



ΠΑΝΕΠΙΣΤΗΜΙΟ
ΔΥΤΙΚΗΣ ΑΤΤΙΚΗΣ
UNIVERSITY OF WEST ATTICA

DEPARTMENT OF INFORMATION AND COMPUTER ENGINEERING

1st LABORATORY EXERCISE CREATION OF DATA BASE personnel

WORK DETAILS

LABORATORY DEPARTMENT: [06] WEDNESDAY 13:00-14:00

LABORATORY RESPONSIBILITY : GAROFALAKI RANIA

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DATA BASES II

STUDENT DETAILS

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DATA BASES II

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\

DATA BASES II

DB personnel

personnel.sql

```
drop database if exists personnel?
```

```
create database personnel?
```

```
use personnel?
```

```
create table
```

```
DEPT (
```

```
DEPTNO int ( 2) not null,
```

```
DNAME varchar( 30 ),
```

```
LOC varchar( 30 ),
```

```
primary key(DEPTNO)
```

```
);
```

```
insert into
```

```
DEPT
```

```
(DEPTNO, DNAME, LOC)
```

```
values
```

```
(50, 'SALES', 'ATHENS'),
```

```
(60, 'ACCOUNT', 'ATHENA'),
```

```
(70, ' PAYROLL ', ' VOLOS ');
```

```
create table
```

```
JOB(
```

```
JOBCODE int ( 3) not null,
```

```
JOB_DESCR varchar( 30 ),
```

```
SAL int ( 4),
```

DATA BASES II

```
primary key(JOBCODE)

);

insert into

JOB

(JOBCODE, JOB_DESCR, SAL)

values

(100, ' SELLER ', 2200),

(200, ' ANALYST ', 2000),

(300, ' OPERATOR ', 1000);


create table

EMP(

EMPNO int ( 2) not null,

NAME varchar( 30 ),

JOBNO int ( 3) not null,

DEPTNO int ( 2) not null,

COMM int ( 3 ),

primary key(EMPNO),

foreign key(DEPTNO) references DEPT(DEPTNO),

foreign key(JOBNO) references JOB(JOBCODE)

);

insert into

EMP

(EMPNO, NAME, JOBNO, DEPTNO, COMM)

values

(10, ' SPYROU ', 100, 50, 450),

(20, ' USER ', 200, 50, NULL),

(30, ' NIKOY', 300, 60, NULL),
```

DATA BASES II

(40, 'SPYROU', 200, 50, NULL);

personnel. png

Emp

EMPNO	NAME	JOBNO	DEPTNO	COMM
10	ΣΠΥΡΟΥ	100	50	450
20	ΧΡΗΣΤΟΥ	200	50	
30	ΝΙΚΟΥ	300	60	
40	ΣΠΥΡΟΥ	200	50	

Job

JOBCODE	JOB_DESCR	SAL
100	ΠΩΛΗΤΗΣ	2200
200	ΑΝΑΛΥΤΗΣ	2000
300	ΧΕΙΡΙΣΤΗΣ	1000

Dept

DEPTNO	DNAME	LOC
50	ΠΩΛΗΣΕΙΣ	ΑΘΗΝΑ
60	ΛΟΓΙΣΤΗΡΙΟ	ΑΘΗΝΑ
70	ΜΙΣΘΟΔΟΣΙΑ	ΒΟΛΟΣ

Activities

1. Connect to your system's MySQL using any of the above methods you wish

1.1. Statement

```
"C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
```

Enter password: *****

1.2. Result

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 8

Server version: 8.0.35 MySQL Community Server - GPL

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DATA BASES II

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Type 'help?' or '\h' for help. Type '\c' to clear the current input statement.

mysql >

1.3. Snapshot

```
Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
C:\Users\bill>"C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 20
Server version: 8.0.35 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> _
```

2. Check if there is a DB with the name personnel . If it doesn't exist, create it

2.1. Statement

show databases?

