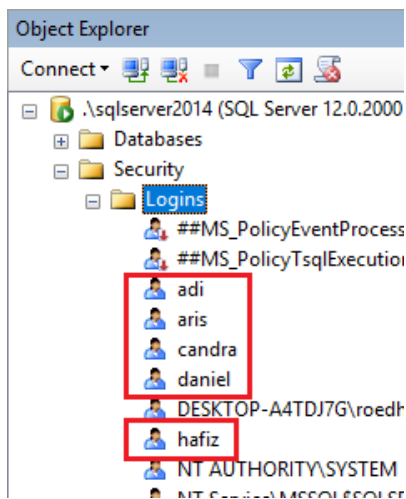


Database Security

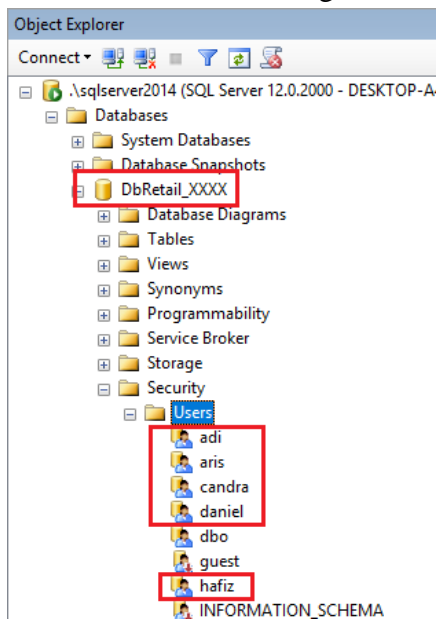
Untuk dapat mencapai kompetensi mata kuliah, mahasiswa harus mencapai kompetensi-kompetensi dasar sebagai berikut:

1. Mampu membuat dan membedakan antara user login, user database dan user group/roles.
2. Mampu menggunakan perintah DDL (Data Definition Languages) untuk membuat objek user login, user database dan user group/roles.
3. Mampu menggunakan perintah DCL (Data Control Languages) untuk mengatur hak akses user database dan user group.

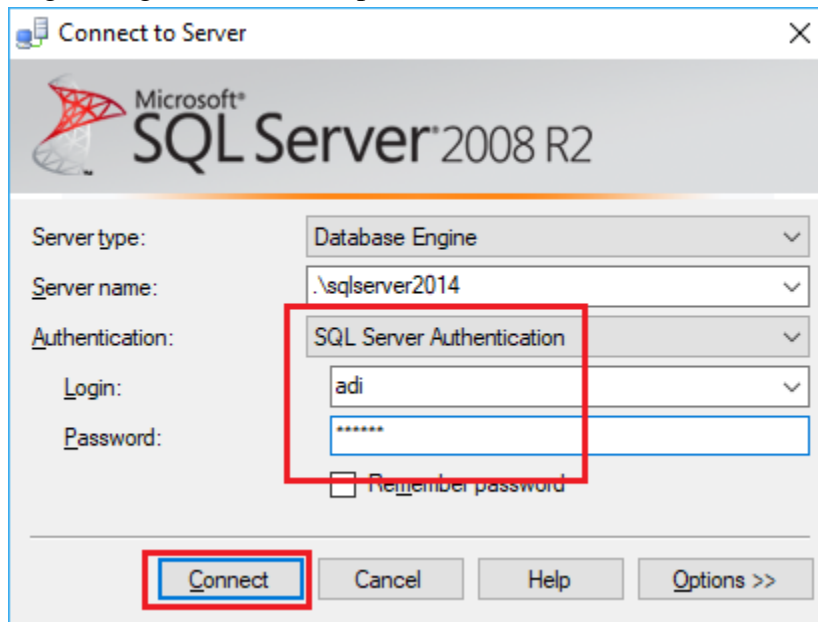
1. Buat user login dengan nama *adi*, *aris*, *candra*, *daniel*, dan *hafiz* dengan password *amikom*.



