

LAPORAN AKHIR PRAKTIKUM

Mata Praktikum : Sistem Basis Data 1
Kelas : 3IA02
Praktikum ke : 4
Tanggal : 12 November 2022
Materi : Select (DML) & Ekspresi Aritmatika
NPM : 50420562
Nama : Ibrahim Bramullah
Ketua Asisten : Natasya Rahma Fadilla
Jumlah Lembar : 7

LABORATORIUM TEKNIK INFORMATIKA
UNIVERSITAS GUNADARMA
2022

1. Buat Tabel dengan nama Product.

```
CREATE TABLE product(  
PRODUCT_ID varchar(255) PRIMARY KEY,  
CATEGORY varchar(255),  
SUB_CATEGORY varchar(255),  
PRODUCT_NAME varchar(255)  
);
```

```
1  --1--  
2  create table product(  
3  PRODUCT_ID varchar(255) PRIMARY KEY,  
4  CATEGORY varchar(255),  
5  SUB_CATEGORY varchar(255),  
6  PRODUCT_NAME varchar(255)  
7  );  
8
```

2. Tampilkan Struktur data pada tabel product yang telah dibuat.

| Data output | Messages | Notifications |
|--|-------------------------------------|---|
| | | |
| product_id [PK] character varying (255) | category character varying (255) | sub_category character varying (255) |
| product_name character varying (255) | | |

3. Masukkan data berikut ke dalam tabel Product, lalu tampilkan isi tabel sales.

```
INSERT INTO product VALUES  
(  
'FUR-CH-10000454','Furniture','Chairs','Hon Deluxe Fabric Upholstered Stacking Chairs Rounded Back'),  
(  
'OFF-LA-10000240','Office Supplies','Labels','Self-Adhesive Address Labels for Typewriters by Universal'),  
(  
'FUR-TA-10000577','Furniture','Tables','Bretford CR4500 Series Slim Rectangular Table'),  
(  
'OFF-ST-10000760','Office Supplies','Storage','Eldon Fold N Roll Cart System'),  
(  
'FUR-FU-10001487','Furniture','Furnishings','Eldon Expressions Wood and Plastic Desk Accessories Cherry Wood'),  
(  
'OFF-AR-10002833','Office Supplies','Art','Newell 322'),  
(  
'TEC-PH-10002775','Technology','Phones','Mitel 5320 IP Phone VoIP phone'),  
(  
'OFF-BI-10003910','Office Supplies','Binders','DXL Angle-View Binders with Locking Rings by Samsill'),  
(  
'OFF-AP-10002892','Office Supplies','Appliances','Belkin F5C206VTEL 6 Outlet Surge'),  
(  
'FUR-TA-10001539','Furniture','Tables','Chromcraft Rectangular Conference Tables'),  
(  
'TEC-PH-10002033','Technology','Phones','Konftel 250 Conference phone Charcoal black'),  
(  
'OFF-PA-10002365','Office Supplies','Paper','Xerox 1967'),  
(  
'OFF-BI-10003656','Office Supplies','Binders','Fellowes PB200 Plastic Comb Binding Machine'),  
(  
'OFF-AP-10002311','Office Supplies','Appliances','Holmes Replacement Filter for HEPA Air Cleaner Very Large Room HEPA Filter'),  
(  
'OFF-BI-10000756','Office Supplies','Binders','Storex DuraTech Recycled Plastic Frosted Binders');
```

pgAdmin 4

supermart/postgres@PostgreSQL 14*

Query

```
13 INSERT INTO product VALUES
14 ('FUR-CH-10000454','Furniture','Chairs','Hon Deluxe Fabric Upholstered Stacking Chairs Rounded Back'),
15 ('OFF-LA-10000240','Office Supplies','Labels','Self-Adhesive Address Labels for Typewriters by Universal'),
16 ('FUR-TA-10000577','Furniture','Tables','Bretford CR4500 Series Slim Rectangular Table'),
17 ('OFF-ST-10000760','Office Supplies','Storage','Eldon Fold N Roll Cart System'),
18 ('FUR-FU-10001487','Furniture','Furnishings','Eldon Expressions Wood and Plastic Desk Accessories Cherry Wood'),
19 ('OFF-AR-10002833','Office Supplies','Art','Newell 322'),
20 ('TEC-PH-10002775','Technology','Phones','Mitel 5320 IP Phone VoIP phone'),
```

