LAPORAN PRAKTIKUM
PENGOLAHAN BASIS DATA MODUL
SECTION *10?*

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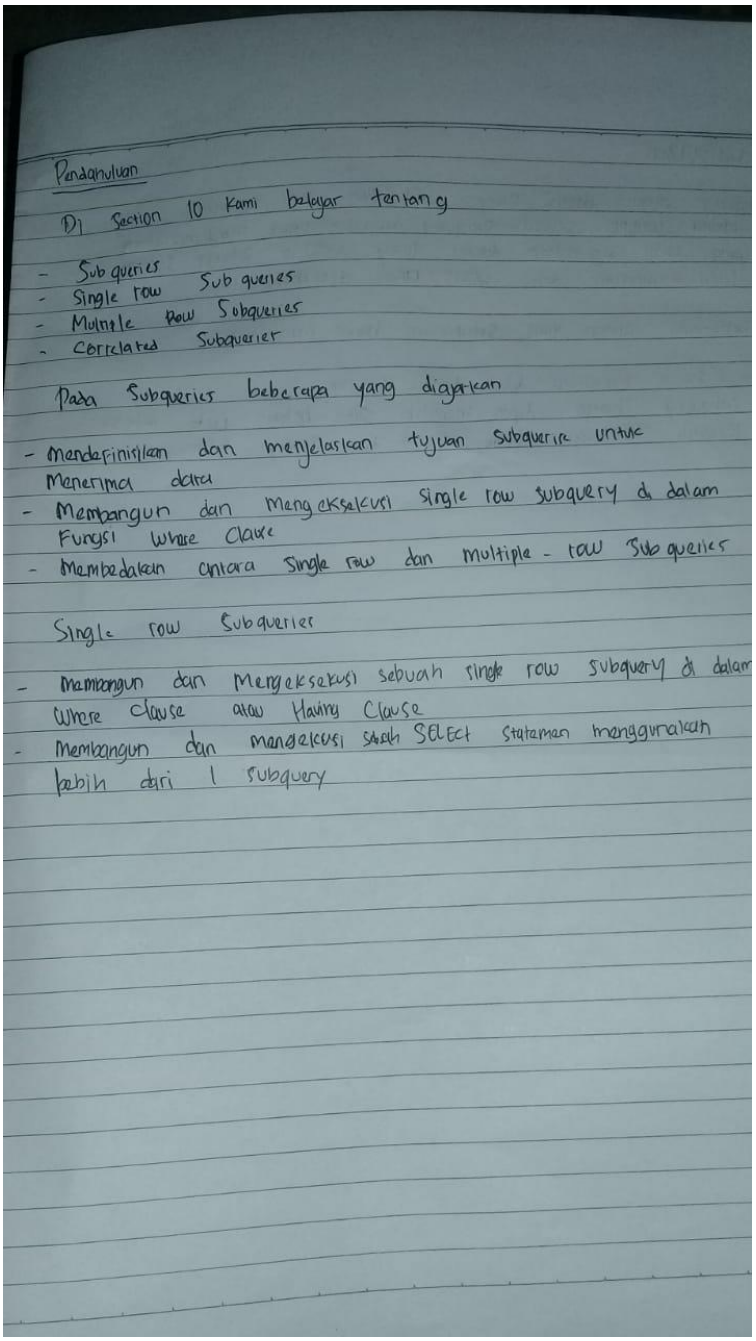
Pengesahan

Tanggal :

Asisten

A. Pendahuluan



Pendahuluan

Di Section 10 Kami belajar tentang

- Sub queries
- Single row Sub queries
- Multiple Row Subqueries
- Correlated Subquerier

Pada Subqueries beberapa yang digarkan

- Mendefinisikan dan menjelaskan tujuan subquerire untuk menerimci data
- Membangun dan Mengeksekusi single row subquery di dalam Fungsi Where Clause
- Membedakan cntara Single row dan multiple - row Sub queries

Single row Subqueries

- Membangun dan Mengeksekusi sebuah single row subquery di dalam Where clause atau Having Clause
- Membangun dan mengeksusi sebuh SELECT statemen menggunakan lebih dari 1 subquery

B. Latihan

- **Fundamentals of Subqueries**
    1. What is the purpose of using a subquery?
    2. What are the names of the Global Fast Foods staff members whose salaries are greater than the staff member whose ID is 12? **Single-Row Subqueries**

1. Write a query to return all those employees who have a salary greater than that of Lorentz and are in the same department as Abel.
2. Return the department ID and minimum salary of all employees, grouped by department ID, having a minimum salary greater than the minimum salary of those employees whose department ID is not equal to 50. **Multiple-Row Subqueries**
    1. Find the last names of all employees whose salaries are the same as the minimum salary for any department.
    2. Write a pair-wise subquery listing the last_name, first_name, department_id, and man-ager_id for all employees that have the same department_ id and manager_id as em- ployee 141. Exclude employee 141 from the result set.

- **Correlated Subqueries**
    1. Write a query that lists the highest earners for each department. Include the last_name, department_id, and the salary for each employee.
    2. Using a WITH clause, write a SELECT statement to list the job_title of those jobs whose maximum salary is more than half the maximum salary of the entire company. Name your subquery MAX_CALC_SAL. Name the columns in the result JOB_TITLE and JOB_TOTAL, and sort the result on JOB_TOTAL in descending order.

       Hint: Examine the jobs table. You will need to join JOBS and EMPLOYEES to display the job_title.