2. Daftarkan semua user login di atas ke dalam database DbRetail_XXXX Anda



3. Login dengan user **adi** dan password **amikom** :



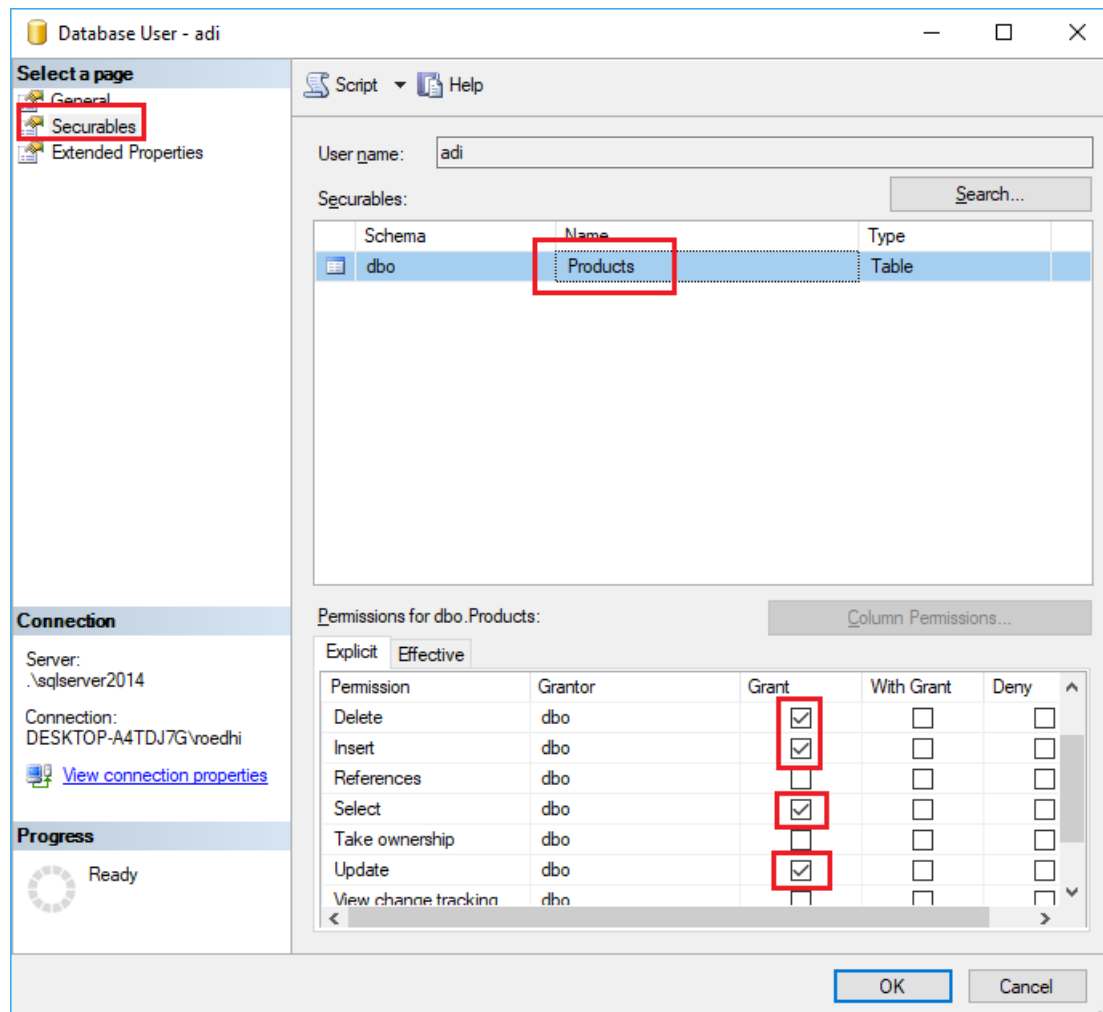
Kemudian aktifkan database Anda, dan ketik perintah berikut:

```
SELECT * FROM Products
```

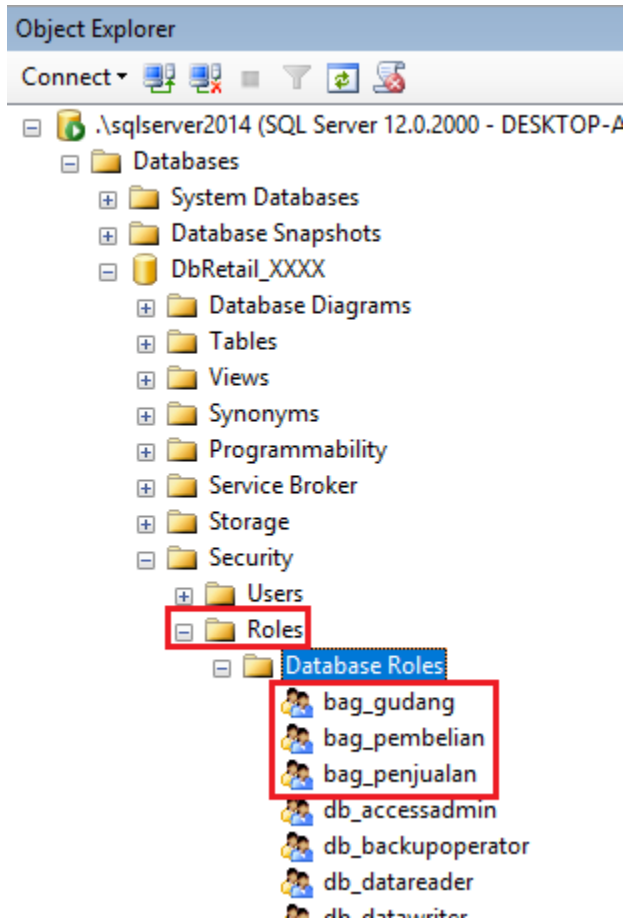
Apa yang terjadi ? Dan apa solusinya agar **adi** bisa melihat semua data product.

