


## PRAKTIKUM SISTEM BASIS DATA

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|               |                         |   |
|---------------|-------------------------|---|
| BAB           | : SUBQUERY SQL          |  |
| NAMA          | : CANNINO ALBY DARMAWAN |   |
| NIM           | : 215150200111018       |   |
| ASISTEN       | : FEMI NOVIA LINA       |   |
|               | : QOLANDAR ANNURI       |   |
| TGL PRAKTIKUM | : 14/11/2022            | TGL PENGUMPULAN :   |

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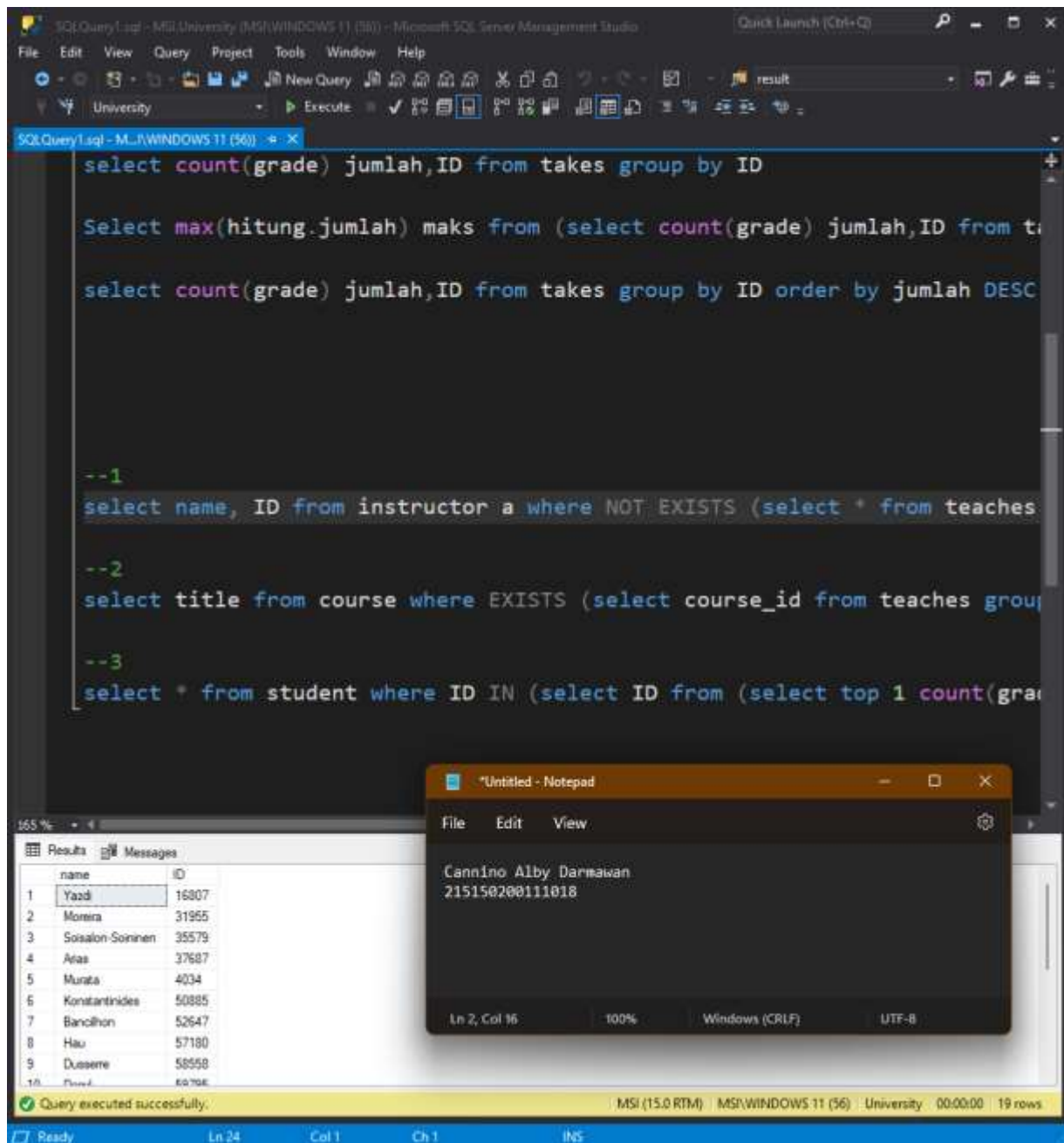
### Pertanyaan