...

create database personnel?

2.2 . Result

```
+-----+
| Database |
+-----+
```


DATA BASES II

```
| information_schema |
```

```
| mysql |
```

```
| performance_schema |
```

```
| personnel |
```

```
| sys |
```

```
+-----+
```

```
5 rows in set (0.02 sec)
```

```
...
```

```
Query OK, 1 row affected (0.01 sec)
```

2.3. Snapshot

```
C:\Program Files\MySQL\MySQL Server 8.0\bin>mysql.exe --default-character-set=utf8mb4 -u root -p
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
+-----+
4 rows in set (0.01 sec)

mysql> create database personnel;
Query OK, 1 row affected (0.01 sec)

mysql> _
```

3. Select the DB personnel to use

3.1. Statement

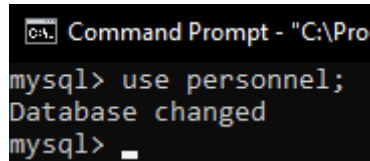
```
use personnel;
```

3.2. Result

```
Database changed
```

3.3. Snapshot

DATA BASES II



```
Command Prompt - "C:\Pro
mysql> use personnel;
Database changed
mysql> _
```

4. Ensure that personnel has no content tables. If it has, delete them

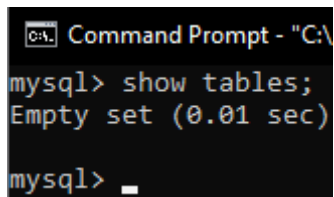
4.1. Statement

show tables ;

4.2. Result

Empty set (0.01 sec)

4.3. Snapshot



```
Command Prompt - "C:\
mysql> show tables;
Empty set (0.01 sec)

mysql> _
```

5. Create the DEPT , JOB and EMP tables with primary and foreign keys.

5.1. Statement

DEPT

create table

DEPT (

DEPTNO int (2) not null,

DNAME varchar(30),

LOC varchar(30),

DATA BASES II

```
        primary key(DEPTNO)
    );
    ...
insert into
    DEPT (
DEPTNO, DNAME, LOC
    )
    values(
50, ' SALES ', ' ATHENS '
    );
    ...
insert into
    DEPT (
DEPTNO, DNAME, LOC
    )
    values(
60, ' ACCOUNTANT ', ' ATHENS '
    );
    ...
insert into
    DEPT (
DEPTNO, DNAME, LOC
    )
    values(
70, ' PAYROLL ', ' VOLOS '
    );
    ...
select * from DEPT;
```

DATA BASES II

JOB

```
create table
    JOB(
JOBCODE int ( 3) not null,
JOB_DESCR varchar( 30 ),
SAL int ( 4),
    primary key(JOBCODE)
);
...
insert into
    JOB(
JOBCODE, JOB_DESCR, SAL
)
    values(
100, 'SELLER', 2200
);
...
insert into
    JOB(
JOBCODE, JOB_DESCR, SAL
)
    values(
200, ' ANALYST ', 2000
);
...
insert into
    JOB(
```

DATA BASES II

```
JOB_CODE, JOB_DESCR, SAL
)
    values(
300, ' OPERATOR ', 1000
);
...
select * from JOB;
```

EMP

```
create table
    EMP(
EMPNO int ( 2) not null,
NAME varchar( 30 ),
JOBNO int ( 3) not null,
DEPTNO int ( 2) not null,
COMM int ( 3 ),
    primary key(EMPNO),
    foreign key(DEPTNO) references DEPT(DEPTNO),
    foreign key(JOBNO) references JOB(JOB_CODE)
);
...
insert into
    EMP(
EMPNO, NAME, JOBNO, DEPTNO, COMM
)
    values(
10, ' SPYROU ', 100, 50, 450
```

