

**LAPORAN PRAKTIKUM
BASIS DATA LANJUT
PERTEMUAN-13 METADATA**

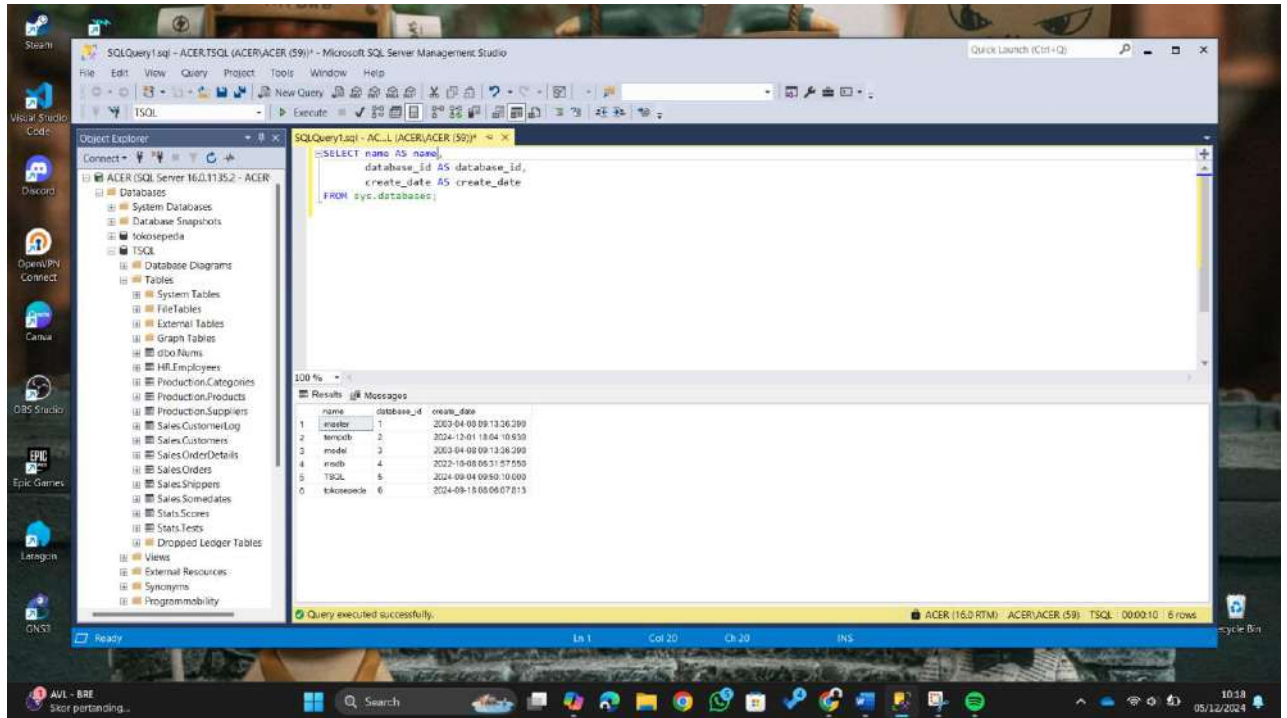


DISUSUN OLEH :

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**PROGRAM STUDI D-IV SISTEM INFORMASI BISNIS
JURUSAN TEKNOLOGI INFORMASI
POLITEKNIK NEGERI MALANG
MALANG
2024**

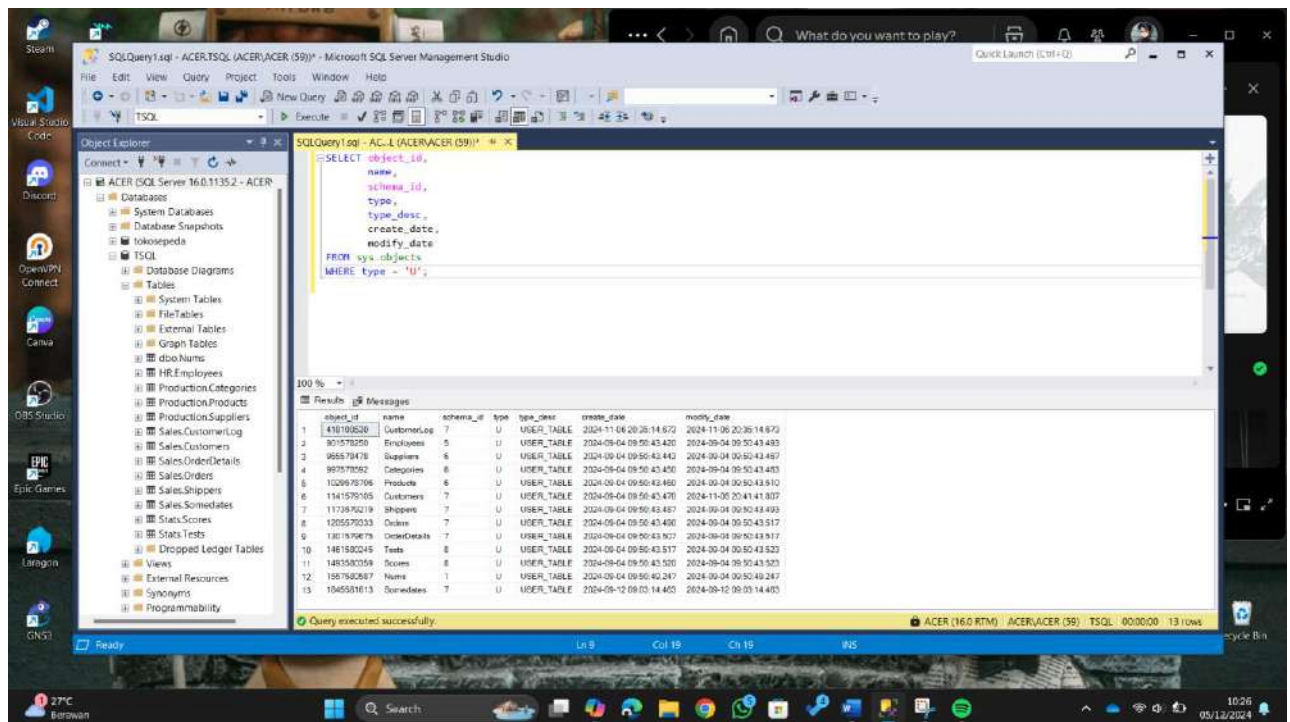
Praktikum – Bagian 1: View-view yang Berkaitan dengan System Catalog