1. Menampilkan *instructor* yang belum pernah mengajar!

### Implementasi

```
select name, ID from instructor a where NOT EXISTS  
(select * from teaches b where b.ID = a.ID);
```

### Tampilan Keluaran



### Pembahasan dan Analisis

SELECT NAME ID FROM INSTRUCTOR A untuk mengambil nama dan id dari table instructor dengan alias A

where NOT EXISTS (select \* from teaches b where b.ID = a.ID) untuk memberikan batasan pada select sebelumnya dengan menggunakan subquery yang deselect dari table teaches

## Pertanyaan

2. Menampilkan *course* yang pernah diajar setidaknya 2 *instructor*!

## Implementasi

```
select title from course where EXISTS (select course_id  
from teaches group by course_id having count(ID) >=2)
```

## Tampilan Keluaran

The screenshot displays the Microsoft SQL Server Enterprise Manager interface. The top pane shows a query window with the following SQL code:

```
--1  
select name, ID from instructor a where NOT EXISTS (select * from teaches  
--2  
select title from course where EXISTS (select course_id from teaches group  
--3  
select * from student where ID IN (select ID from (select top 1 count(gra
```

The bottom pane shows the results of the query, which is a list of course titles. The first 19 titles are visible:

| title  |
|--|
| 1 Diffusion and Phase Transformation             |
| 2 Image Processing                               |
| 3 Differential Equations                         |
| 4 Thermodynamics                                 |
| 5 Differential Geometry                          |
| 6 Antidoeestablishmentarianism in Modern America |
| 7 Manufacturing                                  |
| 8 Number Theory                                  |
| 9 Elastic Structures                             |
| 10 Marine Mammals                                |
| 11 Romantic Literature                           |
| 12 Drama   |
| 13 Numerical Methods                             |
| 14 The Music of the Ramones                      |
| 15 International Trade                           |
| 16 International Finance                         |
| 17 Elastic Structures                            |
| 18 International Trade                           |
| 19 Design and Analysis of Algorithms             |

A Notepad window is open in the foreground, displaying the text:

```
Cannino Alby Darmawan  
215150200111018
```

The status bar at the bottom indicates that the query was executed successfully, showing 200 rows.

### Pembahasan dan Analisis

Query 'select title from course' berarti mengambil kolom title dari table course

Query 'where EXISTS (select course\_id from teaches group by course\_id having count(ID) >=2)' berarti yang ada pada subquery '(select course\_id from teaches group by course\_id having count(ID) >=2)'

Query '(select course\_id from teaches group by course\_id having count(ID) >=2)' berarti memilih course\_id dari table teaches yang kemudian dikelompokkan berdasarkan course\_id yang, 'having count(ID) >=2' berarti select pada query tersebut hanya berlaku pada course id yang memiliki jumlah ID minimal 2