Data output

| | product_id [PK] character varying (255) | category character varying (255) | sub_category character varying (255) | product_name character varying (255) |
|----|--|-------------------------------------|---|---|
| 1 | FUR-CH-10000454 | Furniture | Chairs | Hon Deluxe Fabric Uph... |
| 2 | OFF-LA-10000240 | Office Supplies | Labels | Self-Adhesive Address ... |
| 3 | FUR-TA-10000577 | Furniture | Tables | Bretford CR4500 Serie... |
| 4 | OFF-ST-10000760 | Office Supplies | Storage | Eldon Fold N Roll Cart ... |
| 5 | FUR-FU-10001487 | Furniture | Furnishings | Eldon Expressions Wo... |
| 6 | OFF-AR-10002833 | Office Supplies | Art | Newell 322 |
| 7 | TEC-PH-10002775 | Technology | Phones | Mitel 5320 IP Phone V... |
| 8 | OFF-BI-10003910 | Office Supplies | Binders | DXL Angle-View Binder... |
| 9 | OFF-AP-10002892 | Office Supplies | Appliances | Belkin F5C206VTEL 6 ... |
| 10 | FUR-TA-10001539 | Furniture | Tables | Chromcraft Rectangula... |
| 11 | TEC-PH-10002033 | Technology | Phones | Konftel 290 Conferenc... |
| 12 | OFF-PA-10002365 | Office Supplies | Paper | Xerox 1967 |
| 13 | OFF-BI-10003656 | Office Supplies | Binders | Fellowes PB200 Plasti... |
| 14 | OFF-AP-10002311 | Office Supplies | Appliances | Holmes Replacement F... |
| 15 | OFF-BI-10000756 | Office Supplies | Binders | Storex DuraTech Recy... |

Total rows: 15 of 15 Query complete 00:00:00.085 Ln 9, Col 22

4. Tampilkan data pada tabel customer,sales,product yang terdapat dalam database supermart.

SELECT * FROM customer;

Query

Query History

11

region varchar(255) not null;

12

13

--3--

14

select*from customer;

15

16

--4--

17

insert into customer values ('UG-50420562','Ibrahim Bramullah','CEO',20,'Indonesia','Jakarta','Jakarta Selatan',50420562,'South');

18

insert into customer values ('CG-12520','Claire Gute','Consumer',67,'United States','Henderson','Kentucky',42420,'South');

19

insert into customer values ('DV-13045','Darrin Van Huff','Corporate',31,'United States','Los Angeles','California',90036,'West');

20

insert into customer values ('SO-20335','Sean O Donnell','Consumer',65,'United States','Fort Lauderdale','Florida',33311,'South');

21

insert into customer values ('BH-11710','Brosina Hoffman','Consumer',20,'United States','Los Angeles','California',90032,'West');

22

insert into customer values ('AA-10480','Andrew Allen','Consumer',50,'United States','Concord','North Carolina',28027,'South');

23

insert into customer values ('IM-15070','Irene Maddox','Consumer',66,'United States','Seattle','Washington',98103,'West');

24

insert into customer values ('HP-14815','Harold Pawlan','Home Office',20,'United States','Fort Worth','Texas',76106,'Central');

25

insert into customer values ('PK-19075','Pete Kriz','Consumer',46,'United States','Madison','Wisconsin',53711,'Central');

26

insert into customer values ('AG-10270','Alejandro Grove','Consumer',18,'United States','West Jordan','Utah',84084,'West');