DATA BASES II

```
);  
  
...  
  
insert into  
  
    EMP(  
  
EMPNO, NAME, JOBNO, DEPTNO  
  
    )  
  
    values(  
  
20, ' CHRISTOU ', 200, 50  
  
    );  
  
...  
  
insert into  
  
    EMP(  
  
EMPNO, NAME, JOBNO, DEPTNO  
  
    )  
  
    values(  
  
30, ' NIKOU ', 300, 60  
  
    );  
  
...  
  
insert into  
  
    EMP(  
  
EMPNO, NAME, JOBNO, DEPTNO  
  
    )  
  
    values(  
  
40, ' SPYROU ', 200, 50  
  
    );  
  
...  
  
select * from EMP;
```

5.2. Result

DEPT

Query OK, 0 rows affected, 1 warning (0.02 sec)

...

Query OK, 1 row affected (0.01 sec)

...

Query OK, 1 row affected (0.00 sec)

...

Query OK, 1 row affected (0.00 sec)

...

```
+-----+-----+-----+
| DEPTNO | DNAME | LOC |
+-----+-----+-----+
| 50 | SALES | ATHENS |
| 60 | ACCOUNTING | ATHENS |
| 70 | PAYROLL | VOLOS |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

JOB

Query OK, 0 rows affected, 2 warnings (0.01 sec)

...

Query OK, 1 row affected (0.00 sec)

...

Query OK, 1 row affected (0.00 sec)

...

DATA BASES II

Query OK, 1 row affected (0.00 sec)

...

```
+-----+-----+-----+
| JOBCODE | JOB_DESCR | SAL |
+-----+-----+-----+
| 100 | SELLER | 2200 |
| 200 | ANALYST | 2000 |
| 300 | OPERATOR | 1000 |
+-----+-----+-----+
```

3 rows in set (0.00 sec)

EMP

Query OK, 0 rows affected, 4 warnings (0.02 sec)

...

Query OK, 1 row affected (0.01 sec)

...

Query OK, 1 row affected (0.00 sec)

...

Query OK, 1 row affected (0.01 sec)

...

Query OK, 1 row affected (0.00 sec)

...

DATA BASES II

5.3. Snapshot

DEPT

```
Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> create table
->   DEPT(
->   DEPTNO int(2) not null,
->   DNAME varchar(30),
->   LOC varchar(30),
->   primary key(DEPTNO)
-> );
Query OK, 0 rows affected, 1 warning (0.01 sec)

mysql> _
```

...

```
Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> insert into
->   DEPT(
->   DEPTNO, DNAME, LOC
->   )
->   values(
->   50, 'ΠΩΛΗΣΕΙΣ', 'ΑΘΗΝΑ'
->   );
Query OK, 1 row affected (0.01 sec)

mysql> _
```

...

```
Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> insert into
->   DEPT(
->   DEPTNO, DNAME, LOC
->   )
->   values(
->   60, 'ΛΟΓΙΣΤΗΡΙΟ', 'ΑΘΗΝΑ'
->   );
Query OK, 1 row affected (0.00 sec)

mysql> _
```

...

DATA BASES II

```
C:\> Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> insert into
->   DEPT(
->   DEPTNO, DNAME, LOC
->   )
->   values(
->   70, 'ΜΙΣΘΟΔΟΣΙΑ', 'ΒΟΛΟΣ'
->   );
Query OK, 1 row affected (0.00 sec)

mysql> _
```

...

```
C:\> Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> select * from DEPT;
+-----+-----+-----+
| DEPTNO | DNAME          | LOC    |
+-----+-----+-----+
| 50     | ΠΩΛΗΣΕΙΣ      | ΑΘΗΝΑ  |
| 60     | ΛΟΓΙΣΤΗΡΙΟ    | ΑΘΗΝΑ  |
| 70     | ΜΙΣΘΟΔΟΣΙΑ    | ΒΟΛΟΣ  |
+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> _
```

JOB

```
C:\> Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> create table
->   JOB(
->   JOBCODE int(3) not null,
->   JOB_DESCR varchar(30),
->   SAL int(4),
->   primary key(JOBCODE)
->   );
Query OK, 0 rows affected, 2 warnings (0.01 sec)

mysql> _
```

...

