SQL DDL:

```
create table program(
program_id integer not null primary key,
program_name varchar not null,
duration varchar not null,
degree_type varchar not null
);
```

```
create table student(
student_id integer not null primary key,
student_name varchar not null,
student_gender varchar not null,
student_address text not null,
student_contact_no varchar not null,
student_email_id varchar not null,
DOB date not null,
joining_year integer not null,
CPI decimal(4,2),
program_id integer references program(program_id) ON UPDATE CASCADE ON
DELETE CASCADE
);
```

```
create table student_register(
s_visitor_id integer not null primary key,
s_visitor_name varchar not null,
s_date date not null,
s_entry_time time not null,
s_exit_time time not null,
student_id integer references student(student_id) ON UPDATE CASCADE ON DELETE CASCADE
);

create table librarian(
librarian_id integer not null primary key,
librarian_name varchar not null,
librarian_age integer not null,
librarian_gender varchar not null,
librarian_designation varchar not null,
librarian_salary decimal(8,0) not null
);

create table category(
category_id integer not null primary key,
category_name varchar not null
);
```

```
create table book(
book_id integer not null primary key,
book_title varchar not null,
ISBN varchar not null,
book_pages integer not null,
book_price decimal(5,0) not null,
edition integer not null,
publication_name varchar not null,
category_id integer references category(category_id) ON UPDATE CASCADE ON
DELETE CASCADE
);

create table author(
author_id integer not null primary key,
author_name varchar not null,
author_gender varchar not null,
author_age integer not null,
author_address text not null
);

create table shelf(
shelf_id integer not null primary key,
no_of_books integer not null,
no_of_journal integer not null,
no_of_thesis integer not null,
```

```
category_id integer references category(category_id) ON UPDATE CASCADE ON
DELETE CASCADE
);

create table journal(
journal_id integer not null primary key,
journal_title varchar not null,
volume varchar not null,
no_of_articles integer not null,
journal_pages integer not null,
release_month integer not null,
journal_price decimal(5,0) not null,
category_id integer references category(category_id) ON UPDATE CASCADE ON
DELETE CASCADE
);

create table thesis(
thesis_id integer not null primary key,
thesis_name varchar not null,
thesis_pages integer not null,
category_id integer references category(category_id) ON UPDATE CASCADE ON
DELETE CASCADE,
author_id integer references author(author_id) ON UPDATE CASCADE ON DELETE
CASCADE
);
```

```
create table department(
department_id integer not null primary key,
department_name varchar not null
);

create table faculty(
faculty_id integer not null primary key,
faculty_name varchar not null,
faculty_gender varchar not null,
faculty_address text not null,
faculty_contact_no varchar not null,
faculty_email varchar not null,
faculty_salary decimal(8,0) not null,
department_id integer references department(department_id) ON UPDATE
CASCADE ON DELETE CASCADE
);

create table issue_book_to_student(
student_id integer not null primary key references student(student_id) ON UPDATE
CASCADE ON DELETE CASCADE,
book_id integer not null references book(book_id) ON UPDATE CASCADE ON DELETE
CASCADE,
student_issue_date date not null,
student_return_date date not null,
days_delayed integer,
fine decimal(3,0),
```

```
librarian_id integer references librarian(librarian_id) ON UPDATE CASCADE ON
DELETE CASCADE

);



create table category_subtopics(

category_id integer not null primary key references category(category_id) ON
UPDATE CASCADE ON DELETE CASCADE,

subtopics varchar not null

);



create table student_borrows_book(

student_id integer not null primary key references student(student_id) ON UPDATE
CASCADE ON DELETE CASCADE,

book_id integer not null primary key references book(book_id) ON UPDATE CASCADE
ON DELETE CASCADE

);



create table faculty_borrows_book(

faculty_id integer not null primary key references faculty(faculty_id) ON UPDATE
CASCADE ON DELETE CASCADE,

book_id integer not null primary key references book(book_id) ON UPDATE CASCADE
ON DELETE CASCADE

);
```

```
create table issue_thesis_to_faculty(

faculty_id integer not null primary key references faculty(faculty_id) ON UPDATE CASCADE ON DELETE CASCADE,

thesis_id integer not null primary key references thesis(thesis_id) ON UPDATE CASCADE ON DELETE CASCADE,

thesis_issue_date date not null,

thesis_return_date date not null,

librarian_id integer references librarian(librarian_id) ON UPDATE CASCADE ON DELETE CASCADE

);



create table issue_book_to_faculty(

faculty_id integer not null primary key references faculty(faculty_id) ON UPDATE CASCADE ON DELETE CASCADE,

book_id integer not null primary key references book(book_id) ON UPDATE CASCADE ON DELETE CASCADE,

book_issue_date date not null,

book_return_date date not null,

librarian_id integer references librarian(librarian_id) ON UPDATE CASCADE ON DELETE CASCADE

);



create table faculty_register(

f_visitor_id integer not null primary key,

f_visitor_name varchar not null,

f_date date not null,

f_entry_time time not null,

f_exit_time time not null,
```

```
faculty_id integer references faculty(faculty_id) ON UPDATE CASCADE ON DELETE
CASCADE

);



create table book_author(

book_id integer not null primary key references book(book_id) ON UPDATE CASCADE
ON DELETE CASCADE,

author_id integer not null primary key references author(author_id) ON UPDATE
CASCADE ON DELETE CASCADE

);



create table journal_author(

journal_id integer not null primary key references journal(journal_id) ON UPDATE
CASCADE ON DELETE CASCADE,

author_id integer not null primary key references author(author_id) ON UPDATE
CASCADE ON DELETE CASCADE

);



create table faculty_borrows_thesis(

faculty_id integer not null primary key references faculty(faculty_id) ON UPDATE
CASCADE ON DELETE CASCADE,

thesis_id integer not null primary key references thesis(thesis_id) ON UPDATE
CASCADE ON DELETE CASCADE

);
```