27

insert into customer values ('ZD-21925','Zuschuss Donatelli','Consumer',66,'United States','San Francisco','California',94109,'West');

28

29

Data output

Messages

Notifications

| | customer_id [PK] character varying (255) | customer_name character varying (255) | segment character varying (255) | age integer | country character varying (255) | city character varying (255) | state character varying (255) | postal_code bigint | region character varying (255) |
|---|---|--|------------------------------------|----------------|------------------------------------|---------------------------------|----------------------------------|-----------------------|-----------------------------------|
| 1 | UG-50420562 | Ibrahim Bramullah | CEO | 20 | Indonesia | Jakarta | Jakarta Selatan | 50420562 | South |
| 2 | CG-12520 | Claire Gute | Consumer | 67 | United States | Henderson | Kentucky | 42420 | South |
| 3 | DV-13045 | Darrin Van Huff | Corporate | 31 | United States | Los Angeles | California | 90036 | West |
| 4 | SO-20335 | Sean O Donnell | Consumer | 65 | United States | Fort Lauderdale | Florida | 33311 | South |

SELECT * FROM sales;

| | order_line [PK] integer | order_id character varying (255) | order_date date | ship_date date | ship_mode character varying (255) | customer_id character varying (255) | product_id character varying (255) | sales double precision | quantity integer | discount double precision | profit double precision |
|--|-------------------------|----------------------------------|-----------------|----------------|-----------------------------------|-------------------------------------|------------------------------------|------------------------|------------------|---------------------------|-------------------------|
| 1 | 1 | CA-2016-152156 | 2016-11-08 | 2016-11-11 | Second Class | CG-12520 | FUR-BO-10001798 | 261.96 | 2 | 0 | 41.9136 |
| 2 | 2 | CA-2016-152156 | 2016-11-08 | 2016-11-11 | Second Class | CG-12520 | FUR-CH-10000454 | 731.94 | 3 | 0 | 219.582 |
| 3 | 3 | CA-2016-138688 | 2016-06-02 | 2016-06-16 | Second Class | DV-13045 | OFF-LA-10000240 | 14.62 | 2 | 0 | 6.8714 |
| 4 | 4 | US-2015-108966 | 2015-10-11 | 2015-10-18 | Standard Class | SO-20335 | FUR-TA-10000577 | 957.5775 | 5 | 0.45 | -383.031 |
| 5 | 5 | US-2015-108966 | 2015-10-11 | 2015-10-18 | Standard Class | SO-20335 | OFF-ST-10000760 | 22.368 | 2 | 0.2 | 2.5164 |
| 6 | 6 | CA-2014-115812 | 2014-06-09 | 2014-06-14 | Standard Class | BH-11710 | FUR-FU-10001487 | 48.86 | 7 | 0 | 14.1694 |
| 7 | 7 | CA-2014-115812 | 2014-06-09 | 2014-06-14 | Standard Class | BH-11710 | OFF-AR-10002833 | 7.28 | 4 | 0 | 1.9656 |
| 8 | 8 | CA-2014-115812 | 2014-06-09 | 2014-06-14 | Standard Class | BH-11710 | TEC-PH-10002275 | 907.152 | 6 | 0.2 | 90.7152 |
| 9 | 9 | CA-2014-115812 | 2014-06-09 | 2014-06-14 | Standard Class | BH-11710 | OFF-BI-10003910 | 18.504 | 3 | 0.2 | 5.7825 |
| 10 | 10 | CA-2014-115812 | 2014-06-09 | 2014-06-14 | Standard Class | BH-11710 | OFF-AP-10002892 | 114.9 | 5 | 0 | 34.47 |
| 11 | 11 | CA-2014-115812 | 2014-06-09 | 2014-06-14 | Standard Class | BH-11710 | FUR-TA-10001539 | 1706.184 | 9 | 0.2 | 85.3092 |
| 12 | 12 | CA-2014-115812 | 2014-06-09 | 2014-06-14 | Standard Class | BH-11710 | TEC-PH-10002033 | 911.424 | 4 | 0.2 | 68.3568 |
| 13 | 13 | CA-2014-115812 | 2017-04-15 | 2017-04-20 | Standard Class | AA-10480 | OFF-PA-10002365 | 15.552 | 3 | 0.2 | 5.4432 |
| 14 | 14 | CA-2016-161389 | 2016-12-05 | 2016-12-10 | Standard Class | IM-15070 | OFF-BI-10003656 | 407.976 | 3 | 0.2 | 132.5922 |
| 15 | 15 | US-2015-118983 | 2015-11-22 | 2015-11-26 | Standard Class | HP-14815 | OFF-AP-10002311 | 68.81 | 5 | 0.8 | -123.858 |
| 16 | 16 | US-2015-118983 | 2015-11-22 | 2015-11-26 | Standard Class | HP-14815 | OFF-BI-10000756 | 2.544 | 3 | 0.8 | -3.816 |
| Total rows: 16 of 16 Query complete 00:00:00.182 | | | | | | | | | | | |