```
C:\> Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> insert into
->   JOB(
->   JOBCODE, JOB_DESCR, SAL
->   )
->   values(
->   100, 'ΠΩΛΗΤΗΣ', 2200
->   );
Query OK, 1 row affected (0.00 sec)

mysql> _
```

DATA BASES II

...

```
C:\> Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> insert into
-> JOB(
-> JOB_CODE, JOB_DESCR, SAL
-> )
-> values(
-> 200, 'ΑΝΑΛΥΤΗΣ', 2000
-> );
Query OK, 1 row affected (0.00 sec)

mysql> _
```

...

```
C:\> Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> insert into
-> JOB(
-> JOB_CODE, JOB_DESCR, SAL
-> )
-> values(
-> 300, 'ΧΕΙΡΙΣΤΗΣ', 1000
-> );
Query OK, 1 row affected (0.00 sec)

mysql> _
```

...

```
C:\> Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> select * from JOB;
+-----+-----+-----+
| JOB_CODE | JOB_DESCR      | SAL |
+-----+-----+-----+
| 100 | ΠΩΛΗΤΗΣ      | 2200 |
| 200 | ΑΝΑΛΥΤΗΣ      | 2000 |
| 300 | ΧΕΙΡΙΣΤΗΣ      | 1000 |
+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> _
```

DATA BASES II

EMP

```
Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> create table
-> EMP(
-> EMPNO int(2) not null,
-> NAME varchar(30),
-> JOBNO int(3) not null,
-> DEPTNO int(2) not null,
-> COMM int(3),
-> primary key(EMPNO),
-> foreign key(DEPTNO) references DEPT(DEPTNO),
-> foreign key(JOBNO) references JOB(JOBNO)
-> );
Query OK, 0 rows affected, 4 warnings (0.02 sec)
mysql>
```

...

```
Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> insert into
-> EMP(
-> EMPNO, NAME, JOBNO, DEPTNO, COMM
-> )
-> values(
-> 10, 'ΣΠΥΡΟΥ', 100, 50, 450
-> );
Query OK, 1 row affected (0.01 sec)
mysql>
```

...

```
Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> insert into
-> EMP(
-> EMPNO, NAME, JOBNO, DEPTNO
-> )
-> values(
-> 20, 'ΧΡΗΣΤΟΥ', 200, 50
-> );
Query OK, 1 row affected (0.00 sec)
mysql>
```

...

DATA BASES II

```
C:\> Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> insert into
-> EMP(
-> EMPNO, NAME, JOBNO, DEPTNO
-> )
-> values(
-> 30, 'ΝΙΚΟΥ', 300, 60
-> );
Query OK, 1 row affected (0.01 sec)

mysql> _
```

...

```
C:\> Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> insert into
-> EMP(
-> EMPNO, NAME, JOBNO, DEPTNO
-> )
-> values(
-> 40, 'ΣΠΥΡΟΥ', 200, 50
-> );
Query OK, 1 row affected (0.00 sec)

mysql> _
```

...

```
C:\> Select Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> select EMPNO, NAME, JOBNO, DEPTNO, IFNULL(COMM, " ") COMM from EMP;
+-----+-----+-----+-----+-----+
| EMPNO | NAME      | JOBNO | DEPTNO | COMM |
+-----+-----+-----+-----+-----+
| 10    | ΣΠΥΡΟΥ    | 100   | 50     | 450   |
| 20    | ΧΡΗΣΤΟΥ   | 200   | 50     |       |
| 30    | ΝΙΚΟΥ     | 300   | 60     |       |
| 40    | ΣΠΥΡΟΥ    | 200   | 50     |       |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> _
```

6 . Display details (EMPNO , NAME , JOB _ DESCR , SAL , DEPTNO) of those working as salesmen (SALESMAN)

6.1. Statement

select

EMP.EMPNO, EMP.NAME, JOB.JOB_DESCR, JOB.SAL, DEPT.DEPTNO

from

DATA BASES II

EMP, JOB, DEPT

where

EMP.DEPTNO = DEPT.DEPTNO

and

EMP.JOBNO = JOB.JOB_CODE

and JOB_DESCR = ' SALESMAN '

;

6.2. Result