| Langkah | Keterangan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------|--|-------------|-------------------------|-------------|-------------|---|--------|---|-------------------------|---|--------|---|-------------------------|---|-------|---|-------------------------|---|------|---|-------------------------|---|--------------------------|---|-------------------------|---|--------------------------------|---|-------------------------|---|----------|---|-------------------------|---|---------------|---|-------------------------|---|---------------|---|-------------------------|----|---------------|----|-------------------------|----|----------|----|-------------------------|----|-----------|----|-------------------------|----|--------|----|-------------------------|----|-------|----|-------------------------|----|--------|----|-------------------------|----|--------|----|-------------------------|--|------|-------------|-------------|---|--------|---|-------------------------|---|--------|---|-------------------------|---|-------|---|-------------------------|---|------|---|-------------------------|---|--------------------------|---|-------------------------|---|--------------------------------|---|-------------------------|
| 1 | <p>[Soal-1] Buatlah SQL yang menampilkan nama, id, dan tanggal pembuatan semua database yang ada di server SQL Server</p> <div><div><div>Results</div><div>Messages</div></div><table><tr><th></th><th>name</th><th>database_id</th><th>create_date</th></tr><tr><td>1</td><td>master</td><td>1</td><td>2003-04-08 09:13:36.390</td></tr><tr><td>2</td><td>tempdb</td><td>2</td><td>2017-12-01 13:31:10.330</td></tr><tr><td>3</td><td>model</td><td>3</td><td>2003-04-08 09:13:36.390</td></tr><tr><td>4</td><td>msdb</td><td>4</td><td>2016-04-30 00:46:38.773</td></tr><tr><td>5</td><td>ReportServer\$SQLEXPRESS</td><td>5</td><td>2017-05-17 08:32:30.007</td></tr><tr><td>6</td><td>ReportServer\$SQLEXPRESSTempDB</td><td>6</td><td>2017-05-17 08:32:30.810</td></tr><tr><td>7</td><td>akademik</td><td>7</td><td>2017-06-04 00:12:56.963</td></tr><tr><td>8</td><td>akademik_mi1e</td><td>8</td><td>2017-06-05 11:09:00.717</td></tr><tr><td>9</td><td>akademik_ti1f</td><td>9</td><td>2017-06-06 09:47:32.610</td></tr><tr><td>10</td><td>akademik_ti1g</td><td>10</td><td>2017-06-06 11:52:52.633</td></tr><tr><td>11</td><td>TSQL2012</td><td>11</td><td>2017-11-09 20:08:18.197</td></tr><tr><td>12</td><td>MarketDev</td><td>12</td><td>2017-11-28 00:38:09.040</td></tr><tr><td>13</td><td>DbBaru</td><td>13</td><td>2017-11-28 01:11:58.457</td></tr><tr><td>14</td><td>NewDb</td><td>14</td><td>2017-11-28 10:13:30.700</td></tr><tr><td>15</td><td>Branch</td><td>15</td><td>2017-11-28 10:22:03.573</td></tr><tr><td>16</td><td>TestIE</td><td>17</td><td>2017-11-29 14:33:19.213</td></tr></table></div> <div><pre>SELECT name AS name, database_id AS database_id, create_date AS create_date FROM sys.databases;</pre><table><thead><tr><th></th><th>name</th><th>database_id</th><th>create_date</th></tr></thead><tbody><tr><td>1</td><td>master</td><td>1</td><td>2003-04-08 09:13:36.390</td></tr><tr><td>2</td><td>tempdb</td><td>2</td><td>2017-12-01 13:31:10.330</td></tr><tr><td>3</td><td>model</td><td>3</td><td>2003-04-08 09:13:36.390</td></tr><tr><td>4</td><td>msdb</td><td>4</td><td>2016-04-30 00:46:38.773</td></tr><tr><td>5</td><td>ReportServer\$SQLEXPRESS</td><td>5</td><td>2017-05-17 08:32:30.007</td></tr><tr><td>6</td><td>ReportServer\$SQLEXPRESSTempDB</td><td>6</td><td>2017-05-17 08:32:30.810</td></tr></tbody></table></div> | | name | database_id | create_date | 1 | master | 1 | 2003-04-08 09:13:36.390 | 2 | tempdb | 2 | 2017-12-01 13:31:10.330 | 3 | model | 3 | 2003-04-08 09:13:36.390 | 4 | msdb | 4 | 2016-04-30 00:46:38.773 | 5 | ReportServer\$SQLEXPRESS | 5 | 2017-05-17 08:32:30.007 | 6 | ReportServer\$SQLEXPRESSTempDB | 6 | 2017-05-17 08:32:30.810 | 7 | akademik | 7 | 2017-06-04 00:12:56.963 | 8 | akademik_mi1e | 8 | 2017-06-05 11:09:00.717 | 9 | akademik_ti1f | 9 | 2017-06-06 09:47:32.610 | 10 | akademik_ti1g | 10 | 2017-06-06 11:52:52.633 | 11 | TSQL2012 | 11 | 2017-11-09 20:08:18.197 | 12 | MarketDev | 12 | 2017-11-28 00:38:09.040 | 13 | DbBaru | 13 | 2017-11-28 01:11:58.457 | 14 | NewDb | 14 | 2017-11-28 10:13:30.700 | 15 | Branch | 15 | 2017-11-28 10:22:03.573 | 16 | TestIE | 17 | 2017-11-29 14:33:19.213 | | name | database_id | create_date | 1 | master | 1 | 2003-04-08 09:13:36.390 | 2 | tempdb | 2 | 2017-12-01 13:31:10.330 | 3 | model | 3 | 2003-04-08 09:13:36.390 | 4 | msdb | 4 | 2016-04-30 00:46:38.773 | 5 | ReportServer\$SQLEXPRESS | 5 | 2017-05-17 08:32:30.007 | 6 | ReportServer\$SQLEXPRESSTempDB | 6 | 2017-05-17 08:32:30.810 |
| | name | database_id | create_date | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | master | 1 | 2003-04-08 09:13:36.390 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | tempdb | 2 | 2017-12-01 13:31:10.330 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | model | 3 | 2003-04-08 09:13:36.390 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | msdb | 4 | 2016-04-30 00:46:38.773 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | ReportServer\$SQLEXPRESS | 5 | 2017-05-17 08:32:30.007 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | ReportServer\$SQLEXPRESSTempDB | 6 | 2017-05-17 08:32:30.810 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | akademik | 7 | 2017-06-04 00:12:56.963 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | akademik_mi1e | 8 | 2017-06-05 11:09:00.717 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | akademik_ti1f | 9 | 2017-06-06 09:47:32.610 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | akademik_ti1g | 10 | 2017-06-06 11:52:52.633 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | TSQL2012 | 11 | 2017-11-09 20:08:18.197 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | MarketDev | 12 | 2017-11-28 00:38:09.040 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | DbBaru | 13 | 2017-11-28 01:11:58.457 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | NewDb | 14 | 2017-11-28 10:13:30.700 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Branch | 15 | 2017-11-28 10:22:03.573 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | TestIE | 17 | 2017-11-29 14:33:19.213 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | name | database_id | create_date | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | master | 1 | 2003-04-08 09:13:36.390 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | tempdb | 2 | 2017-12-01 13:31:10.330 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | model | 3 | 2003-04-08 09:13:36.390 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | msdb | 4 | 2016-04-30 00:46:38.773 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | ReportServer\$SQLEXPRESS | 5 | 2017-05-17 08:32:30.007 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | ReportServer\$SQLEXPRESSTempDB | 6 | 2017-05-17 08:32:30.810 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | <p>[Soal-2] Buatlah SQL yang menampilkan data-data semua tabel yang dibuat oleh pengguna (users)! Petunjuk: Perhatikan tabel berikut untuk memfilter tabel yang sesuai!</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | type | type_desc |
|---|------|----------------------|
| 1 | SQ | SERVICE_QUEUE |
| 2 | U | USER_TABLE |
| 3 | V | VIEW |
| 4 | S | SYSTEM_TABLE |
| 5 | IT | INTERNAL_TABLE |
| 6 | P | SQL_STORED_PROCEDURE |