SELECT * FROM product;

| | product_id [PK] character varying (255) | category character varying (255) | sub_category character varying (255) | product_name character varying (255) |
|----|--|-------------------------------------|---|---|
| 1 | FUR-CH-10000454 | Furniture | Chairs | Hon Deluxe Fabric Uph... |
| 2 | OFF-LA-10000240 | Office Supplies | Labels | Self-Adhesive Address ... |
| 3 | FUR-TA-10000577 | Furniture | Tables | Bretford CR4500 Serie... |
| 4 | OFF-ST-10000760 | Office Supplies | Storage | Eldon Fold N Roll Cart ... |
| 5 | FUR-FU-10001487 | Furniture | Furnishings | Eldon Expressions Wo... |
| 6 | OFF-AR-10002833 | Office Supplies | Art | Newell 322 |
| 7 | TEC-PH-10002775 | Technology | Phones | Mitel 5320 IP Phone V... |
| 8 | OFF-BI-10003910 | Office Supplies | Binders | DXL Angle-View Binder... |
| 9 | OFF-AP-10002892 | Office Supplies | Appliances | Belkin F5C206VTEL 6 ... |
| 10 | FUR-TA-10001539 | Furniture | Tables | Chromcraft Rectangula... |
| 11 | TEC-PH-10002033 | Technology | Phones | Konftel 250 Conferenc... |
| 12 | OFF-PA-10002365 | Office Supplies | Paper | Xerox 1967 |
| 13 | OFF-BI-10003656 | Office Supplies | Binders | Fellowes PB200 Plasti... |
| 14 | OFF-AP-10002311 | Office Supplies | Appliances | Holmes Replacement F... |
| 15 | OFF-BI-10000756 | Office Supplies | Binders | Storex DuraTech Recyl... |

5. Tampilkan id, nama, segmen, dan usia customer yang berusia 20-40 tahun.

SELECT customer_id, customer_name, segment, age FROM customer WHERE age BETWEEN 20 AND 40;

| | |
|----|---|
| 13 | |
| 14 | SELECT customer_id, customer_name, segment, age FROM customer WHERE age BETWEEN 20 AND 40 ; |
| 15 | |

| | customer_id [PK] character varying (255) | customer_name character varying (255) | segment character varying (255) | age integer |
|---|---|--|------------------------------------|----------------|
| 1 | UG-50420562 | Ibrahim Bramullah | CEO | 20 |
| 2 | DV-13045 | Darrin Van Huff | Corporate | 31 |
| 3 | BH-11710 | Brosina Hoffman | Consumer | 20 |
| 4 | HP-14815 | Harold Pawlan | Home Office | 20 |