```
+-----+-----+-----+-----+-----+
| EMPNO | NAME | JOB_DESCR | SAL | DEPTNO |
+-----+-----+-----+-----+-----+
| 10 | SPYROU | SELLER | 2200 | 50 |
+-----+-----+-----+-----+-----+

1 row in set (0.01 sec)
```

6.3. Snapshot

```
C:\Program Files\MySQL\MySQL Server 8.0\bin>mysql.exe --default-character-set=utf8mb4 -u root -p
mysql> select
-> EMP.EMPNO, EMP.NAME, JOB.JOB_DESCR, JOB.SAL, DEPT.DEPTNO
-> from
-> EMP, JOB, DEPT
-> where
-> EMP.DEPTNO = DEPT.DEPTNO
-> and
-> EMP.JOBNO = JOB.JOB_CODE
-> and JOB_DESCR = 'ΠΩΛΗΤΗΣ'
-> ;
+-----+-----+-----+-----+-----+
| EMPNO | NAME | JOB_DESCR | SAL | DEPTNO |
+-----+-----+-----+-----+-----+
| 10 | ΣΠΥΡΟΥ | ΠΩΛΗΤΗΣ | 2200 | 50 |
+-----+-----+-----+-----+-----+
1 row in set (0.01 sec)

mysql> _
```

DATA BASES II

7. Display by executing one command: (a) the maximum number of all employees, (b) the minimum salary of all employees, (c) the average salary of all employees, (d) the number of employees who have a salary , (e) the number of employees who have a commission and (f) how many employees there are in total

7.1. Statement

```
select
    MAX( JOB.SAL),
    MIN( JOB.SAL),
    AVG( JOB.SAL),
    COUNT( JOB.SAL ),
    COUNT( EMP.COMM),
    COUNT( EMP.EMPNO)
from
EMP, JOB
where
EMP.JOBNO = JOB.JOBCODE
;
```

7.2 . Result

```
+-----+-----+-----+-----+-----+
+-----+
| MAX( JOB.SAL) | MIN(JOB.SAL) | AVG(JOB.SAL) |
COUNT( JOB.SAL) | COUNT(EMP.COMM) | COUNT(EMP.EMPNO) |
+-----+-----+-----+-----+-----+
+-----+
| 2200 | 1000 | 1800.0000 |
4 | 1 | 4 |
```

DATA BASES II

```
+-----+-----+-----+-----+-----+
+-----+
```

1 row in set (0.00 sec)

7.3. Snapshot

```
Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> select
  -> MAX(JOB.SAL),
  -> MIN(JOB.SAL),
  -> AVG(JOB.SAL),
  -> COUNT(JOB.SAL),
  -> COUNT(EMP.COMM),
  -> COUNT(EMP.EMPNO)
  -> from
  -> EMP, JOB
  -> where
  -> EMP.JOBNO = JOB.JOBNO
  -> ;
+-----+-----+-----+-----+-----+
| MAX(JOB.SAL) | MIN(JOB.SAL) | AVG(JOB.SAL) | COUNT(JOB.SAL) | COUNT(EMP.COMM) | COUNT(EMP.EMPNO) |
+-----+-----+-----+-----+-----+
|          2200 |          1000 |      1800.0000 |                4 |                1 |                4 |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> _
```

8. Display by executing a command: (a) maximum salary and (b) average salary of those working as analysts (ANALYST)

8.1. Statement

