

LAPORAN PRAKTIKUM PEMROGRAMAN BASIS DATA
PERTEMUAN PRAKTIKUM KE-4

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SUBQUERY

1. Tampilkan jumlah customer yang pernah melakukan pembelian barang.

Jawab :

```
SELECT COUNT(customer_id) as customer_total FROM
customers WHERE customer_id IN(SELECT customer_id FROM
purchases);
```

customer_total
13

2. Tampilkan jumlah customer yang pernah melakukan pembelian barang.

Jawab :

```
SELECT * FROM customers WHERE customer_id NOT IN(SELECT
customer_id FROM purchases);
```

	customer_id	name	address	region_id	year_of_birth
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	CUS-000011	Desi Wulandari	Yogyakarta	WL002	2008
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	CUS-000014	Hadrian Gustin Alvaro	Jakarta	WL001	2011

3. Tampilkan data supplier yang pernah memasok barang.

Jawab :

```
SELECT * FROM suppliers WHERE supplier_id IN(SELECT
supplier_id FROM purchases);
```

		supplier_id	name	address
<input type="checkbox"/>	Edit	SUP-000001	G&R Collection	Semarang
<input type="checkbox"/>	Edit	SUP-000002	Mollersz	Jakarta
<input type="checkbox"/>	Edit	SUP-000003	Tamza Accessories	Surabaya
<input type="checkbox"/>	Edit	SUP-000004	Wallette	Medan
<input type="checkbox"/>	Edit	SUP-000005	The Watch Gallery	Surabaya
<input type="checkbox"/>	Edit	SUP-000006	Bags Collection	Medan
<input type="checkbox"/>	Edit	SUP-000007	Couple9	Jakarta
<input type="checkbox"/>	Edit	SUP-000008	Swag Corner	Surabaya
<input type="checkbox"/>	Edit	SUP-000009	Kiss_OS	Jakarta
<input type="checkbox"/>	Edit	SUP-000010	YsN	Makasar
<input type="checkbox"/>	Edit	SUP-000011	Legnarose Beauty	Jakarta
<input type="checkbox"/>	Edit	SUP-000012	Mutiara Cosmetics	Surabaya
<input type="checkbox"/>	Edit	SUP-000013	Essential Store	Jakarta
<input type="checkbox"/>	Edit	SUP-000014	Horny Collections	Medan
<input type="checkbox"/>	Edit	SUP-000015	Viventi Living	Surabaya
<input type="checkbox"/>	Edit	SUP-000016	Orion Bed	Jakarta
<input type="checkbox"/>	Edit	SUP-000017	Tupperware ID	Makasar
<input type="checkbox"/>	Edit	SUP-000018	Utama Mega	Jakarta
<input type="checkbox"/>	Edit	SUP-000019	Mavelly Baby	Jakarta
<input type="checkbox"/>	Edit	SUP-000020	Sciabuna Store	Yogyakarta
<input type="checkbox"/>	Edit	SUP-000021	Kenzie Baby	Surabaya
<input type="checkbox"/>	Edit	SUP-000022	Chios CK	Yogyakarta
<input type="checkbox"/>	Edit	SUP-000023	JT Shop Indo	Jakarta
<input type="checkbox"/>	Edit	SUP-000024	Saga Case ID	Medan
<input type="checkbox"/>	Edit	SUP-000025	Graha Baru	Surabaya

4. Buktikan soal nomor 3 benar. Lakukan pembuktian dengan melakukan SELECT statement terhadap salah satu baris data yang muncul pada result-set soal nomor 3. Misalnya id supplier SUP-000001 pernah men-supply item, berapa item yang pernah di-supply?

Jawab :

```
SELECT COUNT(*) FROM items WHERE supplier_id = 'SUP-000001';
```

COUNT(*)
3

5. Tampilkan kategori barang yang belum terdaftar di tabel items.

Jawab :

```
SELECT * FROM categories WHERE category_id NOT IN(SELECT category_id FROM items);
```