6. Tampilkan data product dari tabel product yang memiliki sub kategori 'Binders' atau 'Tables'.

SELECT * FROM product WHERE sub_category = 'Binders' OR sub_category = 'Tables';

| | |
|----|---|
| 98 | --6-- |
| 99 | SELECT * FROM product WHERE sub_category = 'Binders' OR sub_category = 'Tables'; |

| | product_id [PK] character varying (255) | category character varying (255) | sub_category character varying (255) | product_name character varying (255) |
|---|--|-------------------------------------|---|---|
| 1 | FUR-TA-10000577 | Furniture | Tables | Bretford CR4500 Serie... |
| 2 | OFF-BI-10003910 | Office Supplies | Binders | DXL Angle-View Binder... |
| 3 | FUR-TA-10001539 | Furniture | Tables | Chromcraft Rectangula... |
| 4 | OFF-BI-10003656 | Office Supplies | Binders | Fellowes PB200 Plasti... |
| 5 | OFF-BI-10000756 | Office Supplies | Binders | Storex DuraTech Recyl... |

7. Tampilkan profit terbesar dan profit terkecil dari tabel sales.

SELECT MAX(profit) AS MAX_Profit, MIN(profit) AS MIN_Profit FROM sales;

```

101  --7--
102  SELECT MAX(profit) AS MAX_Profit, MIN(profit) AS MIN_Profit FROM sales;

```

| | max_profit double precision | min_profit double precision |
|---|--------------------------------|--------------------------------|
| 1 | 219.582 | -383.031 |

8. Tampilkan id customer, nama customer, usia, kota dan negara bagian dari customer yang memiliki nama dengan huruf awal 'J' dan tinggal di kota Los Angeles dan San Fransisco.

```

SELECT
    customer_id,
    customer_name,
    age,
    city
STATE FROM customer
WHERE customer_name
LIKE 'J%'AND city IN ('Los Angeles','San Fransisco');
--8--
SELECT
    customer_id,
    customer_name,
    age,
    city
STATE FROM customer
WHERE customer_name LIKE 'J%'AND city IN('Los Angeles','San Fransisco');

```

| customer_id [PK] character varying (255) | customer_name character varying (255) | age integer | state character varying (255) |
|---|--|----------------|----------------------------------|
|---|--|----------------|----------------------------------|

9. Tampilkan 3 baris data pada tabel product yang memiliki kategori 'Office Supplies' dan sub kategori yang berakhiran huruf 's' dengan id product yang terurut secara ascending.

```
SELECT * FROM product WHERE category = 'Office Supplies' AND sub_category LIKE 's%' ORDER BY product_id ASC LIMIT 3;
```

53 --9--
54 **SELECT * FROM product WHERE category = 'Office Supplies' AND sub_category LIKE 's%' ORDER BY product_id ASC LIMIT 3;**

Data output Messages Notifications

| | product_id [PK] character varying (255) | category character varying (255) | sub_category character varying (255) | product_name character varying (255) |
|---|--|-------------------------------------|---|---|
| 1 | OFF-AP-10002311 | Office Supplies | Appliances | Holmes Replacement F... |
| 2 | OFF-AP-10002892 | Office Supplies | Appliances | Belkin F5C206VTEL 6 ... |
| 3 | OFF-BI-10000756 | Office Supplies | Binders | Storex DuraTech Recyl... |

10. Tampilkan jumlah biaya penjualan, rata-rata biaya penjualan, jumlah profit, dan rata-rata profit yang dihasilkan dari tabel sales.

```
SELECT  
SUM(sales) AS SUM_Sales,  
AVG(sales) AS SUM_Profit,  
AVG(profit) FROM sales;
```

109 --10--
110 **SELECT**
111 **SUM(sales) AS SUM_Sales,**
112 **AVG(sales) AS SUM_Profit,**
113 **AVG(profit) FROM sales;**

Data output Messages Notifications

| | sum_sales double precision | sum_profit double precision | avg double precision |
|---|-------------------------------|--------------------------------|-------------------------|
| 1 | 6197.651499999999 | 387.353218749999 | 12.4364062499999 |