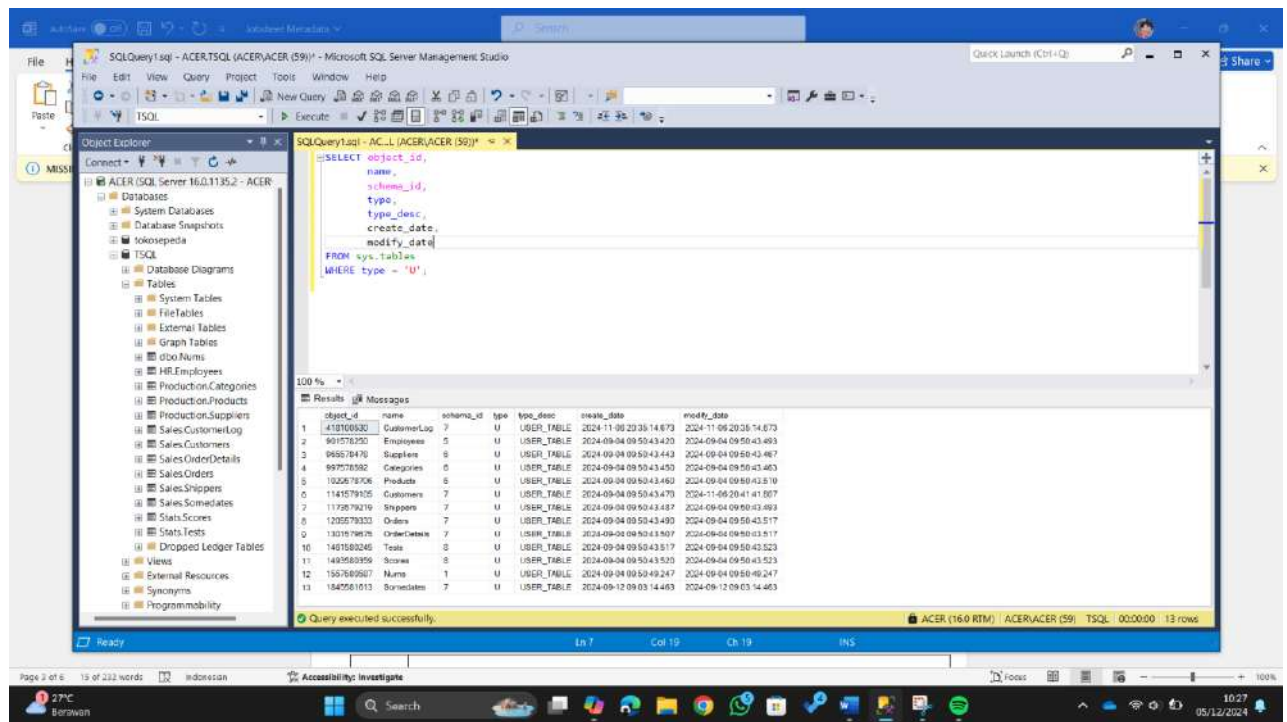
Pastikan hasil akhirnya seperti berikut:

| | object_id | name | schema_id | type | type_desc | create_date | modify_date |
|---|-----------|------------------|-----------|------|------------|-------------------------|-------------------------|
| 1 | 117575457 | spt_fallback_db | 1 | U | USER_TABLE | 2003-04-08 09:18:01.557 | 2016-04-30 00:48:23.147 |
| 2 | 133575514 | spt_fallback_dev | 1 | U | USER_TABLE | 2003-04-08 09:18:02.870 | 2016-04-30 00:48:23.167 |
| 3 | 149575571 | spt_fallback_usg | 1 | U | USER_TABLE | 2003-04-08 09:18:04.180 | 2016-04-30 00:48:23.187 |
| 4 | 279672044 | Employees | 5 | U | USER_TABLE | 2017-11-29 14:41:27.130 | 2017-11-29 14:41:27.130 |
| 5 | 599673184 | test | 1 | U | USER_TABLE | 2017-12-01 14:23:34.293 | 2017-12-01 14:23:34.293 |
| 6 | 615673241 | TabelNyobaSaja | 5 | U | USER_TABLE | 2017-12-01 14:24:45.213 | 2017-12-01 14:24:45.213 |