		category_id	explanation
<input type="checkbox"/>	Edit Copy Delete	CG-007	Baby Care
<input type="checkbox"/>	Edit Copy Delete	CG-008	Handphone & Tablet
<input type="checkbox"/>	Edit Copy Delete	CG-009	Laptop & Accessories
<input type="checkbox"/>	Edit Copy Delete	CG-010	Computer & Accessories
<input type="checkbox"/>	Edit Copy Delete	CG-011	Electronic
<input type="checkbox"/>	Edit Copy Delete	CG-012	Camera, Photo & Video
<input type="checkbox"/>	Edit Copy Delete	CG-013	Otomotif
<input type="checkbox"/>	Edit Copy Delete	CG-014	Sports
<input type="checkbox"/>	Edit Copy Delete	CG-015	Office & Stationery
<input type="checkbox"/>	Edit Copy Delete	CG-016	Souvenirs & Gifts
<input type="checkbox"/>	Edit Copy Delete	CG-017	Books
<input type="checkbox"/>	Edit Copy Delete	CG-018	Softwares
<input type="checkbox"/>	Edit Copy Delete	CG-019	Films, Musics & Games
<input type="checkbox"/>	Edit Copy Delete	CG-020	Toys & Hobbies
<input type="checkbox"/>	Edit Copy Delete	CG-021	Foods & Drinks

6. Buktikan soal 5 benar, bahwa kategori barang "Otomotif" belum tersedia pada tabel items.

Jawab :

```
SELECT * FROM items WHERE category_id = (SELECT category_id
FROM categories WHERE explanation = 'Otomotif');
```

item_id	name	stock	purchasing_price	selling_price	category_id	supplier_id

Keterangan : Hasil dari query kosong, menandakan barang “Otomotif” belum tersedia pada tabel items.

7. Eksekusi 2 buah sintaks berikut. Lakukan analisa terhadap result-set kemudian berikan pendapat anda, kenapa sintaks 1 dan 2 menghasilkan keluaran yang berbeda!

Jawab :

```
-- Sintaks 1 :
SELECT * FROM customers
WHERE customer_id IN(SELECT customer_id FROM purchases);

-- Sintaks 2 :
SELECT * FROM customers
WHERE EXISTS(SELECT customer_id FROM purchases);
```

		customer_id	name	address	region_id	year_of_birth
<input type="checkbox"/>	Edit	CUS-000001	Bagus Nur Hakim	Jakarta	WL001	2010
<input type="checkbox"/>	Edit	CUS-000002	Putri Kharisma	Yogyakarta	WL002	2009
<input type="checkbox"/>	Edit	CUS-000003	Aliany Milawaty	Yogyakarta	WL002	2010
<input type="checkbox"/>	Edit	CUS-000004	Yudha Adisaputra	Solo	WL005	2006
<input type="checkbox"/>	Edit	CUS-000005	Nurafni Oktaviani	Surabaya	WL003	2010
<input type="checkbox"/>	Edit	CUS-000006	Meilia	Bandung	WL004	2007
<input type="checkbox"/>	Edit	CUS-000007	Aulia Luthfi Anna	Jakarta	WL001	2008
<input type="checkbox"/>	Edit	CUS-000008	Ichzam Rusmana	Medan	WL007	2009
<input type="checkbox"/>	Edit	CUS-000009	Tri Yulianti	Makasar	WL006	2000
<input type="checkbox"/>	Edit	CUS-000010	Ervina Jayanti	Surabaya	WL003	2007
<input type="checkbox"/>	Edit	CUS-000012	Sukma Tri Setia	Medan	WL007	2009
<input type="checkbox"/>	Edit	CUS-000013	Abinaya Basupati	Jakarta	WL001	2009
<input type="checkbox"/>	Edit	CUS-000015	Nathania Earline	Surabaya	WL003	2011

