DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

DBMS LABORATORY WITH MINI PROJECT

18CSL58

TIMETABLE MANAGEMENT SYSTEM

SYNOPSIS

About Project

A Database Management System project which uses a database to store all the various timetables of a college or university. It also provides a web interface for students and lecturers to use.

Team Details

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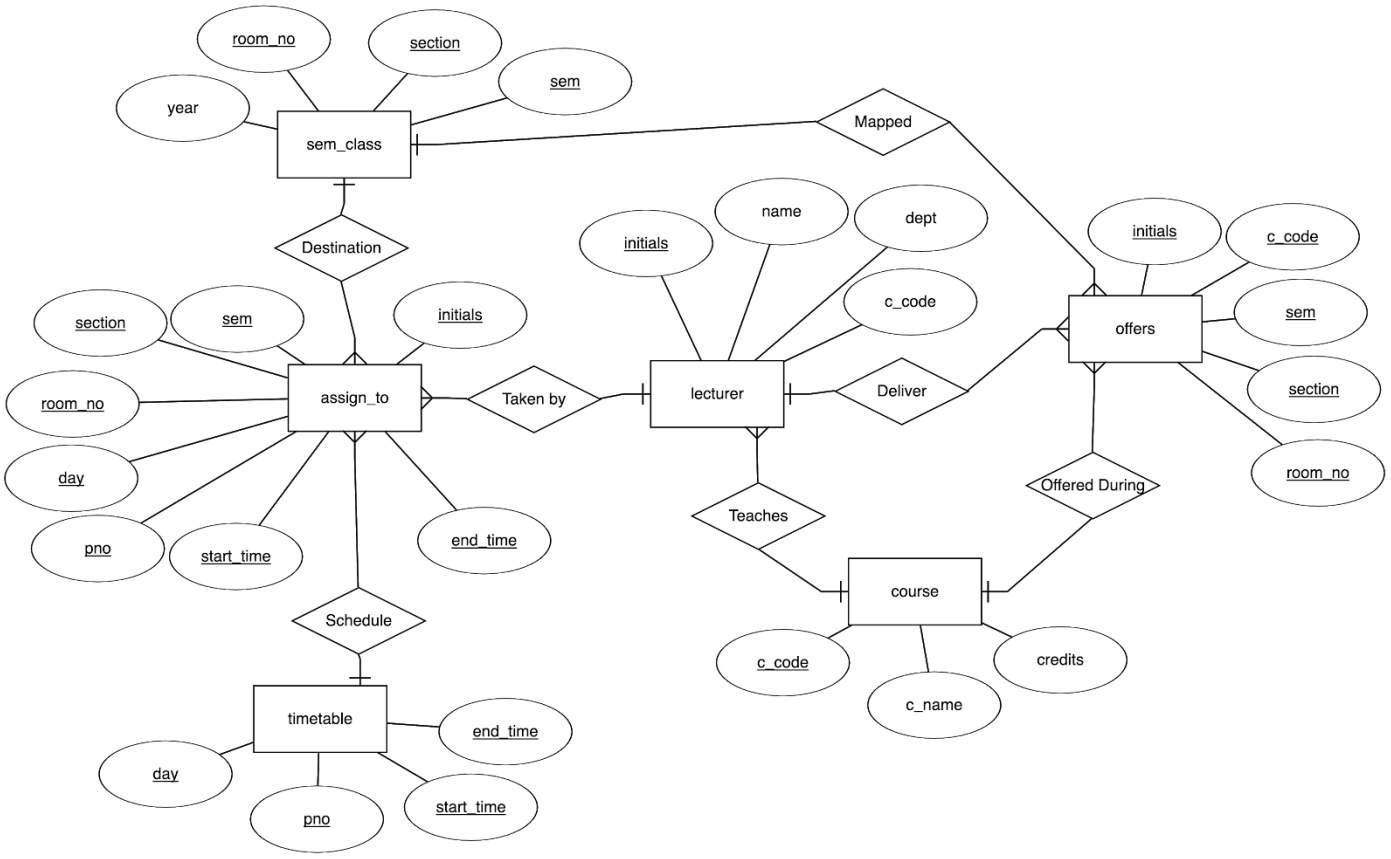
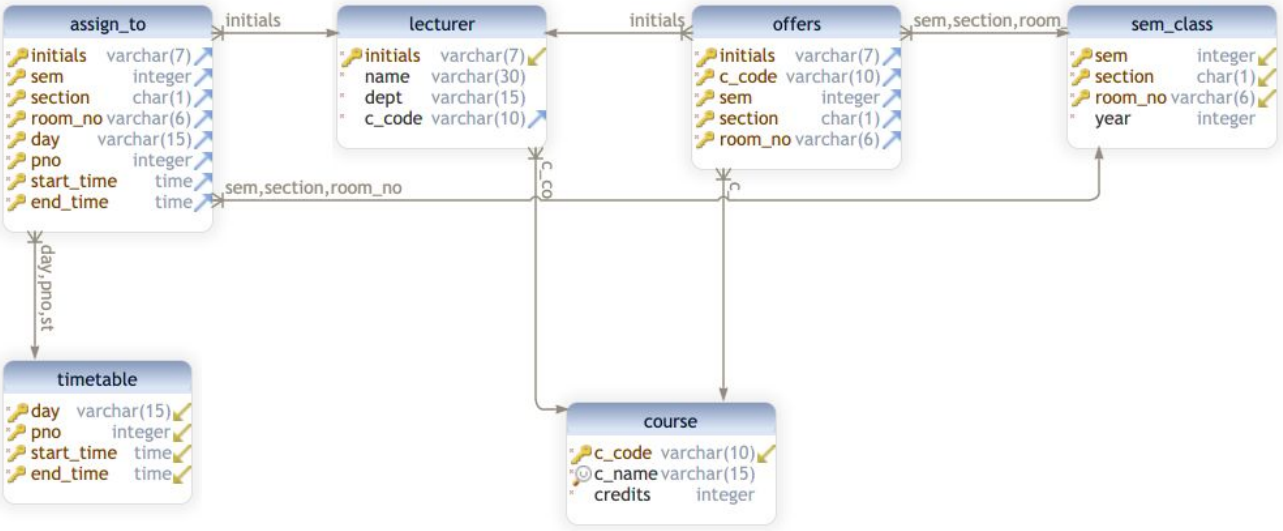
User Requirements

