id = p.id  
    INNER JOIN Packages AS pa ON f.friend_id = pa.id  
)  
SELECT name_salary  
FROM SalaryComparison  
WHERE name_salary IS NOT NULL  
ORDER BY salary;
```

TASK 2

Description:

You are working with a student management system that stores student information in a table. The table has the following schema: ID, Name, Marks.

→

```
CREATE TABLE student_management (  
    ID INTEGER PRIMARY KEY,  
    Name TEXT,  
    Marks INTEGER  
);
```

```
INSERT INTO student_management (ID, Name, Marks) VALUES  
(1, 'Alice', 85),  
(2, 'Bob', 90),  
(3, 'Carol', 75),  
(4, 'Dave', 80),  
(5, 'Eve', 70),  
(6, 'Frank', 95);
```

```
CREATE TEMPORARY TABLE temp AS
```

```

SELECT
    t1.ID AS ID1,
    t1.Name AS Name1,
    t1.Marks AS Marks1,
    t2.ID AS ID2,
    t2.Name AS Name2,
    t2.Marks AS Marks2
FROM
    student_management t1
JOIN
    student_management t2
ON
    t1.ID + 1 = t2.ID
WHERE
    t1.ID % 2 = 1;

UPDATE student_management
SET
    Name = (SELECT Name2 FROM temp WHERE ID1 = student_management.ID),
    Marks = (SELECT Marks2 FROM temp WHERE ID1 = student_management.ID)
WHERE ID IN (SELECT ID1 FROM temp);

UPDATE student_management
SET
    Name = (SELECT Name1 FROM temp WHERE ID2 = student_management.ID),
    Marks = (SELECT Marks1 FROM temp WHERE ID2 = student_management.ID)
WHERE ID IN (SELECT ID2 FROM temp);

DROP TABLE temp;

SELECT * FROM student_management;

```

TASK 3 & TASK 4

- IDE NOTEBOOK SUBMITTED IN MAIL WITH THE DESIRED OUTPUT-