		customer_id	name	address	region_id	year_of_birth
<input type="checkbox"/>	Edit	CUS-000001	Bagus Nur Hakim	Jakarta	WL001	2010
<input type="checkbox"/>	Edit	CUS-000002	Putri Kharisma	Yogyakarta	WL002	2009
<input type="checkbox"/>	Edit	CUS-000003	Aliany Milawaty	Yogyakarta	WL002	2010
<input type="checkbox"/>	Edit	CUS-000004	Yudha Adisaputra	Solo	WL005	2006
<input type="checkbox"/>	Edit	CUS-000005	Nurafni Oktaviani	Surabaya	WL003	2010
<input type="checkbox"/>	Edit	CUS-000006	Meilia	Bandung	WL004	2007
<input type="checkbox"/>	Edit	CUS-000007	Aulia Luthfi Anna	Jakarta	WL001	2008
<input type="checkbox"/>	Edit	CUS-000008	Ichzam Rusmana	Medan	WL007	2009
<input type="checkbox"/>	Edit	CUS-000009	Tri Yulianti	Makasar	WL006	2000
<input type="checkbox"/>	Edit	CUS-000010	Ervina Jayanti	Surabaya	WL003	2007
<input type="checkbox"/>	Edit	CUS-000011	Desi Wulandari	Yogyakarta	WL002	2008
<input type="checkbox"/>	Edit	CUS-000012	Sukma Tri Setia	Medan	WL007	2009
<input type="checkbox"/>	Edit	CUS-000013	Abinaya Basupati	Jakarta	WL001	2009
<input type="checkbox"/>	Edit	CUS-000014	Hadrian Gustin Alvaro	Jakarta	WL001	2011
<input type="checkbox"/>	Edit	CUS-000015	Nathania Earline	Surabaya	WL003	2011

Keterangan :

- Sintaks 1. Pada commands tersebut menggunakan fungsi IN sehingga keluarannya menampilkan customer yang pernah melakukan transaksi.
 - Sintaks 2. Pada commands tersebut menggunakan fungsi EXISTS sehingga keluarannya menampilkan keseluruhan customer yang ada. Karena fungsi EXISTS hanya mengembalikan nilai boolean untuk subquery apakah mengeluarkan hasil atau tidak.
8. Eksekusi 2 sintaks berikut. Lakukan analisa terhadap output mengapa sintaks 1 mengembalikan error message, sedangkan sintaks 2 tidak, jelaskan!

Jawab :

```
-- Sintaks 1 :
SELECT * FROM suppliers
WHERE supplier_id = (SELECT supplier_id FROM items);
```

-- Sintaks 2 :

SELECT * FROM suppliers

WHERE supplier_id IN (SELECT supplier_id FROM items);

Error

SQL query: [Copy](#) [🔗](#)

```
SELECT * FROM suppliers
WHERE supplier_id = (SELECT supplier_id FROM items) LIMIT 0, 25
```

MySQL said: [🔗](#)

#1242 - Subquery returns more than 1 row

	supplier_id	name	address
<input type="checkbox"/> Edit Copy Delete	SUP-000001	G&R Collection	Semarang
<input type="checkbox"/> Edit Copy Delete	SUP-000002	Mollersz	Jakarta
<input type="checkbox"/> Edit Copy Delete	SUP-000003	Tamza Accessories	Surabaya
<input type="checkbox"/> Edit Copy Delete	SUP-000007	Couple9	Jakarta
<input type="checkbox"/> Edit Copy Delete	SUP-000008	Swag Corner	Surabaya
<input type="checkbox"/> Edit Copy Delete	SUP-000010	YsN	Makasar
<input type="checkbox"/> Edit Copy Delete	SUP-000011	Legnarose Beauty	Jakarta
<input type="checkbox"/> Edit Copy Delete	SUP-000012	Mutiara Cosmetics	Surabaya
<input type="checkbox"/> Edit Copy Delete	SUP-000013	Essential Store	Jakarta
<input type="checkbox"/> Edit Copy Delete	SUP-000014	Homy Collections	Medan
<input type="checkbox"/> Edit Copy Delete	SUP-000015	Viventi Living	Surabaya
<input type="checkbox"/> Edit Copy Delete	SUP-000016	Orion Bed	Jakarta
<input type="checkbox"/> Edit Copy Delete	SUP-000017	Tupperware ID	Makasar

Keterangan : Pada sintaks 1 mengembalikan error message karena tidak boleh menggunakan comparison operators “=” di dalam subquery.

9. Buat sebuah DELETE statement dengan subquery untuk menghapus data customer yang tidak pernah melakukan pembelian!

Jawab :

DELETE FROM customers WHERE customer_id NOT IN(SELECT
customer_id FROM purchases);

✔ 2 rows deleted. (Query took 0.0004 seconds.)

```
DELETE FROM customers WHERE customer_id NOT IN(SELECT customer_id FROM purchases);
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

Keterangan : Terdapat pengembalian “2 rows deleted” artinya terdapat 2 customer yang tidak pernah melakukan pembelian.