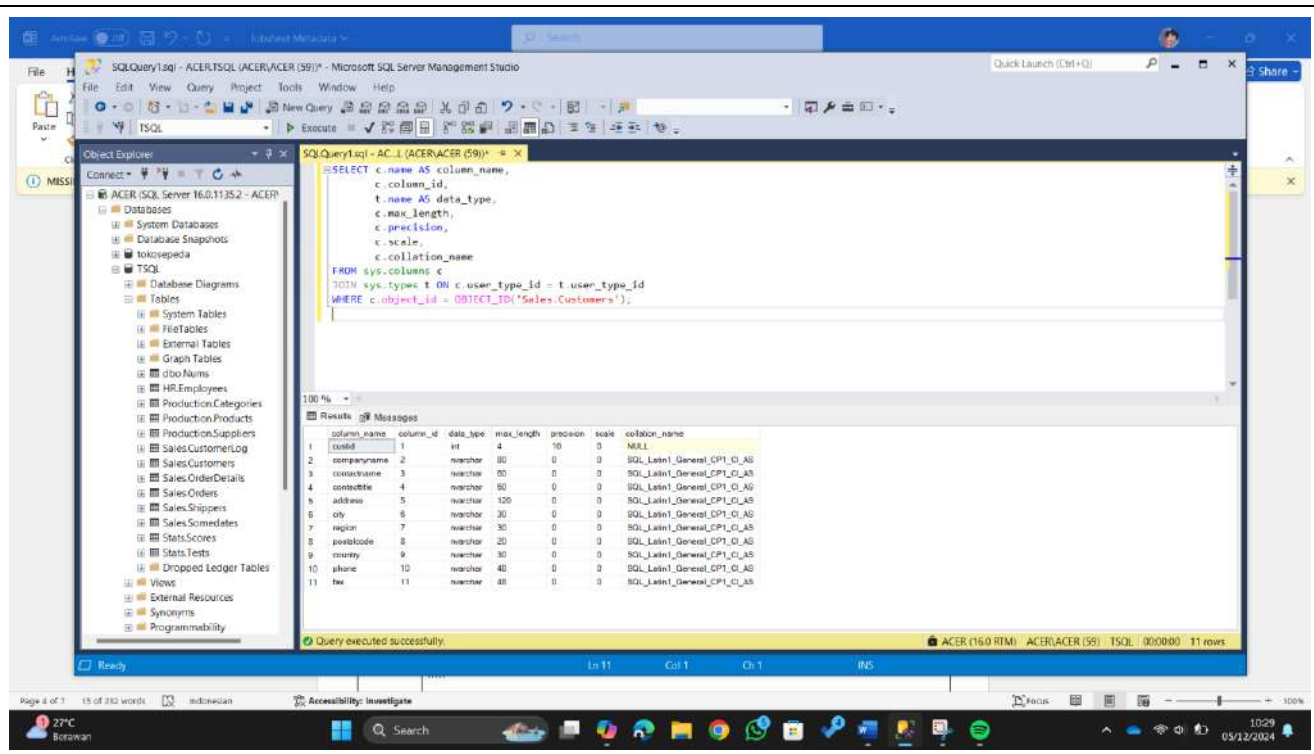
[Soal-3] Dengan maksud dan tujuan yang sama seperti task sebelumnya, buatlah SQL dengan memanfaatkan tabel sys.tables!

| | object_id | name | schema_name | type | type_desc | create_date | modify_date |
|---|------------|-----------------------|-------------|------|------------|-------------------------|-------------------------|
| 1 | 117575457 | spt_fallback_db | dbo | U | USER_TABLE | 2003-04-08 09:18:01.557 | 2016-04-30 00:48:23.147 |
| 2 | 133575514 | spt_fallback_dev | dbo | U | USER_TABLE | 2003-04-08 09:18:02.870 | 2016-04-30 00:48:23.167 |
| 3 | 149575571 | spt_fallback_usg | dbo | U | USER_TABLE | 2003-04-08 09:18:04.180 | 2016-04-30 00:48:23.187 |
| 4 | 279672044 | Employees | HR | U | USER_TABLE | 2017-11-29 14:41:27.130 | 2017-11-29 14:41:27.130 |
| 5 | 599673184 | test | dbo | U | USER_TABLE | 2017-12-01 14:23:34.293 | 2017-12-01 14:23:34.293 |
| 6 | 615673241 | TabelNyobaSaja | HR | U | USER_TABLE | 2017-12-01 14:24:45.213 | 2017-12-01 14:24:45.213 |
| 7 | 1483152329 | spt_monitor | dbo | U | USER_TABLE | 2016-04-30 00:46:37.557 | 2016-04-30 00:48:23.213 |
| 8 | 1787153412 | MSreplication_options | dbo | U | USER_TABLE | 2016-04-30 00:47:59.690 | 2017-05-17 08:33:05.127 |



[Soal-4] Tampilkan semua kolom yang dimiliki tabel Sales.Customers berikut tipe data yang digunakan pada masing-masing kolom.

| | column_name | column_id | data_type | max_length | precision | scale | collation_name |
|----|--------------|-----------|-----------|------------|-----------|-------|------------------------------|
| 1 | custid | 1 | int | 4 | 10 | 0 | NULL |
| 2 | companyname | 2 | nvarchar | 80 | 0 | 0 | SQL_Latin1_General_CP1_CI_AS |
| 3 | contactname | 3 | nvarchar | 60 | 0 | 0 | SQL_Latin1_General_CP1_CI_AS |
| 4 | contacttitle | 4 | nvarchar | 60 | 0 | 0 | SQL_Latin1_General_CP1_CI_AS |
| 5 | address | 5 | nvarchar | 120 | 0 | 0 | SQL_Latin1_General_CP1_CI_AS |
| 6 | city | 6 | nvarchar | 30 | 0 | 0 | SQL_Latin1_General_CP1_CI_AS |
| 7 | region | 7 | nvarchar | 30 | 0 | 0 | SQL_Latin1_General_CP1_CI_AS |
| 8 | postalcode | 8 | nvarchar | 20 | 0 | 0 | SQL_Latin1_General_CP1_CI_AS |
| 9 | country | 9 | nvarchar | 30 | 0 | 0 | SQL_Latin1_General_CP1_CI_AS |
| 10 | phone | 10 | nvarchar | 48 | 0 | 0 | SQL_Latin1_General_CP1_CI_AS |
| 11 | fax | 11 | nvarchar | 48 | 0 | 0 | SQL_Latin1_General_CP1_CI_AS |



