DEPARTMENT-WISE LIBRARY DATABASE

DATE : 31-07-19
CYCLE :
Exp. No. : 2

Design and Create a department wise Library database in a college using ER diagram and Schema diagram.

ER-DIAGRAM:

STEP 1: Identifying the entities for the above case study -

1) Books entity 2) Students entity 3) Department_Library entity

STEP 2: Identifying the attributes of each entity.

The attributes of Books entity - 1) Bid 2) Bname 3) Bauthor

The attributes of Students entity - 1) Sid 2) Sname 3) Sbranch

The attributes of Department_Library entity - 1) Depthibid
2) Depthibname
3) Depthibloc

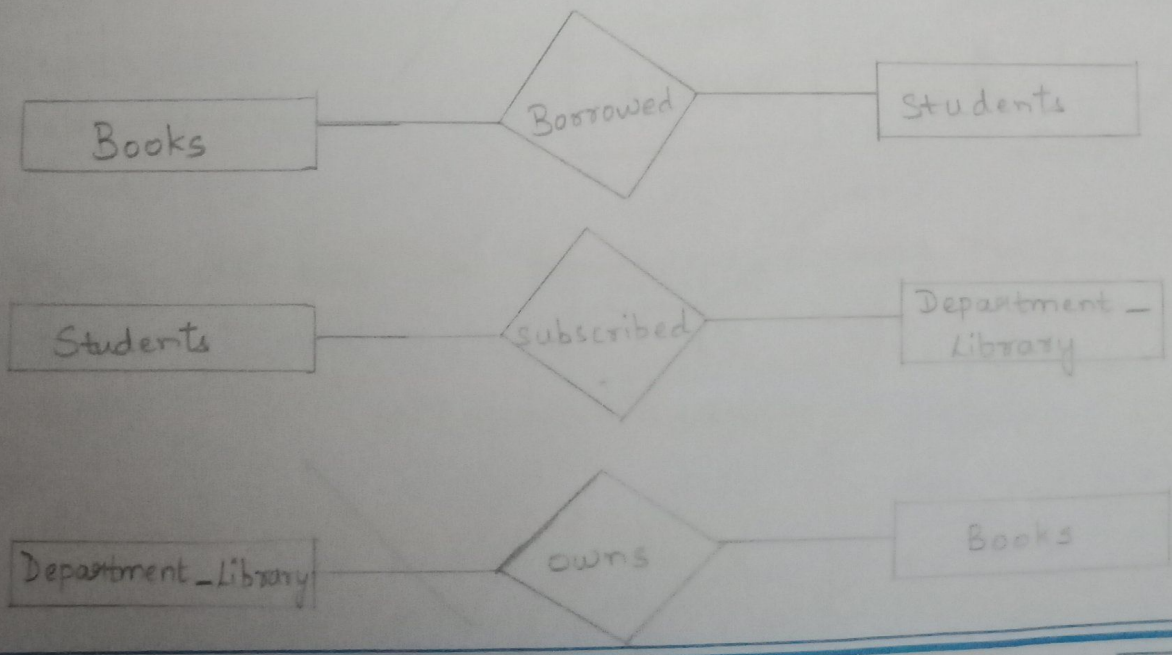
STEP 3: Identifying the key attributes of each entity

