# Problem 1 get rank

# Write your MySQL query statement below

SELECT score, dense\_rank() OVER(ORDER BY score DESC) AS 'rank' FROM Scores;

# Problem 2 Exchange seats

# Write your MySQL query statement below

SELECT(

    CASE

        WHEN MOD(id,2)!=0 AND id!=total\_seat THEN id+1

        WHEN MOD(id,2)!=0 AND id= total\_seat THEN id

        ELSE id-1

    END

) AS id, Student from Seat, (SELECT Count(\*) AS total\_seat from Seat) AS seat\_count order by id;

# Problem 3 define Tree nodes types

# Write your MySQL query statement below

SELECT id,(

    CASE

        WHEN p\_id is NULL THEN 'Root'

        WHEN id not in (SELECT p\_id from Tree where p\_id is not null) THEN 'Leaf'

        ELSE 'Inner'

    END

) AS type from Tree

# Problem 4 Top 3 salries

# Write your MySQL query statement below

WITH RankedSalaries AS (

    SELECT

        e.id AS employee\_id,

        e.name AS employee\_name,

        e.salary,

        e.departmentId,

        d.name AS department\_name,

        DENSE\_RANK() OVER (PARTITION BY e.departmentId ORDER BY e.salary DESC) AS salary\_rank

    FROM Employee e

    JOIN Department d ON e.departmentId = d.id

)

SELECT

    r.department\_name Department,

    r.employee\_name Employee,

    r.salary Salary

FROM RankedSalaries r

WHERE r.salary\_rank <= 3;