

PRAKTIKUM SISTEM DATABASE II

(UTS)



Disusun Oleh:

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PROGRAM STUDI S-1 TEKNIK INFORMATIKA
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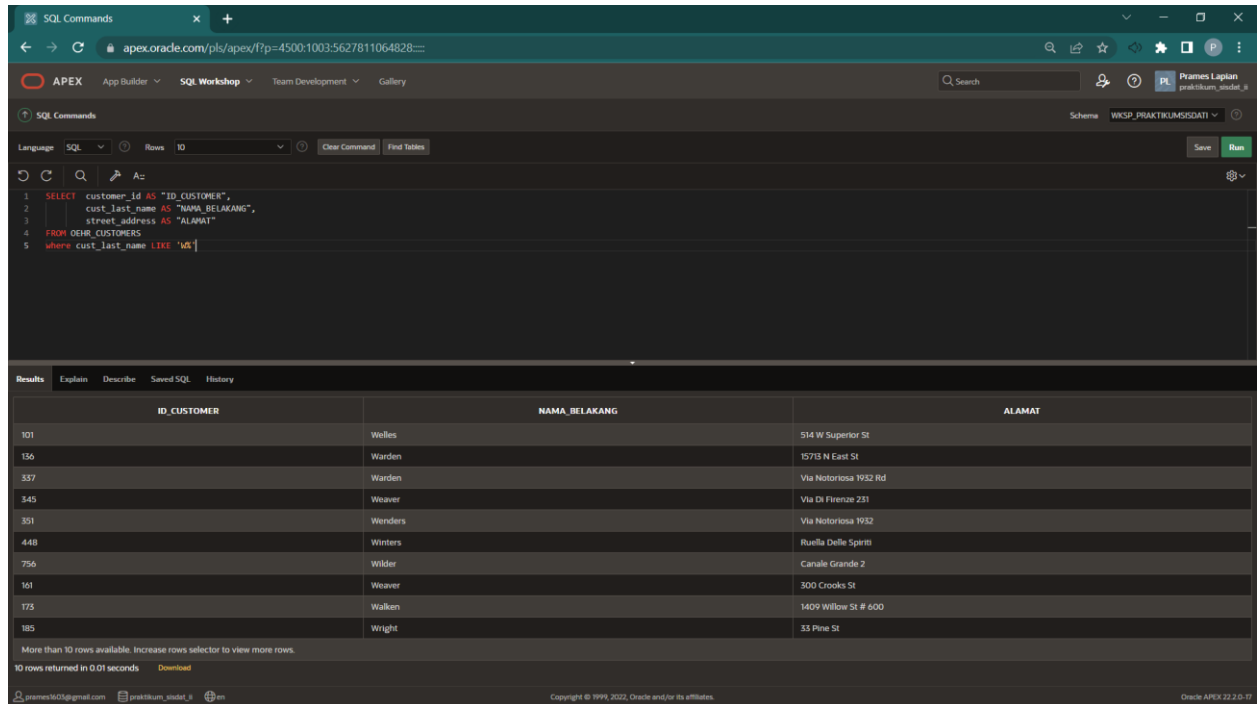
2022

1. Soal 1:

a. Query:

```
SELECT customer_id AS "ID_CUSTOMER",
       cust_last_name AS "NAMA_BELAKANG",
       street_address AS "ALAMAT"
FROM OEHR_CUSTOMERS
where cust_last_name LIKE 'W%'
```

b. Screenshot:



2. Soal 2:

a. Query:

```
CREATE VIEW PEKERJA_SALES AS
SELECT CONCAT(CONCAT(FIRST_NAME, ' '), LAST_NAME) AS
"NAMA LENGKAP",
       EMAIL,
       SALARY AS "GAJI"
FROM OEHR_EMPLOYEES
WHERE JOB_ID = 'SA_REP' AND SALARY > 1500;

SELECT * FROM PEKERJA_SALES;
```

b. Screenshot:

The screenshot shows the Oracle APEX SQL Workshop interface. The SQL command area contains the following query:

```

1 CREATE VIEW PEKERJA_SALES AS
2 SELECT CONCAT(CONCAT(FIRST_NAME, ' '), LAST_NAME) AS "NAMA LENGKAP",
3        EMAIL,
4        SALARY AS "GAJI"
5 FROM OEHR_EMPLOYEES
6 WHERE JOB_ID = 'SA_REP' AND SALARY > 1500;
7
8 SELECT * FROM PEKERJA_SALES;

```

The Results tab shows the following data:

NAMA LENGKAP	EMAIL	GAJI
Peter Tucker	PTUCKER	10000
David Bernstein	DBERNSTE	9500
Peter Hall	PHALL	9000
Christopher Olsen	COLSEN	8000
Nanette Cambrault	NCAMBRAU	7500
Oliver Tuvault	OTUVAULT	7000
Janette King	JKING	10000
Patrick Sully	PSULLY	9500
Allan Mcewen	AMCEWEN	9000
Lindsay Smith	LSMITH	8000

More than 10 rows available. Increase rows selector to view more rows.
10 rows returned in 0.14 seconds

3. Soal 3:

a. Query:

```

SELECT CONCAT(CONCAT(c.CUST_FIRST_NAME, ' '),
c.CUST_LAST_NAME) AS "NAMA LENGKAP",
       c.STREET_ADDRESS AS "ALAMAT",
       o.ORDER_DATE AS "TANGGAL PEMESANAN",
       i.QUANTITY AS "KUANTITAS"
FROM OEHR_CUSTOMERS c
JOIN OEHR_ORDERS o
  ON (c.CUSTOMER_ID = o.CUSTOMER_ID)
JOIN OEHR_ORDER_ITEMS i
  ON (o.ORDER_ID = i.ORDER_ID)
WHERE c.STATE_PROVINCE = 'IN' AND o.ORDER_DATE > '01-OCT-21
01.00.00.000000 AM +00:00' AND i.QUANTITY > 50;

```

b. Screenshot:

The screenshot shows the Oracle APEX SQL Workshop interface. The SQL command window contains the following query:

```

1 SELECT CONCAT(CONCAT(c.cust_first_name, ' '), c.cust_last_name) AS "NAMA LENGKAP",
2        c.street_address AS "ALAMAT",
3        o.order_date AS "TANGGAL PEMESANAN",
4        i.quantity AS "KUANTITAS"
5 FROM oehi_customers c
6 JOIN oehi_orders o
7     ON (c.customer_id = o.customer_id)
8 JOIN oehi_order_items i
9     ON (o.order_id = i.order_id)
10 WHERE c.state_province = 'IN' AND o.order_date > '01-OCT-21 01.00.00.000000 AM +00:00' AND i.quantity > 50;

```

The Results window displays the following data:

NAMA LENGKAP	ALAMAT	TANGGAL PEMESANAN	KUANTITAS
Meenakshi Mason	136 E Market St # 800	23-DEC-21 02:34:21.000000 PM +00:00	180
Christian Cage	1905 College St	23-DEC-21 03:41:10.000000 PM +00:00	200
Harrison Sutherland	6445 Bay Harbor Ln	24-AUG-22 05:18:23.000000 PM +00:00	61
Matthias Hannah	1608 Portage Ave	24-JUN-22 07:59:08.000000 PM +00:00	110
Christian Cage	1905 College St	22-MAR-22 10:22:35.000000 PM +00:00	90
Constantin Welles	514 W Superior St	09-MAY-22 12:34:04.000000 PM +00:00	200
Manisha Taylor	8768 N State Rd 37	11-NOV-21 04:49:34.000000 PM +00:00	120
Meenakshi Mason	136 E Market St # 800	23-DEC-21 02:34:21.000000 PM +00:00	180
Christian Cage	1905 College St	23-DEC-21 03:41:10.000000 PM +00:00	160
Meenakshi Mason	136 E Market St # 800	23-DEC-21 02:34:21.000000 PM +00:00	182

More than 10 rows available. Increase rows selector to view more rows.
10 rows returned in 0.01 seconds

4. Soal 4

a. Yang bisa dilakukan Rinov:

- Rinov dapat menggunakan TCL(Transaction Control Language) sebelum melakukan input data ataupun query

b. Query:

- Start Transaction:
set_autocommit = 0
start transaction
- Buat savepoint ditengah-tengah ketika melakukan update database agar jika ada kesalahan, Rinov tidak perlu mengulang update databasenya terlalu jauh:
savepoint p1
- Jika terdapat kesalahan, Rinov bisa undo update yang sudah dilakukan ke savepoint yang sudah dibuat:
rollback to p1
- Setelah update database dirasa sudah selesai, Rinov dapat melakukan commit agar update database yang Rinov lakukan bisa benar benar berubah secara permanen:
commit

5. Soal 5

a. Indexing:

Index merupakan sebuah struktur data yang berisi kumpulan 'keyword' beserta referensinya dari suatu data di suatu table

b. Kegunaan Indexing:

Index dapat digunakan untuk mempercepat proses kerja query. Hal ini berkaitan dengan kinerja CPU yang menghabiskan banyak resource CPU untuk mencari data melalui suatu query, disinilah letak index dapat digunakan. Mungkin dalam skala kecil kurang terlihat kegunaannya, namun akan terlihat dalam beberapa kasus dimana mengharuskan suatu query untuk menampilkan data yang sangat banyak dan kompleks.