Source code :

```
-- 1
CREATE DATABASE `employee`;
use employee;


-- 3
SELECT  EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT
        FROM emp_record_table;


-- 4
SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT, EMP_RATING,
        CASE
                WHEN emp_rating < 2 THEN "rating is less than 2"
      WHEN emp_rating > 4 THEN "rating is grater than 4"
      WHEN emp_rating <= 4 and emp_rating >= 2 THEN "rating is inbetween 2 and 4"
        END rating
   FROM emp_record_table;


-- 5
SELECT CONCAT(first_name,' ',last_name) AS NAME, dept
        FROM emp_record_table
   WHERE dept = "finance";


-- 6
select manager_id, count(emp_id)
        from emp_record_table
        where manager_id is not null
        group by manager_id;


-- 7
SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT
FROM emp_record_table
WHERE DEPT = 'healthcare'

UNION

SELECT EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT
FROM emp_record_table
WHERE DEPT = 'finance';


-- 8
Select EMP_ID, FIRST_NAME, LAST_NAME, ROLE,dept, EMP_RATING, max(emp_rating)
over(partition by dept) as max_rating
```

```
        FROM emp_record_table;


-- 9
 SELECT first_name, role, salary,
        min(salary) over(partition by role) as min_salary,
    max(salary) over(partition by role) as max_salary
        from emp_record_table
    order by salary desc;


-- 10
select first_name,exp,rank()over(order by exp desc)
        from emp_record_table;

-- 11
create view 6_k as
        select EMP_ID, FIRST_NAME, LAST_NAME, GENDER, DEPT , country, salary
                from emp_record_table
                where salary > 6000;

Select * from 6_k;

-- 12

select *
from emp_record_table
where emp_id in (
select emp_id
from emp_record_table
 where exp > 10
 );


-- 13
DELIMITER //

CREATE PROCEDURE exp3()
BEGIN
    SELECT *
    FROM emp_record_table
    WHERE EXP > 3;
END //

DELIMITER ;

call exp3;

-- 14

DELIMITER $$
```

```
CREATE FUNCTION `ex` (eid VARCHAR(5))
RETURNS VARCHAR(100)
DETERMINISTIC
BEGIN
    DECLARE ex INT;
    DECLARE ro VARCHAR(100);
    DECLARE flag VARCHAR(10);

    -- Retrieve the employee's experience and role
    SELECT exp, role INTO ex, ro FROM data_science_team WHERE emp_ID = eid;

    -- Determine the flag based on the employee's experience and role
    CASE
        WHEN ex <= 2 AND ro = 'JUNIOR DATA SCIENTIST' THEN
            SET flag = 'Yes';
        WHEN ex <= 5 AND ro = 'ASSOCIATE DATA SCIENTIST' THEN
            SET flag = 'Yes';
        WHEN ex <= 10 AND ro = 'SENIOR DATA SCIENTIST' THEN
            SET flag = 'Yes';
        WHEN ex <= 12 AND ro = 'LEAD DATA SCIENTIST' THEN
            SET flag = 'Yes';
        WHEN ex <= 16 AND ro = 'Manager' THEN
            SET flag = 'Yes';
        ELSE
            SET flag = 'No';
    END CASE;

    RETURN flag;
END$$

DELIMITER ;

SELECT *, ex(Emp_ID) FROM data_science_team;

-- 15

CREATE INDEX idx_first_name ON emp_record_table(FIRST_NAME(100));
EXPLAIN SELECT * FROM emp_record_table WHERE FIRST_NAME = 'Eric';
SELECT * FROM emp_record_table WHERE FIRST_NAME = 'Eric';

-- 16

SELECT EMP_ID, FIRST_NAME, LAST_NAME, EMP_RATING, SALARY,
       0.05 * SALARY * EMP_RATING AS BONUS
          FROM emp_record_table;

-- 17

SELECT CONTINENT,COUNTRY,AVG(SALARY) AS AVERAGE_SALARY
          FROM emp_record_table
          GROUP BY CONTINENT, COUNTRY;
```