4. Aturlah hak akses user berdasarkan tabel berikut :

| User | Tabel | Hak Akses | | | |
|--------|----------------------|-----------|--------|--------|--------|
| | | SELECT | INSERT | UPDATE | DELETE |
| adi | products | ✓ | ✓ | ✓ | ✓ |
| aris | customers, suppliers | ✓ | | | |
| candra | orders | ✓ | ✓ | | |
| daniel | orders | ✓ | | ✓ | |
| hafiz | orderitems | ✓ | ✓ | ✓ | |

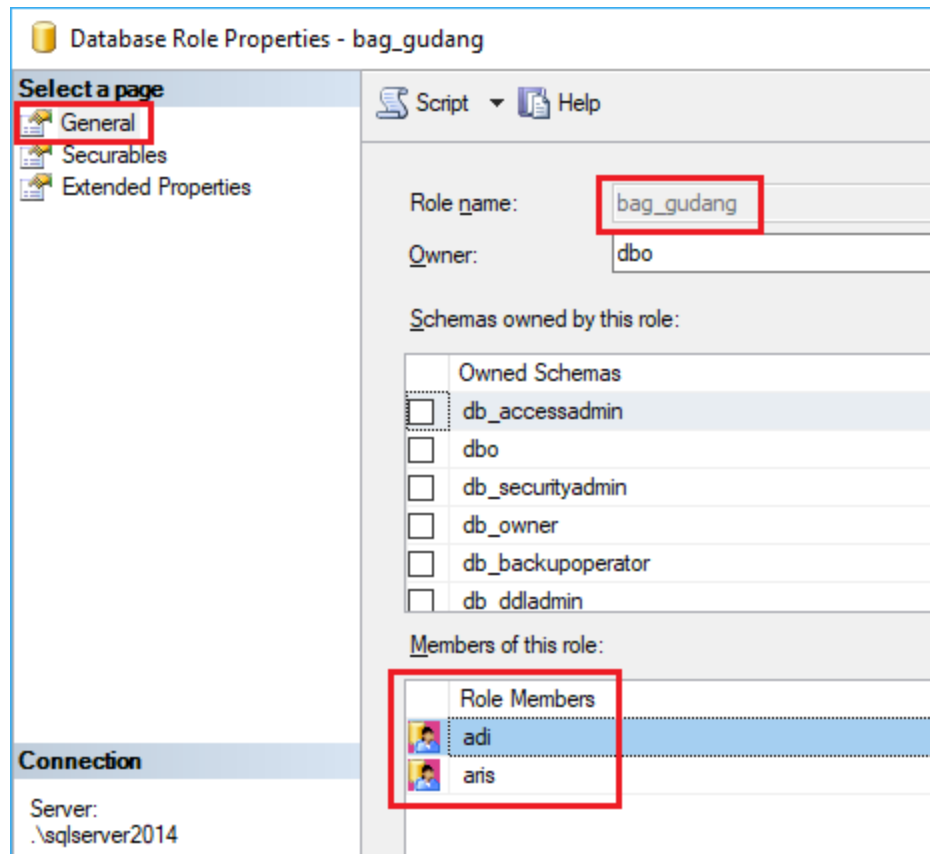


5. Buatlah Group User/Roles dengan nama bag_pembelian, bag_penjualan dan bag_gudang



6. Daftarkan semua user database ke group/role user yang sudah dibuat (soal no 5) berdasarkan tabel berikut :

| User | Group User/Roles |
|--------|------------------|
| adi | bag_gudang |
| aris | bag_gudang |
| candra | bag_penjualan |
| daniel | bag_penjualan |
| hafiz | bag_pembelian |



7. Aturlah hak akses group user berdasarkan tabel berikut :

| Group/Role | Tabel | Hak Akses | | | |
|---------------|--------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| | | SELECT | INSERT | UPDATE | DELETE |
| bag_gudang | products, customers, suppliers | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| bag_pembelian | products | <input checked="" type="checkbox"/> | | | |
| bag_pembelian | suppliers | <input checked="" type="checkbox"/> | | | |
| bag_pembelian | products | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| bag_penjualan | products | <input checked="" type="checkbox"/> | | | |
| bag_penjualan | customers | <input checked="" type="checkbox"/> | | | |
| bag_penjualan | orders, orderitems | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