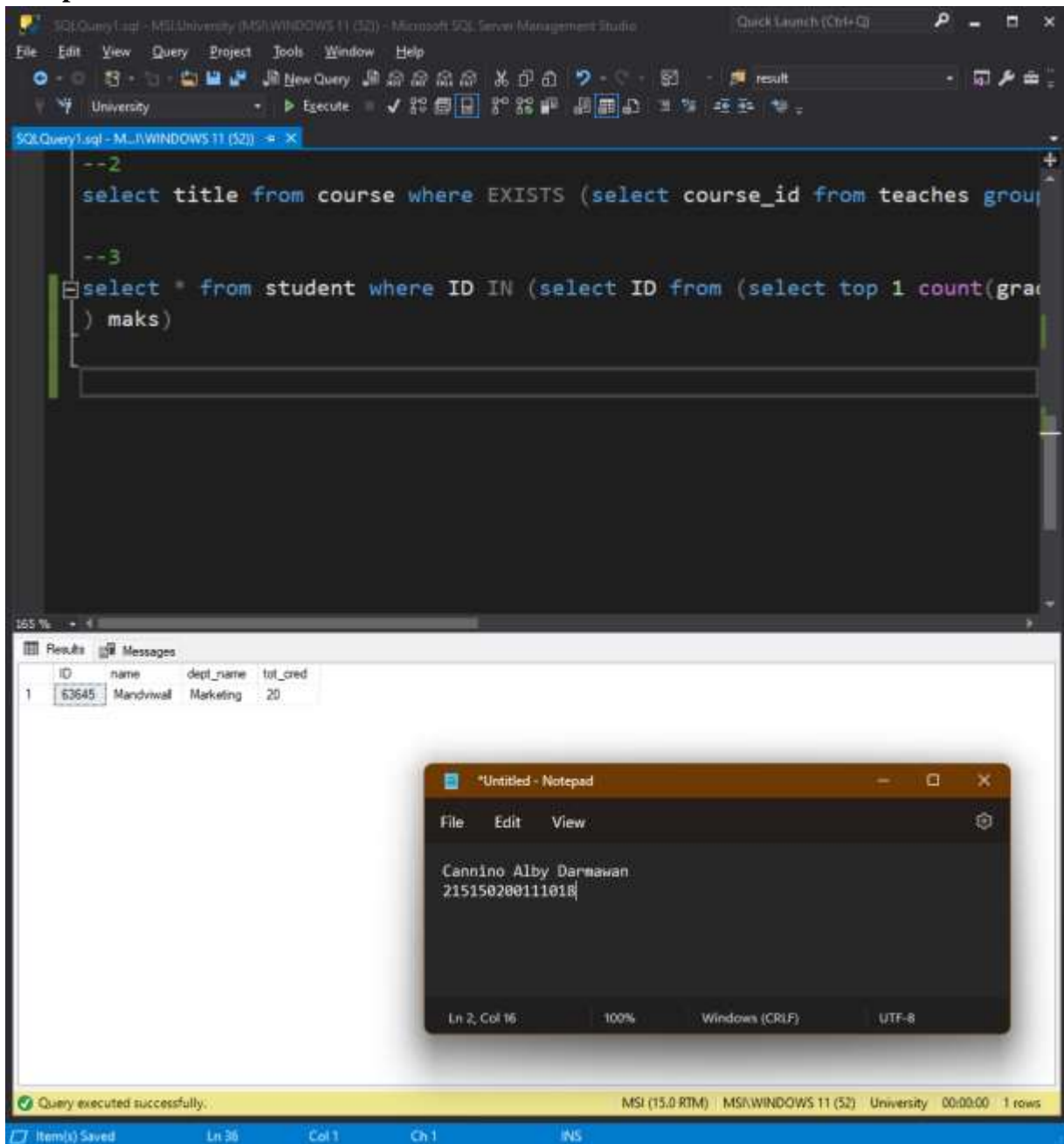
### Pertanyaan

3. Menampilkan *student* yang paling banyak mendapat nilai A!

### Implementasi

```
select * from student where ID IN (select ID from
(select top 1 count(grade) jumlah, ID from takes where
grade = 'A' group by ID order by jumlah DESC
) maks)
```

## Tampilan Keluaran



## Pembahasan dan Analisis

‘Select \* from student where ID IN’ berarti memilih semua dari table student dimana ID berada pada sub-Query ‘select ID from (select top 1 count(grade) jumlah, ID from takes where grade = 'A' group by ID order by jumlah DESC) maks)’

‘select ID from (select top 1 count(grade) jumlah, ID from takes where grade = 'A' group by ID order by jumlah DESC) maks)’ berarti mengambil ID dari sub-Query ‘(select top 1 count(grade) jumlah, ID from takes where grade = 'A' group by ID order by jumlah DESC)’ yang diberi alias maks

‘select top 1 count(grade) jumlah, ID from takes where grade = 'A' group by ID order by jumlah DESC’ berarti mengambil top 1 dari hasil query count(grade) yang diberi alias jumlah, dan ID dari table takes yang memiliki grade ‘A’ yang kemudian akan dikelompokkan berdasarkan ID dan kemudian diurutkan berdasarkan jumlah secara menurun