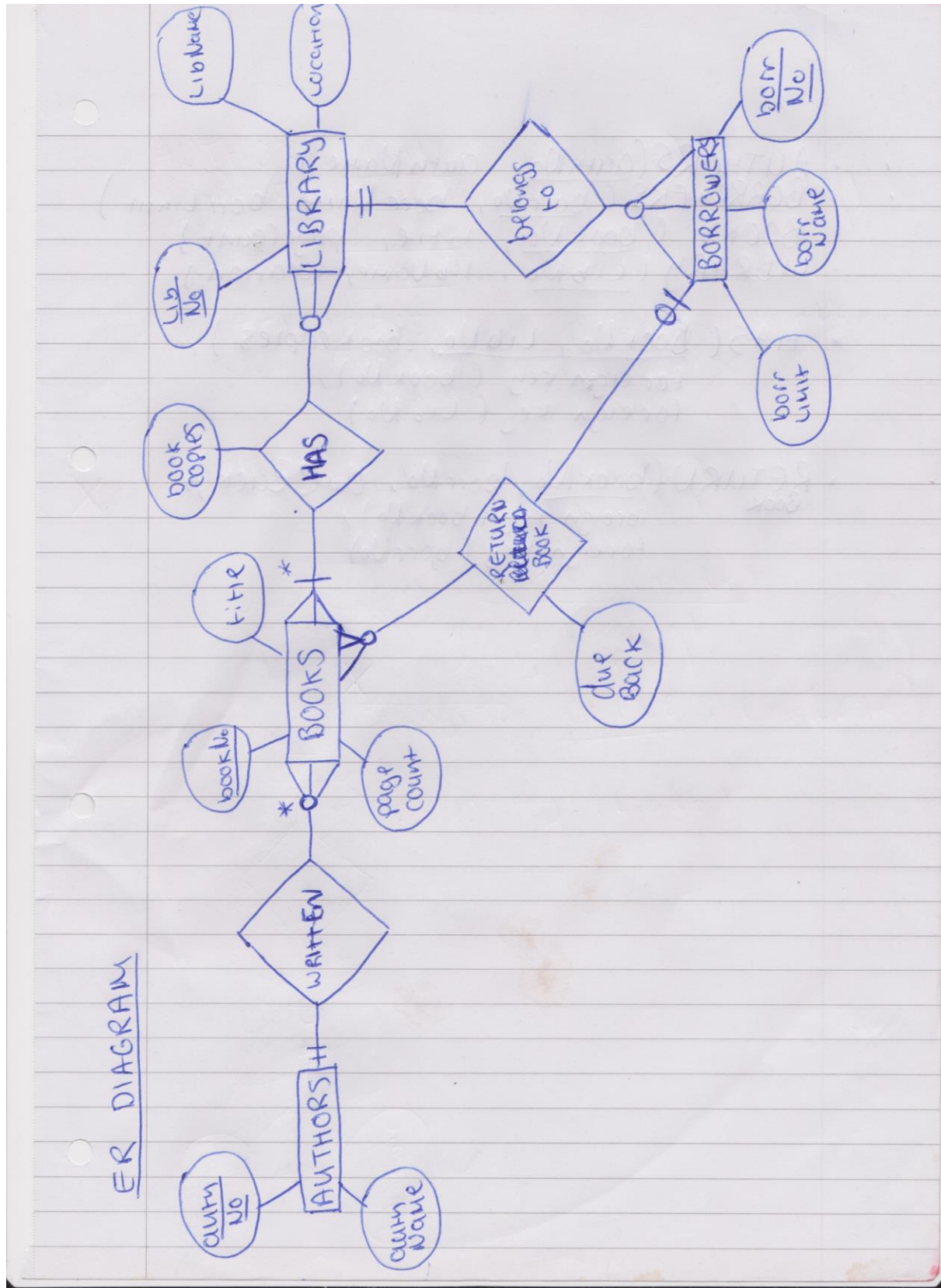


1)



2) AUTHORS(authNo, authName)

BORROWERS(borrNo,borrName,borrLimit)

BOOKS(bookNo, title,pageCount)

LIBRARY(libNo, libName, location)

HAS(bookNo, libNo, bookCoppies)

Foreign key(bookNo)

Foreign key(libNo)