The key attribute of Books entity - Bid

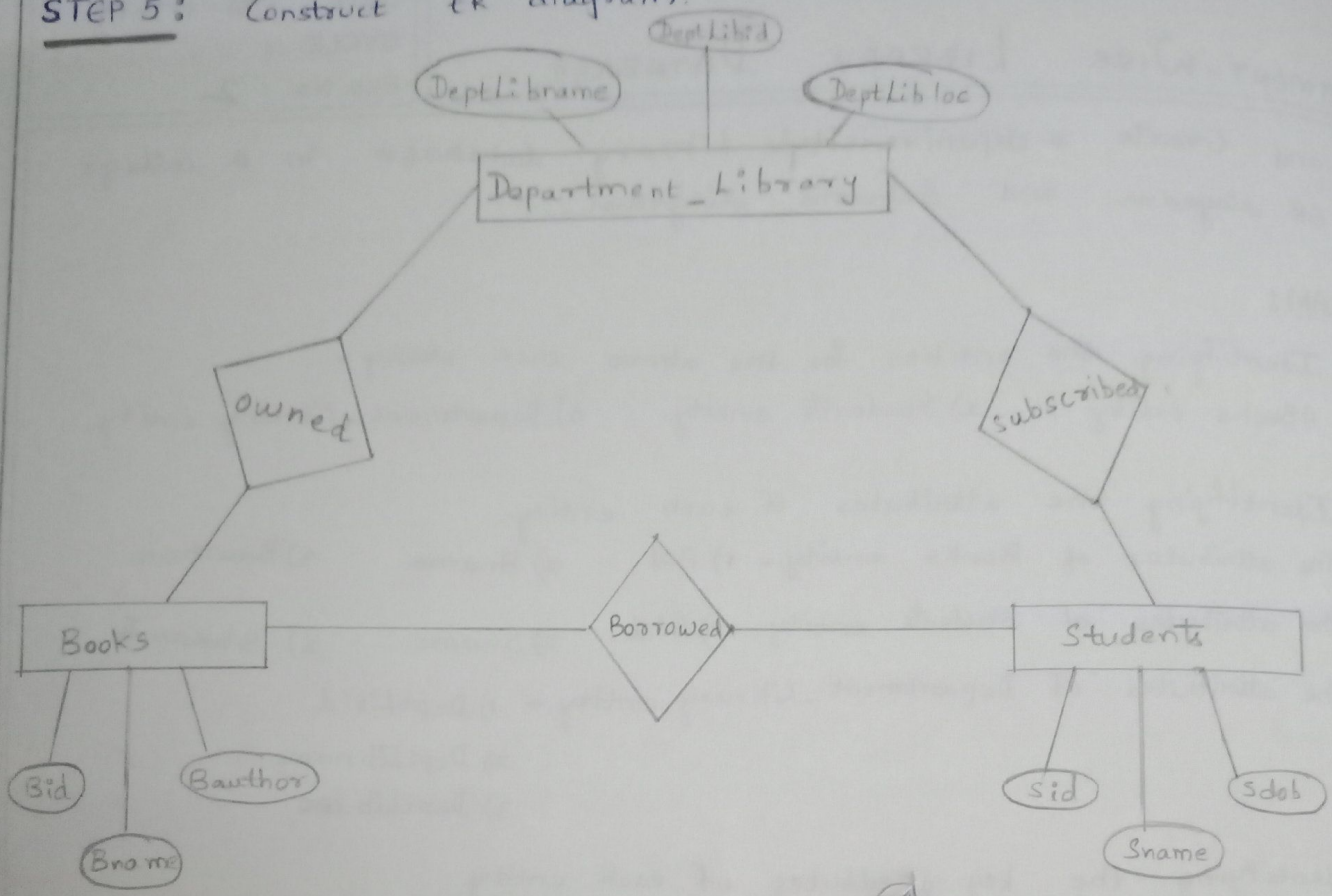
The key attribute of Students entity - Sid