Praktikum – Bagian 2: Melakukan Kueri Terhadap System Functions

| Langkah | Keterangan |
|---------|------------|
|---------|------------|

[Soal-5] Buatlah SELECT query untuk menampilkan database yang dipakai, dan pengguna saat ini!

| | database_id | database_name | user_id | user_name |
|---|-------------|---------------|---------|-----------|
| 1 | 11 | TSQL2012 | 1 | dbo |

1

The screenshot displays the Microsoft SQL Server Enterprise Manager interface. The Object Explorer on the left shows the database structure for 'ACER (SQL Server 16.0.11352 - ACER)'. The main window shows a query in the 'SQLQuery1.sql' file:

```
SELECT DB_NAME() AS CurrentDatabase,
       USER_NAME() AS CurrentUser;
```

The Results pane at the bottom displays the following data:

| | CurrentDatabase | CurrentUser |
|---|-----------------|-------------|
| 1 | TSQLE | ACERACER |

Page 5 of 712 of 232 wordsIndonesianAccessibility: Investigate

yang di nama kolomnya ada kata "name"

27°C

Berawan

Search

10:38

05/12/2024

[Soal-6] Tulis SQL untuk menampilkan nama objek dan nama schema.

| | name | type_desc | object_id | schema_name |
|----|----------------|--------------|----------------|-------------|
| 1 | sysrscols | SYSTEM_TABLE | sysrscols | sys |
| 2 | sysrowsets | SYSTEM_TABLE | sysrowsets | sys |
| 3 | sysclones | SYSTEM_TABLE | sysclones | sys |
| 4 | sysallocunits | SYSTEM_TABLE | sysallocunits | sys |
| 5 | sysfiles1 | SYSTEM_TABLE | sysfiles1 | sys |
| 6 | sysseobjvalues | SYSTEM_TABLE | sysseobjvalues | sys |
| 7 | syspriorities | SYSTEM_TABLE | syspriorities | sys |
| 8 | sysdbfrag | SYSTEM_TABLE | sysdbfrag | sys |
| 9 | sysfgfrag | SYSTEM_TABLE | sysfgfrag | sys |
| 10 | sysdbfiles | SYSTEM_TABLE | sysdbfiles | sys |
| 11 | sysdbfiles | SYSTEM_TABLE | sysdbfiles | sys |

2

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. On the left, the 'Object Explorer' pane displays the 'ACER' database structure, including 'System Databases', 'Database Snapshots', 'Tables', 'Views', and 'Programability'. The 'Tables' folder is expanded, showing various system tables. In the center, the 'SQL Query1.sql' window contains the following query:

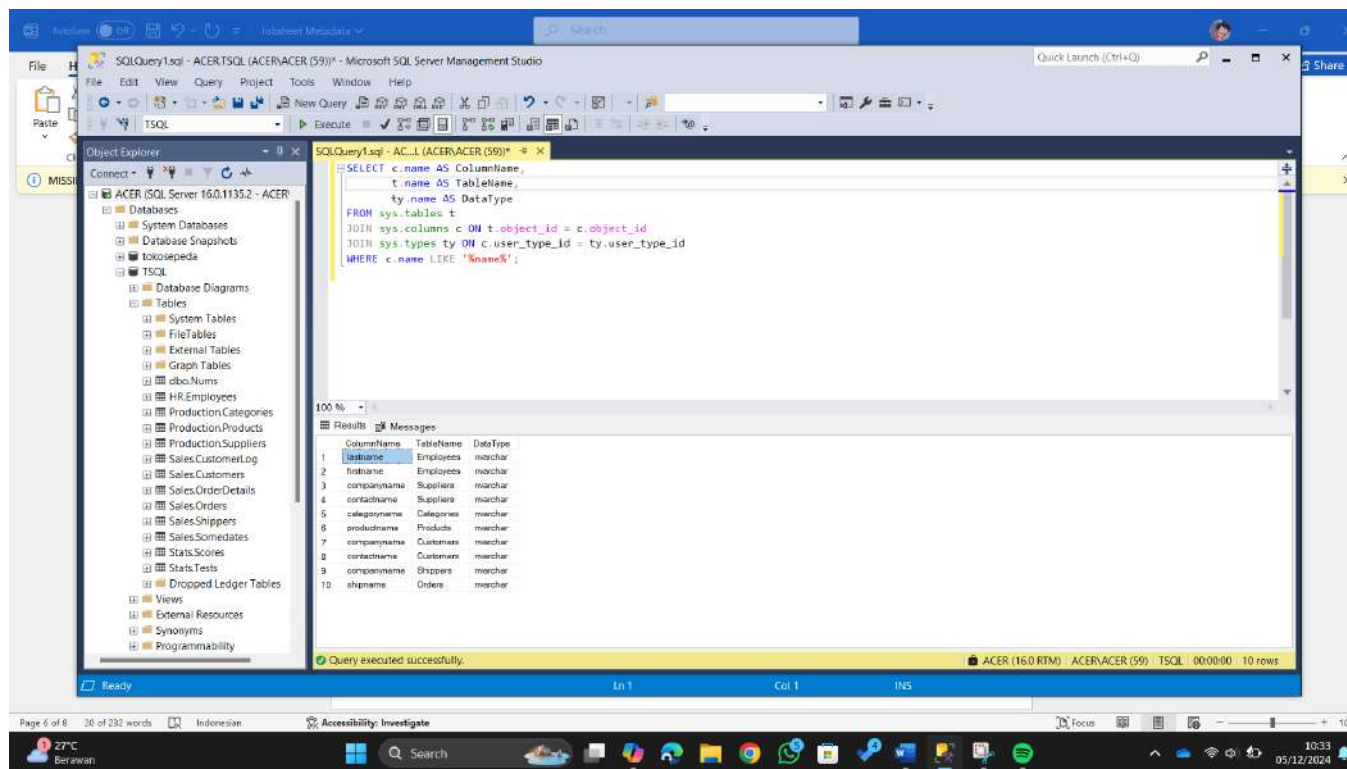
```
SELECT o.name AS ObjectName,
       s.name AS SchemaName
FROM sys.objects o
JOIN sys.schemas s ON o.schema_id = s.schema_id
```

At the bottom, the 'Results' pane shows the output of the query, listing object names and their corresponding schema names. The status bar at the bottom indicates 'Query executed successfully'.

