COM2058 LAB2

The CHECKS table:

CHECK_ID	PAYEE	AMOUNT	REMARKS
1	Migros	270.12	Groceries
2	Petrol Ofisi	105.00	Gas (For Car)
3	TCDD	25.00	Train to Konya
4	Turkcell	528.00	Cellular Phone
5	Baskent Elektrik	113.78	Electricity Bill
6	Flo	175.00	Shoes
7	Migros	315.90	Groceries
8	Allianz Sigorta	365.43	Car Insurance

SELECT STATEMENT

If we use SELECT * FROM CHECKS; we get all columns of data.
We do not have to follow predefined order; we can also change the order.

SELECT PAYEE, REMARKS, AMOUNT, CHECK_ID FROM CHECKS;

Also we can select individual columns:

SELECT PAYEE, REMARKS FROM CHECKS;

In that example, we can observe the repeated data;

If we use SELECT DISTINCT PAYEE, REMARKS FROM CHECKS; only one instance of the duplicated data is shown.

CONDITIONS

If we want to get specific records, we should use expressions; to define an expression, we use WHERE clause;

SELECT AMOUNT, CHECK_ID FROM CHECKS WHERE PAYEE = 'TCDD';
If we need one more condition, we may put additional conditions into the WHERE clause.
SELECT REMARKS FROM CHECKS WHERE PAYEE = 'TCDD' and AMOUNT>10;

OPERATORS

The arithmetic operators are plus (+), minus (-), divide (/), multiply (*) and modulo (%)
Try these queries:

- SELECT AMOUNT,AMOUNT+0.15 FROM CHECKS;

- SELECT PAYEE, -AMOUNT AS NEWAMOUNT FROM CHECKS;

- SELECT PAYEE, (AMOUNT/2) AS NEWAMOUNT FROM CHECKS;

- SELECT CHECK_ID, (AMOUNT*0.9) AS NEWAMOUNT FROM CHECKS;

COMPARISON OPERATORS

Comparison operator compares expressions and returns one of the three values: TRUE, FALSE, Unknown.

- SELECT *
  FROM CHECKS
  WHERE PAYEE='Migros';

For comparison, we can also use greater than (>), less than (<), greater than or equal(>=), less than or equal(<=) and inequalities(!=)

- SELECT *
  FROM CHECKS
  WHERE PAYEE !='Petrol Ofisi';

If you want to select parts of a database that fit a pattern but were not quite exact match, you should use LIKE

- SELECT *
  FROM CHECKS
  WHERE REMARKS LIKE '%EL%';

%EL, get occurrence that ended with EL
EL%, get occurrence that started with EL

LOGICAL OPERATORS

- SELECT PAYEE
  FROM CHECKS
  WHERE AMOUNT <=150
  AND
  CHECK_ID >3;

IN and BETWEEN

You can use OR to define multiple conditions. For example:
SELECT * FROM FRIENDS WHERE STATE='CA' OR STATE='CO' OR STATE='LA';

But you can use IN without using multiple OR:
SELECT * FROM FRIENDS WHERE STATE IN ('CA','CO','LA');

Also you can use BETWEEN to define a range

SELECT * FROM CHECKS WHERE AMOUNT >25 AND AMOUNT<200;

with using BETWEEN instead of AND

SELECT * FROM CHECKS WHERE AMOUNT BETWEEN 25 AND 200;

ORDER BY

SELECT * FROM CHECKS ORDER BY CHECK_ID DESC;

This query returns all the checks with decreasing order of CHECK_ID.

LAB EXERCISES

Use the **CHECKS** table to answer the following questions. Create a .pdf file by taking screenshots of the queries and outputs.

CHECK_ID	PAYEE	AMOUNT	REMARKS
1	Migros	270.12	Groceries
2	Petrol Ofisi	105.00	Gas (For Car)
3	TCDD	25.00	Train to Konya
4	Turkcell	528.00	Cellular Phone
5	Baskent Elektrik	113.78	Electricity Bill
6	Flo	175.00	Shoes
7	Migros	315.90	Groceries
8	Allianz Sigorta	365.43	Car Insurance

1. Write a query that returns all checks (CHECK_ID, PAYEE, and AMOUNT) in the database in which PAYEE begins with M or P.

2. Write a query that returns all checks (CHECK_ID, PAYEE, and AMOUNT) that is related to Car expenses.

3. Write a query that returns all PAYEEs in which the check AMOUNT is greater than 200.00. Only one instance of duplicate data is shown.

4. Write a query that returns all the checks with the decreasing order of the check AMOUNT.

5. Write a query that returns all the checks (CHECK_ID, PAYEE, and AMOUNT) that is related to Shoes or Groceries expenses.