The key attribute of Department_Library entity - Depthibid

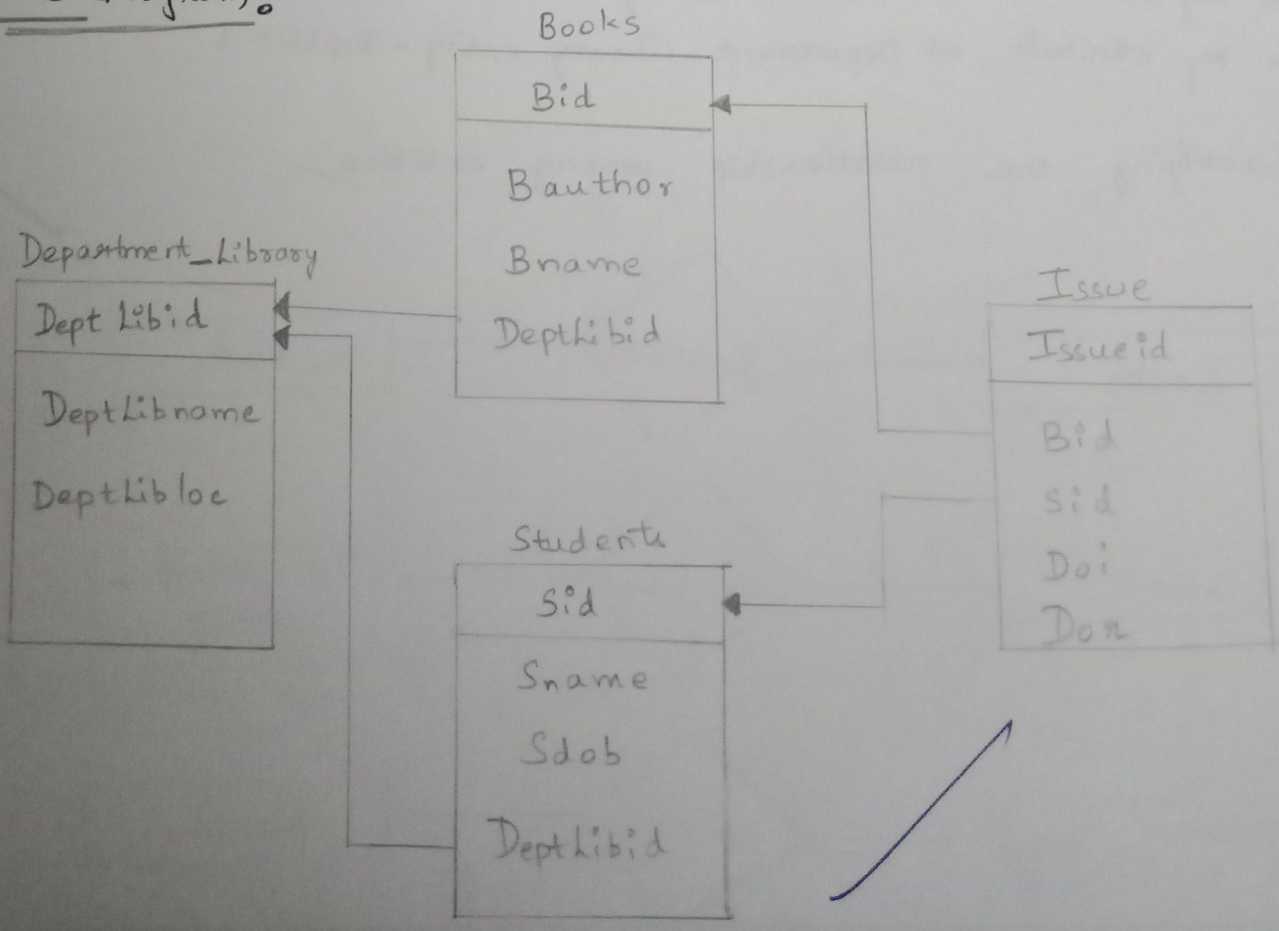
STEP 4: Identifying the relationship among entities



STEP 5 : Construct ER diagram.



Schema Diagram:



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STEP 1: Create a Department_Library Table

```
Sql > create table deptlibd7 (deptlibid varchar(3), deptlibname varchar(10),
      deptlibloc varchar(20), primary key (deptlibid));
```

A deptlibd7 table is created with the fields deptlibid, deptlibname and deptlibloc.

```
Sql> desc deptlibd7;
```

Name	Null?	Type
DEPTLIBID	NOT NULL	VARCHAR2(3)
DEPTLIBNAME		VARCHAR2(10)
DEPTLIBLOC		VARCHAR2(20)

STEP 2: Insert the records into Department_Library Table

```
Sql > insert into deptlibd7 values ('&deptlibid', '&deptlibname', '&deptlibloc');
Enter deptlibid : 05
Enter deptlibname : cse
Enter deptlibloc : silver jublee block
One record inserted.
Sql >/
Enter deptlibid : 01
Enter deptlibname : civil
Enter deptlibloc : ce block 2
One record inserted.
```