[Soal-7] Buatlah SQL untuk menampilkan data semua kolom dari tabel yang dibuat oleh user, yang di nama kolomnya ada kata "name"

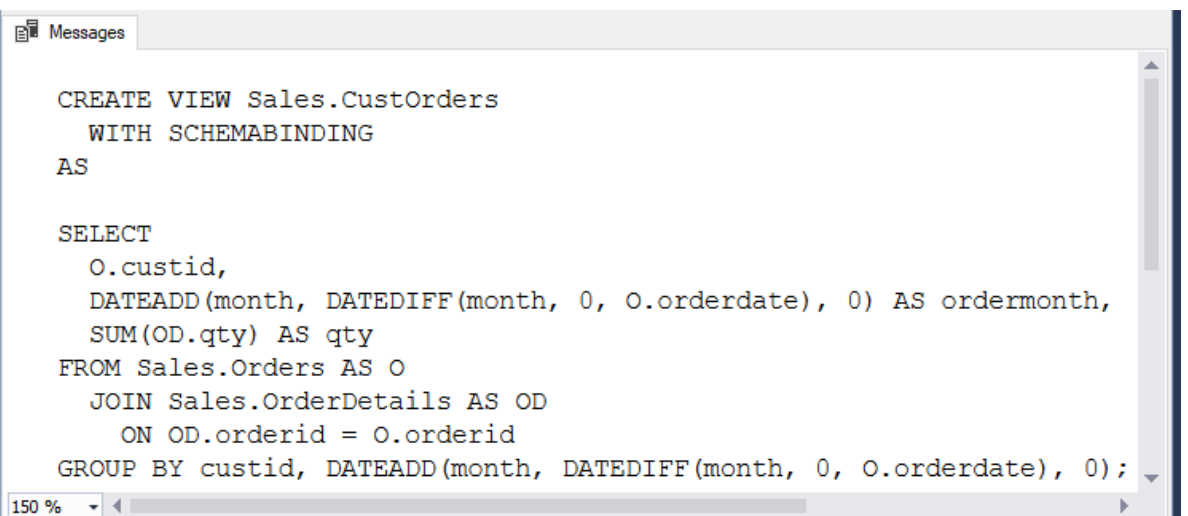
3

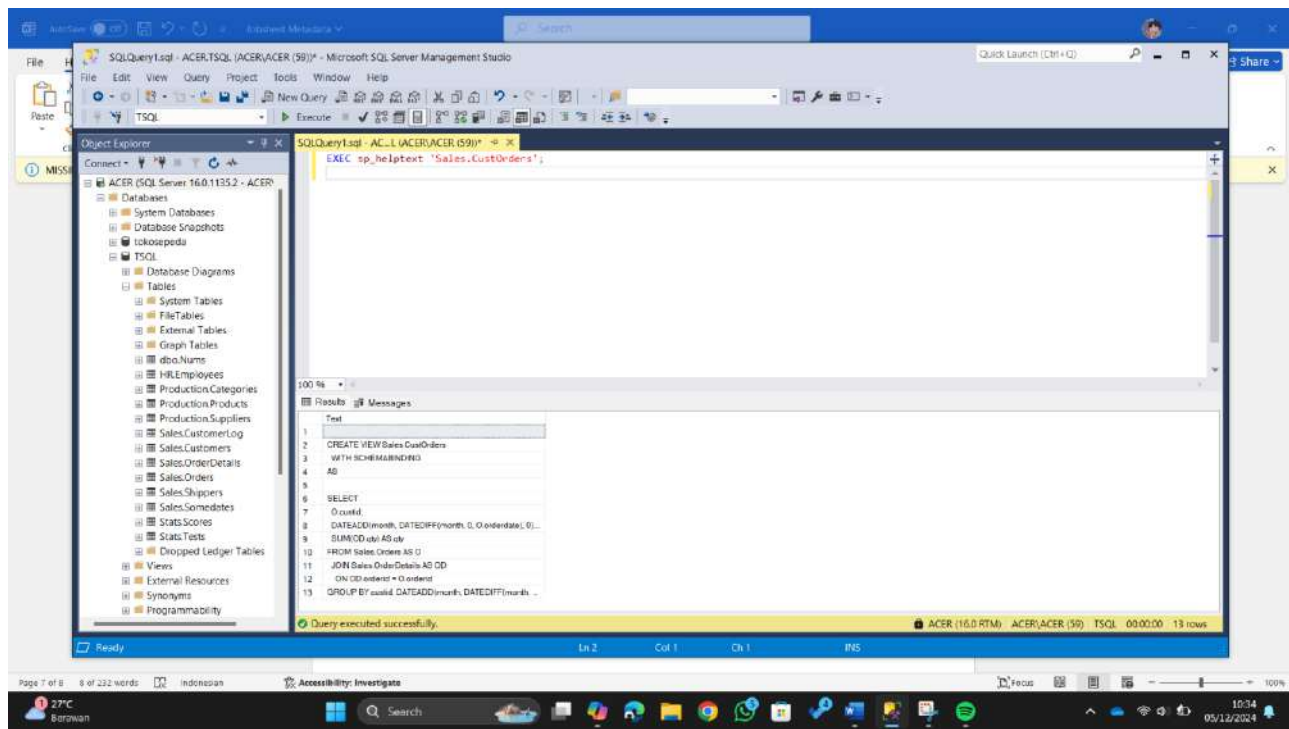
| | column_name | table_name | schema_name |
|----|--------------|------------|-------------|
| 1 | firstname | Employees | HR |
| 2 | lastname | Employees | HR |
| 3 | companyname | Suppliers | Production |
| 4 | contactname | Suppliers | Production |
| 5 | categoryname | Categories | Production |
| 6 | productname | Products | Production |
| 7 | companyname | Customers | Sales |
| 8 | contactname | Customers | Sales |
| 9 | companyname | Shippers | Sales |
| 10 | shipname | Orders | Sales |



