

# Module 3 SIMPLE SQL QUERIES

## Agenda

- SELECT ... FROM
- DISTINCT
- ORDER BY
- SELECT ... FROM ... WHERE
- IN, BETWEEN, LIKE, NOT
- NULL VALUE
- DATE AND TIME



#### SELECT ... FROM

Main SQL commands to extract data from database tables:

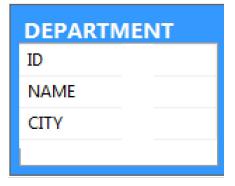
- SELECT \* FROM
- SELECT <field name1>, <field name2>, ...
   FROM

#### For example:

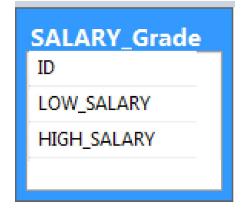
SELECT CITY FROM DEPARTMENT SELECT ID, NAME FROM STUDENT



### **COMPANY** database







#### **DEMONSTRATION**

• Demo 1

#### ORDER BY

The ORDER BY keyword is used for sorting the result set by one or more columns.

To sort the records in a descending order, we can use the DESC keyword.

For example

SELECT NAME
FROM DEPARTMENT
ORDER BY NAME
DESC



#### DISTINCT

To avoid duplication of information we get from the database, we use the DISTINCT keyword.

SELECT CITY
FROM DEPARTMENT

SELECT DISTINCT CITY
FROM DEPARTMENT



#### WHERE

The WHERE clause is used to extract only those records that fulfill a specified criterion

**SELECT < LIST OF FIELDS>** 

FROM <TABLE>

WHERE < CRITERIA>

Comparison operators:

- =, >, <, >=, <=, <>
- NOT
- AND
- OR

#### **DEMONSTRATION**

• Demo 3



#### IN, BETWEEN

• The IN operator allows you to specify multiple values in a WHERE clause.

For example

**SELECT FIRSTNAME, LASTNAME** 

FROM EMPLOYEE

WHERE POSITION IN ('MANAGER', 'SELLER')



#### LIKE

- The LIKE operator is used in a WHERE clause to search for a specified pattern in a column
- In SQL, wildcard characters are used with the SQL LIKE operator
- Wildcard characters
  - % a substitute for zero or more characters
  - \_ a substitute for a single character



#### NOT

 NOT operator is used to negate a condition in a SELECT, INSERT, UPDATE, or DELETE statement.

**NOT CONDITION** 

For example

**SELECT CITY** 

FROM DEPARTMENT

WHERE NOT CITY LIKE 'Lviv'



#### **NULL** value

- NULL values represent missing unknown data.
- IS NULL
- IS NOT NULL

For example

SELECT LASTNAME, FIRSTNAME FROM EMPLOYEE WHERE BONUS IS NULL



#### **DEMONSTRATION**

• Demo 4



# Working with DATE type

- DATEPART(datepart, date)
- DAY(date)
- MONTH(date)
- YEAR(date)
- DATEDIFF(datepart, startdate, enddate)



# Thank you!

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