Database Role Properties - bag_gudang

Select a page: General, **Securables**, Extended Properties

Database role name: **bag_gudang**

Securables:

| Schema | Name | Type |
|--------|-----------------|-------|
| dbo | Customers | Table |
| dbo | Products | Table |
| dbo | Suppliers | Table |

Permissions for dbo.Products:

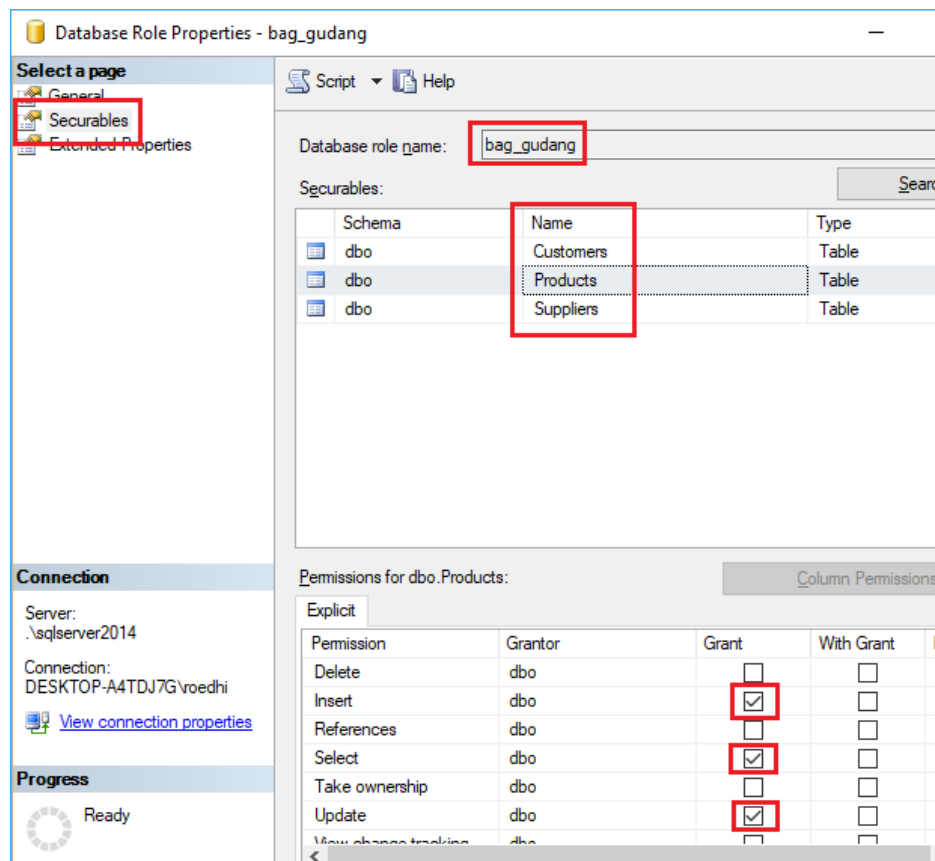
| Permission | Grantor | Grant | With Grant | Deny |
|----------------|---------|-------------------------------------|--------------------------|--------------------------|
| Delete | dbo | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Insert | dbo | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| References | dbo | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Select | dbo | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Take ownership | dbo | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Update | dbo | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

8. Update hak akses group user seperti tabel berikut :

| Group/Role | Tabel | Hak Akses | | | |
|---------------|--------------------------------|-----------|--------|--------|--------|
| | | SELECT | INSERT | UPDATE | DELETE |
| bag_gudang | products, customers, suppliers | ✓ | ✓ | ✓ | ✗ |
| bag_pembelian | products | ✓ | | ✓ | |
| bag_pembelian | suppliers | ✓ | | | |
| bag_pembelian | products | ✓ | ✓ | ✓ | ✓ |
| bag_penjualan | products | ✓ | | ✓ | |
| bag_penjualan | customers | ✓ | | | |
| bag_penjualan | orders, orderitems | ✓ | ✓ | ✓ | ✓ |

Keterangan :

- ✓ Menghapus hak akses DELETE pada tabel products, customers dan suppliers untuk group bag_gudang.
- ✓ Menambahkan hak akses UPDATE pada tabel products untuk group bag_pembelian dan bag_penjualan.



Kamarudin, M.Kom

<http://coding4ever.net/>

<https://github.com/rudi-krsoftware/open-retail>