JAWAB :

- **Fundamentals of Subqueries**

1. **To find the intermediate information we need to extract information we want. E.g. extracting right part in WHERE/HAVING/FROM clause.**
2. **SELECT first_name,last_name**

   FROM f_staffs

   WHERE salary > (SELECT salary FROM f_staffs WHERE id = 12);
3. **SELECT first_name, last_name**

   FROM EMPLOYEES

   WHERE salary > (SELECT salary FROM employees WHERE last_name = 'Lorentz') AND department_id = (SELECT department_id FROM employees WHERE last_name = 'Abel');
4. **SELECT department_id, TO_CHAR(ROUND(MIN(salary),2),'$999999.99') "Minimum Salary"**

   FROM employees
   GROUP BY department_id
   HAVING MIN(salary) > (SELECT MIN(salary) from employees WHERE department_id != 50);
5. **SELECT last_name**

   FROM employees
   WHERE salary in (SELECT MIN(salary) FROM employees GROUP BY department_id);
6. **SELECT last_name, first_name, department_id, manager_id**
   FROM employees
   WHERE (NVL(department_id,-1), NVL(manager_id,-1)) = (SELECT NVL(department_id,-1), NVL(manager_id,-1) FROM employees WHERE employee_id = 141) AND employee_id != 141

- **Correlated Subqueries**

1. **SELECT oe.last_name, oe.department_id, oe.salary**

   FROM employees oe

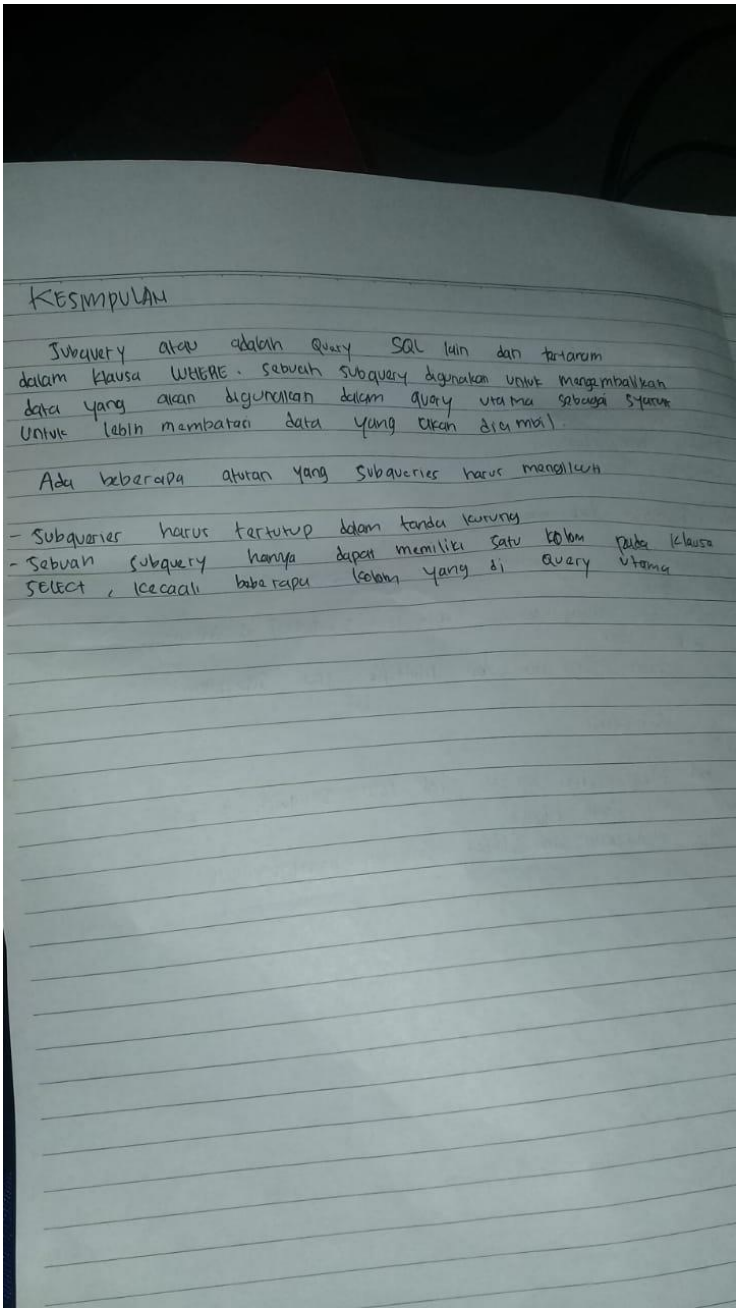
   WHERE oe.salary = (SELECT MAX(ie.salary) FROM employees ie WHERE NVL(ie.department_id,-1) = NVL(oe.department_id,-1));

2. **SELECT job_title, job_actual_max AS job_total**

   FROM max_calc_sal

   WHERE job_actual_max > (SELECT MAX(job_actual_max)/2
   FROM max_calc_sal) ORDER BY job_total DESC;

C. Kesimpulan



KESIMPULAN

Subquery atau adalah Query SQL lain dan tertanam dalam klausa WHERE. sebuah subquery digunakan untuk mengembalikan data yang akan digunakan dalam query utama sebagai syarat untuk lebih membatasi data yang akan diambil.

Ada beberapa aturan yang Subqueries harus mengikuti

- Subqueries harus tertutup dalam tanda kurung
- Sebuah subquery hanya dapat memiliki satu kolom pada klausa SELECT, kecuali beberapa kolom yang di query utama