- The college has many departments, each of which has many faculty members that take classes for various semesters. We keep a record of the timings of all classes taken by faculties of all semesters, in all departments.
- The database will store the timetables of all classes in all semesters of all departments, from which the timetables of all teachers and lab instructors can be extracted.
- Any teacher can view her free slots as well as that of any other faculty member. This can also be accessed by students.
- If the timetable of a faculty is changed or they have any other works or are absent, the database can be updated and the timetable of the respective teacher is reorganized.
- The faculty will have an option to show that they are not free at any particular time if they wish to do so.
- The database also keeps track of all vacant classes at any a particular time, so that it can be used by any other teacher if the need arises.

Entity Relationship Diagram



Relational Schema



Details

Number of Tables Created: 6

Table No.	Table Name	No. of Attributes	No. of Tuples Inserted

1	ASSIGN_TO	8	168
2	COURSE	3	7
3	LECTURER	4	26
4	OFFERS	5	40
5	SEM_CLASS	4	8
6	TIMETABLE	4	30

Technologies

- Frontend: HTML, CSS & Bootstrap
- Backend: PHP
- Query Language: SQL
- RDBMS: PostgreSQL

Usage

- Start PostgreSQL service using the command

```
brew services start postgresql
```

To stop the service use the command

```
brew services stop postgresql
```

- Make sure to set the `DATABASE_NAME`, `DATABASE_PASS` and `DATABASE_USER` parameters in the `pg_connect` function in the `request.php` file.
- Open PostgreSQL terminal using the command

```
psql postgres
```

Create a new database using the command

```
CREATE DATABASE {DATABASE_NAME};
```

- Load the `demo.sql` file into PostgreSQL using the command

```
psql -U {DATABASE_USER} {DATABASE_NAME} < demo.sql
```

- Run PHP server inside `src` folder which has `index.php` file using the command

```
php -S localhost:3000
```