RETURNBOOK(bookNo,borrNo,dueBack)

Foreign key(bookNo)

Foreign key(borrNo)

3)

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| cdcol      |
| cs250      |
| librarysystem |
| mysql      |
| performance_schema |
| phpmyadmin |
| student    |
| task2      |
| test       |
| webauth    |
+-----+
11 rows in set (0.00 sec)
```

```
mysql> use librarysystem;
Database changed
mysql> show tables
-> ;
```

```
+-----+
| Tables_in_librarysystem |
+-----+
| authors |
| books   |
| borrowers |
| has     |
| library |
| returnbook |
+-----+
6 rows in set (0.00 sec)
```

```
mysql> select * from books
-> where pageCount > 65;
```

```
+-----+-----+-----+
| bookNo | title      | pageCount |
+-----+-----+-----+
| 2      | The Batman | 70        |
+-----+-----+-----+
1 row in set (0.07 sec)
```

```
mysql>
```

```

drop database if exists librarySystem;

create database if not exists librarySystem;

use librarySystem;

create table authors(
    authNo integer not null,
    authName char(20),
    primary key (authNo)
);
insert into authors values (1,'Stormzy');
insert into authors values (2,'J.K Rowling');

create table borrowers (
    borrNo integer not null,
    borrName char(20),
    borrLimit integer,
    primary key (borrNo)
);
insert into borrowers values (857845,'David Plumb',5);
insert into borrowers values (837867,'Abubakar Suudy',5);

create table books (
    bookNo integer not null,
    title char(20),
    pageCount Integer,
    primary key (bookNo)
);
insert into books values (1,'The Flash',60);
insert into books values (2,'The Batman',70);

```

4)There is no way for the system to know when the borrow limit is met. So another table that could be created that holds these two values can communicate directly.

1)

```
SELECT COUNT( DISTINCT `sid` )  
FROM `stud`
```

+ Options

```
COUNT(DISTINCT `sid`)  
1830
```

2)

```
SELECT COUNT( * )  
FROM `stud`  
WHERE `lastname` LIKE 's%n'
```

+ Options

```
COUNT(*)  
51
```

3)

```
SELECT DISTINCT `lastname`  
FROM `stud`  
WHERE `lastname` LIKE 's%'  
OR `lastname` LIKE 'h%'  
ORDER BY `lastname`  
LIMIT 0 , 30
```

Show : Start row: Number of rows: Headers every rows

Sort by key:

+ Options

lastname
Harold
Harry
Heather
Helen
Henry
Howard
Samuel
Sandra
Sara
Sarah
Scott
Sean
Sharon
Shawn
Shirley
Stephanie
Stephen
Steve
Steven
Susan

4)

```
SELECT (
  `gender`
), COUNT(*)
FROM `stud`
NATURAL JOIN `smod`
WHERE `ayr` = '2001/02'
AND `mid` = 'CS-219'
```

Show : Start row: Number of rows: Headers every rows


+ Options

gender	COUNT(*)
f	34
m	28

```
GROUP BY `gender`
LIMIT 0 , 30
```

All of code could not fit in one print screen, but it's all on one line.

SQL Import files SQL history

Run SQL query/queries on database student: 

```
1 select ('gender'),COUNT(*) FROM `stud` NATURAL JOIN `smod` where `ayr`= '2001/02' and `mid` = 'CS-219' group by`gender`
```

Columns

- sid
- lastname
- firstname
- title
- dob
- gender

5)

```
SELECT `dname` , COUNT( * )  
FROM mods  
NATURAL JOIN dept  
GROUP BY (  
    `did`  
)  
LIMIT 0 , 30
```

Show: Start row: Number of rows: Headers every rows

+ Options

dname	COUNT(*)
School of Biological Sciences	131
Chemistry	142
Computer Science	75
Welsh	77
English	129
French	119
Geography	118
German	118
Hispanic Studies	86
Italian	66
Mathematics	105
Music	8
Physics	58
Russian	31

6)

7)

```
SELECT DISTINCT lvl, COUNT( * )  
FROM enr1  
NATURAL JOIN dept  
WHERE dname = 'Computer Science'  
GROUP BY (   
    lvl  
)
```

Show : Start row: Number of rows: Headers every rows

+ Options

lvl	COUNT(*)
1	657
2	479
3	429

8)