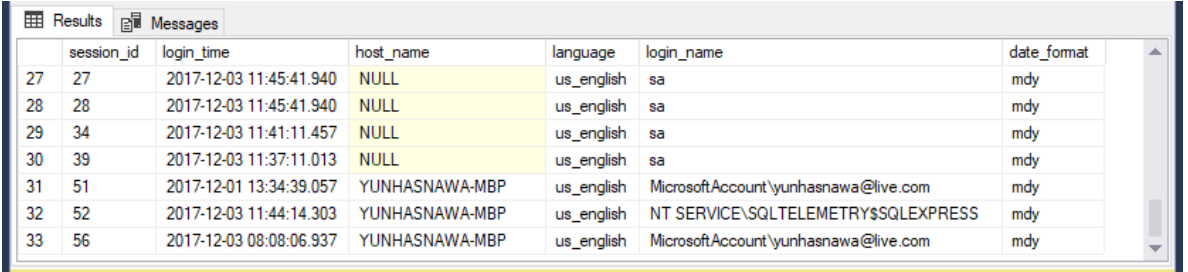
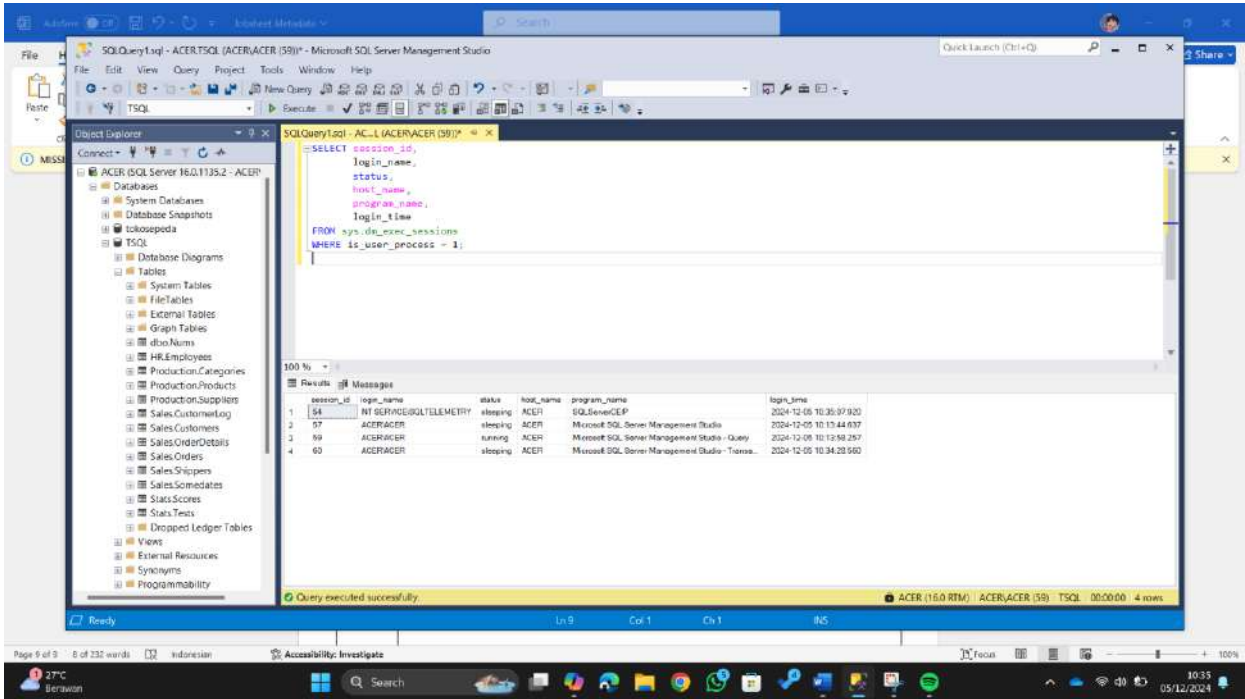
[Soal-8] Tampilkan 'definisi' dari sebuah view yang bernama 'Sales.CustOrders'!