STEP 3: Display the data in Department_Library Table.

```
Sql > select * from deptlibd7;
```

DEPTLIBID	DEPTLIBNAME	DEPTLIBLOC
05	cse	silver jublee block
01	civil	ce block 2

STEP 4: Create a Books Table

```
Sql> create table bookd7 (bookid varchar(10), bookname varchar(30),
     bookauthor varchar(25), deptlibid varchar(3), primary key(bookid),
     foreign key (deptlibid) references deptlibd7);
```

A bookd7 table is created with the fields bookid, bookname, bookauthor, deptlibid

```
Sql> desc bookd7;
```

Name	Null ?	Type
BOOKID	NOT NULL	VARCHAR2(10)
BOOKNAME		VARCHAR2(30)
BOOKAUTHOR		VARCHAR2(25)
DEPTHBID		VARCHAR2(3)

STEP 5: Insert the records into Books Table

```
Sql> insert into bookd7 values ('&bookid', '&bookname', '&bookauthor',
     '&deptlibid');
Enter bookid : b100
Enter bookname: data structures
Enter bookauthor : praveen
Enter deptlibid : 05
One record inserted.
Sql>/
Enter bookid : b104
Enter bookname : engineering drawing
Enter bookauthor: mahesh
Enter deptlibid :01
One record inserted.
```

STEP 6: Display the records from Books Table

```
Sql> select * from bookd7;
```

BOOKID	BOOKNAME	BOOKAUTHOR	DEPTHBID
b100	data structures	Praveen	05
b104	engineering drawing	mahesh	01

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STEP 7: Create a Students Table

Sql> create table studentd7 (sid varchar (20), sname varchar (25), sdob date, deptlibid varchar (3), primary key (sid), foreign key (deptlibid) references deptlibd7);

A studentd7 table is created with the fields sid, sname, sdob, deptlibid

Sql> desc studentd7;

Name	Null?	Type
SID	NOT NULL	VARCHAR 2(20)
SNAME		VARCHAR 2 (25)
SDOB		DATE
DEPTLIBID		VARCHAR 2(3)

STEP 8: Insert the records into students table

Sql > insert into studentd7 values ('&sid', '&sname', '&sdob', '&deplibid');

Enter sid : S100
Enter sname : samhita
Enter sdob : 01-jan-2000
Enter deptlibid : 05
One record inserted.
Sql>/
Enter sid : S103
Enter sname : mahathi
Enter sdob : 04-jan-2000
Enter deptlibid : 01
One record inserted.

STEP 9: Display the records from students Table.

Sql> select * from studentd7;

SID	SNAME	SDOB	DEPTLIBID
S100	Samhita	01-JAN-2000	05
S103	mahathi	04-JAN-2000	01

STEP 10: Create issue table

Sql> create table issued7(issueid varchar(10), doi date, dor date, bookid varchar(10), sid varchar(20), primary key(issueid), foreign key(bookid) references bookd7, foreign key (sid) references studentd7);

An issued7 table is created with fields issueid, doi, dor, bookid, sid

Sql> desc issued7;

Name	Null?	Type
ISSUE ID	NOT NULL	VARCHAR(10)
DOI		DATE
DOR		DATE
BOOK ID		VARCHAR2(10)
SID		VARCHAR2(20)

STEP 11: Insert the records into issue table

Sql> insert into issued7 values ('&issueid', '&doi', '&dor', '&bookid', '&

Enter issueid : i100
Enter doi : 21-jan-19
Enter dor : 24-jan-19
Enter bookid : b100
Enter sid : s100
One record inserted.
Sql> /
Enter issueid : i104
Enter doi : 14-jan-19
Enter dor : 20-jan-19
Enter bookid : b104
Enter sid : s103
One record inserted.

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STEP 12: Display the records from the issue table

Sql> select * from issued7;

ISSUEID	DOI	DOR	BOOKID	SID
i100	21-JAN-19	24-JAN-19	b100	s100
i104	14-JAN-19	20-JAN-19	b104	s103

Sql> commit;