```
select
MAX(JOB.SAL) "MAX ANALYST SALARY", AVG(JOB.SAL) "MOV ANALYST SALARY"
from
EMP, JOB
where
EMP.JOBNO = JOB.JOBNO
and
JOB.JOB_DESCR = ' ANALYST '
;
```


DATA BASES II

8.2. Result

```
+-----+-----+
| MAXIMUM SALARY
OF ANALYSTS | M.O. ANALYST SALARY |
+-----+-----+
| 2000 | 2000.0000 |
+-----+-----+

1 row in set (0.00 sec)
```

8.3. Snapshot

```
Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> select
-> MAX(JOB.SAL) "ΜΕΓΙΣΤΟΣ ΜΙΣΘΟΣ ΑΝΑΛΥΤΩΝ", AVG(JOB.SAL) "Μ.Ο. ΜΙΣΘΟΥ ΑΝΑΛΥΤΩΝ"
-> from
-> EMP, JOB
-> where
-> EMP.JOBNO = JOB.JOBNO
-> and
-> JOB.JOB_DESCR = 'ΑΝΑΛΥΤΗΣ'
-> ;
+-----+-----+
| ΜΕΓΙΣΤΟΣ ΜΙΣΘΟΣ ΑΝΑΛΥΤΩΝ | Μ.Ο. ΜΙΣΘΟΥ ΑΝΑΛΥΤΩΝ |
+-----+-----+
| 2000 | 2000.0000 |
+-----+-----+
1 row in set (0.00 sec)

mysql> _
```

9. Display the details (EMPNO , NAME , JOB _ DESCR , SAL , DEPTNO) of those who work as analysts (ANALYST) and their salary (SAL) ranges from 1000 euros to 2500 euros

9.1. Statement

```
select
EMP.EMPNO, EMP.NAME, JOB.JOB_DESCR, JOB.SAL, DEPT.DEPTNO
from
EMP, JOB, DEPT
```

DATA BASES II

```
where
EMP.JOBNO = JOB.JOBCODE
and
EMP.DEPTNO = DEPT.DEPTNO
and
JOB.JOB_DESCR = ' ANALYST '
having
JOB.SAL >= 1000
and
JOB.SAL <= 2500
;
```

9.2. Result

```
+-----+-----+-----+-----+-----+
| EMPNO | NAME | JOB_DESCR | SAL | DEPTNO |
+-----+-----+-----+-----+-----+
| 20 | CHRISTOU | ANALYST | 2000 | 50 |
| 40 | SPYROU | ANALYST | 2000 | 50 |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

DATA BASES II

9.3. Snapshot

```
C:\Program Files\MySQL\MySQL Server 8.0\bin>mysql.exe --default-character-set=utf8mb4 -u root -p
mysql> select
-> EMP.EMPNO, EMP.NAME, JOB.JOB_DESCR, JOB.SAL, DEPT.DEPTNO
-> from
-> EMP, JOB, DEPT
-> where
-> EMP.JOBNO = JOB.JOBCODE
-> and
-> EMP.DEPTNO = DEPT.DEPTNO
-> and
-> JOB.JOB_DESCR = 'ΑΝΑΛΥΤΗΣ'
-> having
-> JOB.SAL >= 1000
-> and
-> JOB.SAL <= 2500
-> ;
+-----+-----+-----+-----+-----+
| EMPNO | NAME      | JOB_DESCR | SAL  | DEPTNO |
+-----+-----+-----+-----+-----+
| 20    | ΧΡΗΣΤΟΥ  | ΑΝΑΛΥΤΗΣ | 2000 | 50     |
| 40    | ΣΠΥΡΟΥ  | ΑΝΑΛΥΤΗΣ | 2000 | 50     |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> _
```

10. Display the data (EMPNO , NAME , JOB _ DESCR , SAL , DEPTNO) of the employees whose first name (NAME) contains the letter R (or P if you have entered data with Greek characters)