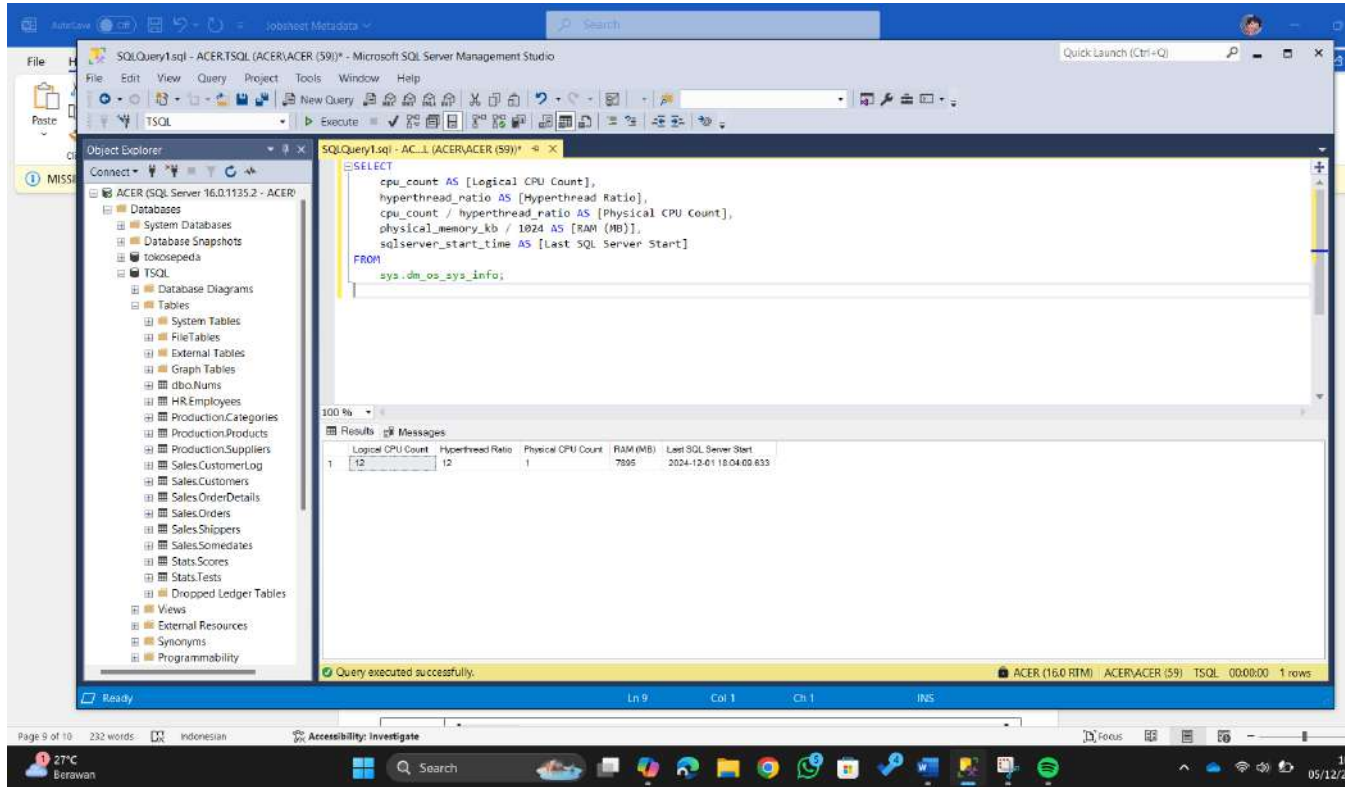
4





Praktikum – Bagian 3: System Dynamic Management View

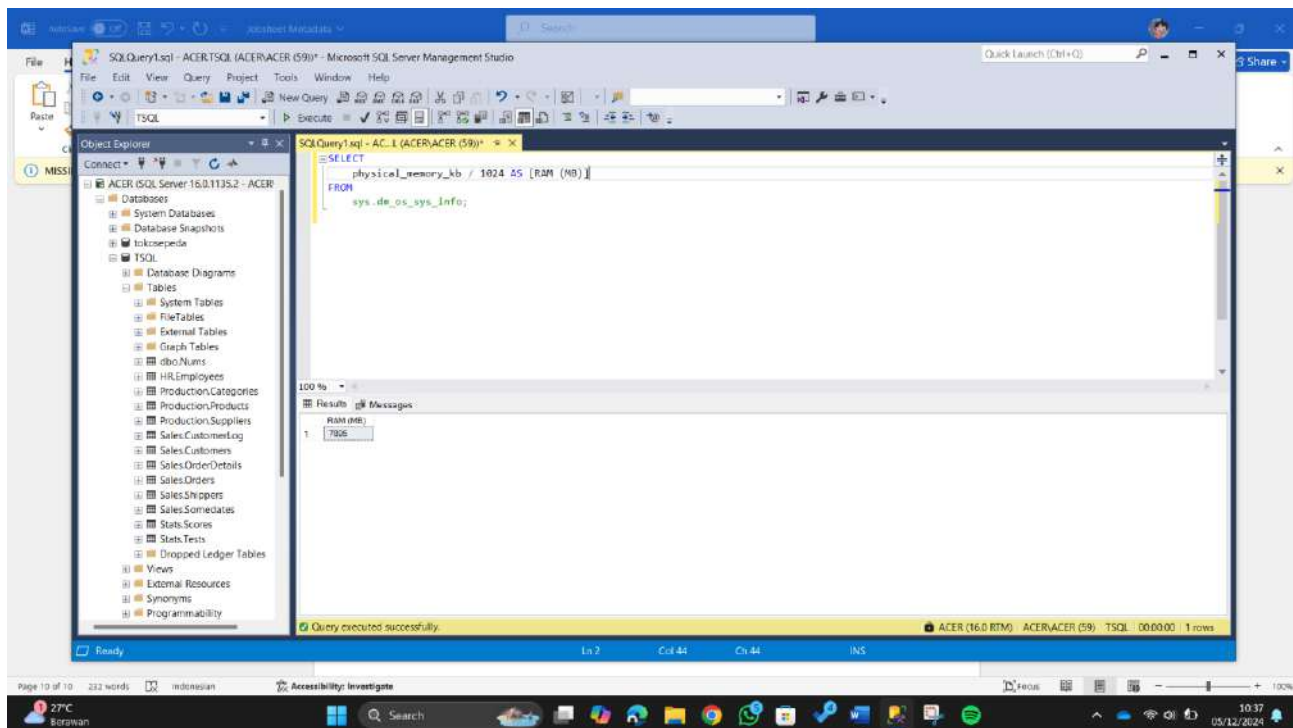
| Langkah | Keterangan |
|---------|--|
| 1 | <p>[Soal-9] Tampilkan semua session yang sedang aktif saat ini!</p>   |
| 2 | <p>[Soal-10] Eksekusilah SQL berikut dan screenshot-lah hasilnya!</p> <pre> SELECT cpu_count AS [Logical CPU Count], hyperthread_ratio AS [Hyperthread Ratio], cpu_count / hyperthread_ratio AS [Physical CPU Count], physical_memory_kb / 1024 AS [RAM (MB)], sqlserver_start_time AS [Last SQL Server Start] FROM sys.dm_os_sys_info; </pre> |



[Soal-11] Tulislah SQL untuk menampilkan info memory (RAM) dari PC Anda!

| | Total RAM (GB) | Available RAM (GB) | Total Page File (GB) | Available Page File (GB) | RAM Availability Status |
|---|----------------|--------------------|----------------------|--------------------------|-----------------------------------|
| 1 | 15 | 11 | 18 | 13 | Available physical memory is high |

3



--- Selamat Mengerjakan ---