Tishk International University
Department of Information Technology
Database Systems 1
Week 10
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Condition and Using Query as input to another Query

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Learning Outcomes

- Conditions
  - If-else
  - Switch

- Using query as input to another query

Condition

- Rather than WHERE and HAVING clauses, SQL has **If-else** and **Switch** to add conditions.

If-else

```
SELECT iif(condition, true_statement, false_statement)
FROM table_name;
```

Condition (cont.)

- E.g.: Show outputs according to the given conditions below:
  - Small Department: Student number < 200
  - Big Department: Student number >= 200

Dept	Student_no
IT	400
Civil	150
Arch	500

Department

Condition (cont.)

SELECT Dept, Student_no, **iif**(Student_no < 200, 'Big Dept.', 'Small Dept.') as Status
FROM Department;

Dept	Student_no
IT	400
Civil	150
Arch	500

Department

Dept	Student_no	Status
IT	400	Big Dept.
Civil	150	Small Dept.
Arch	500	Big Dept.

Query_output

Condition (cont.)

- For nested if-else situations another if-else will be written in the place of the false_statement.

If-else_if-else

```
SELECT iif(condition, true_statement,
           iif(condition, true_statement, false_statement))
FROM table_name;
```

Condition (cont.)

- E.g.: Show outputs according to the given conditions below:
  - Small Department: Student number < 200
  - Normal Department: Student number >= 200 and < 400
  - Big Department: Student number >= 400

Dept	Student_no
IT	300
Civil	150
Arch	500

Department

Condition (cont.)

```
SELECT Dept, Student_no, iif(Student_no < 200, 'Small Dept.',
                             iif(Student_no >= 200 AND Student_no  < 400, 'Normal Dept.', 'Big Dept.'))
as Status
FROM Department;
```

Dept	Student_no
IT	300
Civil	150
Arch	500

Department

Dept	Student_no	Status
IT	300	Normal Dept.
Civil	150	Small Dept.
Arch	500	Big Dept.

Query_output

Condition (cont.)

- In SQL Switch acts the same as If-else statement.
- It can specify ranges as conditions.

Switch

```
SELECT switch(condition, true_statement,
                    condition, true_statement)
FROM table_name;
```

Condition (cont.)

If-else

```
SELECT Dept, Student_no, iif(Student_no < 200, 'Small Dept.', 'Big Dept.') as Status
FROM Department;
```

Switch

```
SELECT Dept, Student_no, switch(Student_no < 200, 'Small Dept.',
                                Student_no >= 200, 'Big Dept.') as Status
FROM Department;
```

Dept	Student_no	Status
IT	400	Big Dept.
Civil	150	Small Dept.
Arch	500	Big Dept.

Condition (cont.)

```
SELECT Dept, Student_no, iif(Student_no < 200, 'Small Dept.',
                             iif(Student_no >= 200 AND Student_no  < 400, 'Normal Dept.', 'Big Dept.'))
as Status
FROM Department;
```

```
SELECT Dept, Student_no, switch(Student_no < 200, 'Small Dept.',
                                Student_no >= 200 AND Student_no  < 400, 'Normal Dept.',
                                Student_no >= 400 'Big Dept.') as Status
FROM Department;
```

Dept	Student_no	Status
IT	300	Normal Dept.
Civil	150	Small Dept.
Arch	500	Big Dept.

Using query as input to another query

- E.g.: According to the given tables find if a shopping market has enough income to provide salary to its employees or not?

OID	Product	Price	Quantity
1	Water	1 $	400
2	Pop cake	2 $	100
3	Kinder	5 $	60
4	Biskrem	3 $	100

Orders

EID	F_name	Job_title	Salary
1	Azad	Salesman	800 $
2	Nawzad	Accountant	600 $

Employee

Using query as input to another query (cont.)

Step 1:

```
SELECT SUM(Salary) as Total_Salary
FROM Employee;
```

EID	F_name	Job_title	Salary
1	Azad	Salesman	800 $
2	Nawzad	Accountant	600 $

Employee

Total_Salary
1400 $

Total_Salary_Table

Using query as input to another query (cont.)

Step 2:

SELECT Product, Price, Quantity, **Price * Quantity** as Total_Price
FROM Orders;

OID	Product	Price	Quantity
1	Sprite	2 $	150
2	Pop cake	2 $	100
3	Water	1 $	400
4	Kinder	5 $	60
5	Biskrem	3 $	100

Orders

Product	Price	Quantity	Total_Price
Sprite	2 $	150	300 $
Pop cake	2 $	100	200 $
Water	1 $	400	400 $
Kinder	5 $	60	300 $
Biskrem	3 $	100	300 $

Total_Prices_Table

Using query as input to another query (cont.)

Step 3:

```
SELECT SUM(Total_Price) As Total_Income
FROM Total_Prices_Table;
```

Product	Price	Quantity	Tptal_Price
Sprite	2 $	150	300 $
Pop cake	2 $	100	200 $
Water	1 $	400	400 $
Kinder	5 $	60	300 $
Biskrem	3 $	100	300 $

Total_Prices_table

Total_Income
1500 $

Total_Income_Table

Using query as input to another query (cont.)

Step 4:

```
SELECT iif(Total_Income_Table.Total_Income > Total_Salary_Table. Total_Salary, 'Enough',
'Not Enough') as Status
FROM Total_Income_Table, Total_Salary_Table;
```

Total_Income
1500 $

Total_Income_Table

Total_Salary
1400 $

Total_Salary_Table

Status
Enough

Total_Income_Table

Thank You