10.1. Statement

```
select
EMP.EMPNO, EMP.NAME, JOB.JOB_DESCR, JOB.SAL, DEPT.DEPTNO
from
EMP, JOB, DEPT
where
EMP.NAME like '% P %'
and
EMP.JOBNO = JOB.JOBCODE
and
```

DATA BASES II

EMP.DEPTNO = DEPT.DEPTNO

;

10.2. Result

```
+-----+-----+-----+-----+-----+
| EMPNO | NAME | JOB_DESCR | SAL | DEPTNO |
+-----+-----+-----+-----+-----+
| 10 | SPYROU | SELLER | 2200 | 50 |
| 20 | CHRISTOU | ANALYST | 2000 | 50 |
| 40 | SPYROU | ANALYST | 2000 | 50 |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

10.3. Snapshot

```
C:\> Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> select
-> EMP.EMPNO, EMP.NAME, JOB.JOB_DESCR, JOB.SAL, DEPT.DEPTNO
-> from
-> EMP, JOB, DEPT
-> where
-> EMP.NAME like '%P%'
-> and
-> EMP.JOBNO = JOB.JOBNO
-> and
-> EMP.DEPTNO = DEPT.DEPTNO
-> ;
+-----+-----+-----+-----+-----+
| EMPNO | NAME | JOB_DESCR | SAL | DEPTNO |
+-----+-----+-----+-----+-----+
| 10 | ΣΠΥΡΟΥ | ΠΩΛΗΤΗΣ | 2200 | 50 |
| 20 | ΧΡΗΣΤΟΥ | ΑΝΑΛΥΤΗΣ | 2000 | 50 |
| 40 | ΣΠΥΡΟΥ | ΑΝΑΛΥΤΗΣ | 2000 | 50 |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
mysql> _
```

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11. Display details (EMPNO , NAME , JOB _ DESCR , SAL , DEPTNO) of employees sorted by department (DEPTNO) and salary (SAL)

11.1 . Statement

```
select
EMP.EMPNO, EMP.NAME, JOB.JOB_DESCR, JOB.SAL, DEPT.DEPTNO
  from
EMP, JOB, DEPT
  where
EMP.JOBNO = JOB.JOBCODE
  and
EMP.DEPTNO = DEPT.DEPTNO
  order by
DEPT.DEPTNO, JOB.SAL
;
```

11.2. Result

```
+-----+-----+-----+-----+-----+
| EMPNO | NAME | JOB_DESCR | SAL | DEPTNO |
+-----+-----+-----+-----+-----+
| 20 | CHRISTOU | ANALYST | 2000 | 50 |
| 40 | SPYROU | ANALYST | 2000 | 50 |
| 10 | SPYROU | SELLER | 2200 | 50 |
| 30 | NIKOU | OPERATOR | 1000 | 60 |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

DATA BASES II

11.3. Snapshot

```
Command Prompt - "C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe" --default-character-set=utf8mb4 -u root -p
mysql> select
-> EMP.EMPNO, EMP.NAME, JOB.JOB_DESCR, JOB.SAL, DEPT.DEPTNO
-> from
-> EMP, JOB, DEPT
-> where
-> EMP.JOBNO = JOB.JOBCODE
-> and
-> EMP.DEPTNO = DEPT.DEPTNO
-> order by
-> DEPT.DEPTNO, JOB.SAL
-> ;
+-----+-----+-----+-----+-----+
| EMPNO | NAME      | JOB_DESCR      | SAL  | DEPTNO |
+-----+-----+-----+-----+-----+
| 20    | ΧΡΗΣΤΟΥ  | ΑΝΑΛΥΤΗΣ      | 2000 | 50     |
| 40    | ΣΠΥΡΟΥ  | ΑΝΑΛΥΤΗΣ      | 2000 | 50     |
| 10    | ΣΠΥΡΟΥ  | ΠΩΛΗΤΗΣ      | 2200 | 50     |
| 30    | ΝΙΚΟΥ   | ΧΕΙΡΙΣΤΗΣ      | 1000 | 60     |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> _
```

12. Display the average salary and number of employees per department

12.1. Statement

```
select
AVG(JOB.SAL) "SALARY NO", COUNT(EMP.EMPNO) "NUMBER OF EMPLOYEES", DEPT.DNAME
"DEPARTMENT"

from
JOB, EMP, DEPT

where
EMP.JOBNO = JOB.JOBCODE

and
EMP.DEPTNO = DEPT.DEPTNO

group by
EMP.DEPTNO

;
```

DATA BASES II

12.2. Result

```
+-----+-----+-----+
| M. The . SALARY | HOST OF EMPLOYEES | SECTION |
+-----+-----+-----+
| 2066.6667 | 3 | SALES |
| 1000.0000 | 1 | ACCOUNTING |
+-----+-----+-----+

2 rows in set (0.00 sec)
```

12.3. Snapshot

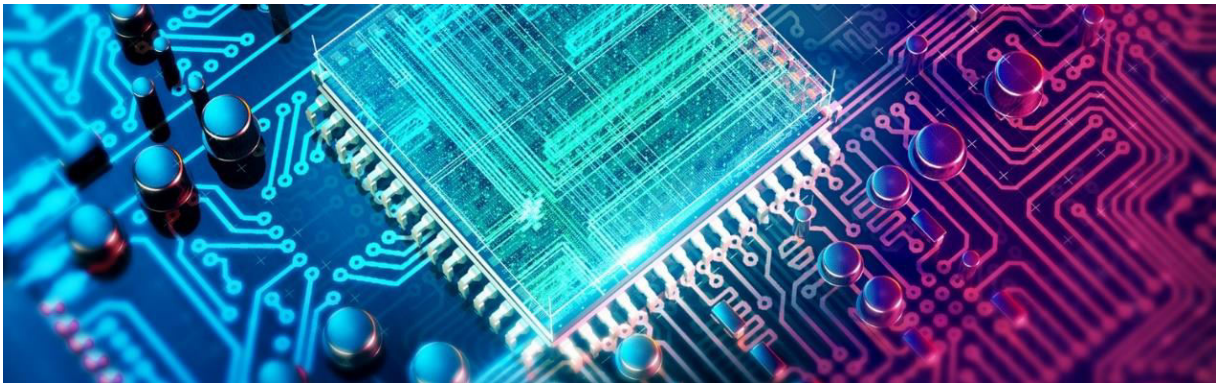
```
C:\Program Files\MySQL\MySQL Server 8.0\bin>mysql.exe --default-character-set=utf8mb4 -u root -p
mysql> select
  -> AVG(JOB.SAL) "Μ.Ο. ΜΙΣΘΟΥ", COUNT(EMP.EMPNO) "ΠΛΗΘΟΣ ΥΠΑΛΛΗΛΩΝ", DEPT.DNAME "ΤΜΗΜΑ"
  -> from
  -> JOB, EMP, DEPT
  -> where
  -> EMP.JOBNO = JOB.JOBCODE
  -> and
  -> EMP.DEPTNO = DEPT.DEPTNO
  -> group by
  -> EMP.DEPTNO
  -> ;
+-----+-----+-----+
| Μ.Ο. ΜΙΣΘΟΥ | ΠΛΗΘΟΣ ΥΠΑΛΛΗΛΩΝ | ΤΜΗΜΑ |
+-----+-----+-----+
|          2066.6667 |          3 | ΠΩΛΗΣΕΙΣ |
|          1000.0000 |          1 | ΛΟΓΙΣΤΗΡΙΟ |
+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> _
```

DATA BASES II



Thank you for your attention.



DATA BASES II

