# DATABASE MANAGEMENT SYSTEMS LAB

Assignment 3: Web Based Information System Design

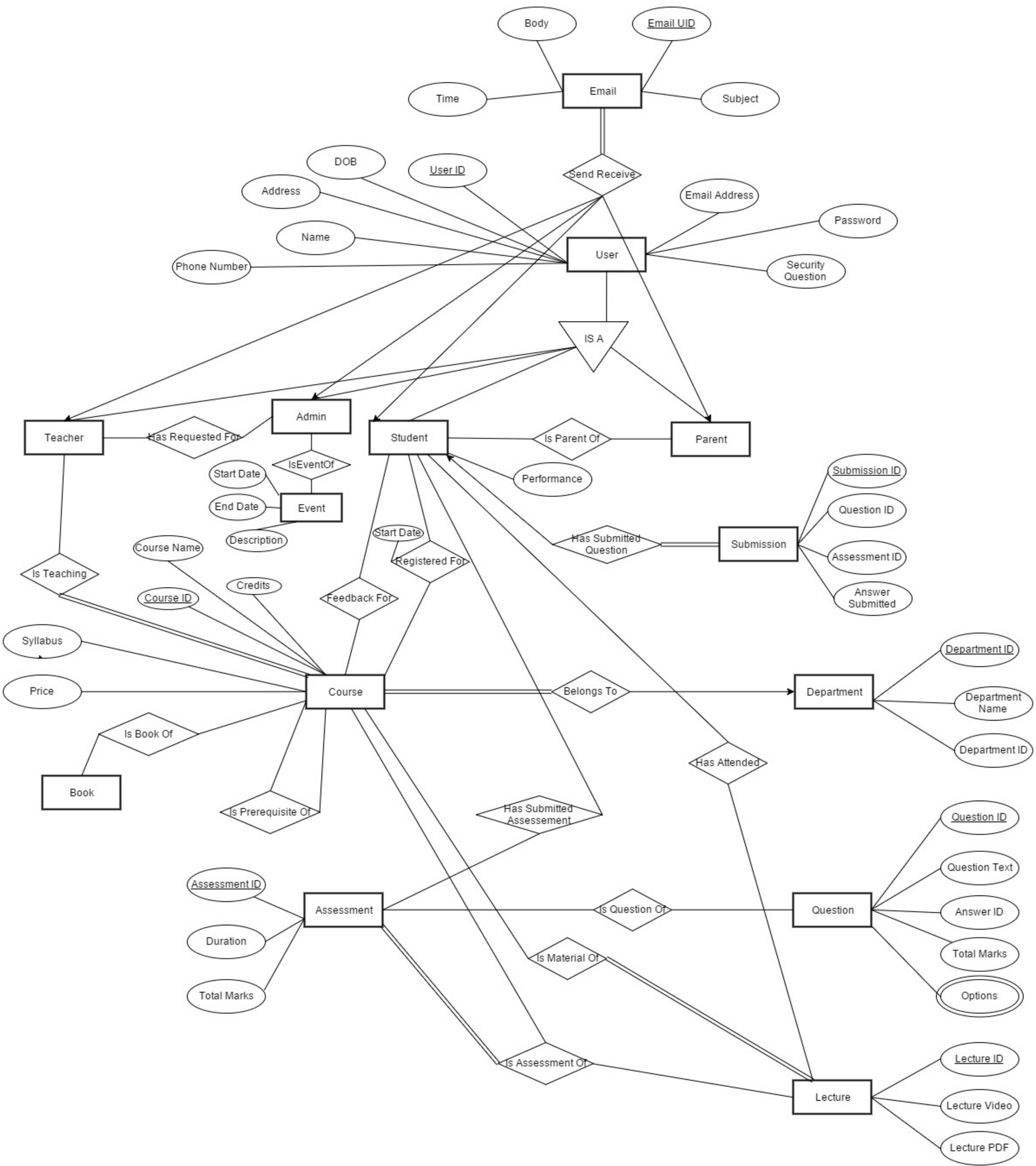Jatin Arora (13CS10057)

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# 1. ER DIAGRAM

# 2. WORKFLOW DIAGRAM

**Admin**

Manages the Courses and their Teachers

Takes regular feedback to improve the quality of teaching

**Teacher** → Gets the opportunity to teach in the global school → Registers himself on the online portal → Creates a new course along with its contents → Gets the Admin's approval for it

Create assessments for the lectures

Now Students can enroll in the course

Regularly updates the courses

Keeps track of the upcoming events and schedules his activities accordingly

Provides expert opinion to students → Email Service ← Clarifies his doubts from the best faculties across the globe

**Student** → Registers himself on the online portal → Gets access to diverse varieties of courses → Registers himself in the courses of his choice → Gets access to the workflow of the course

Goes through the available e-Learning material at his own pace

Regular assessments to support his understanding of lectures

Completes all the assessments and gets a detailed performance report

Submits his feedback for the course

**Parent** → Adds his ward → Reviews their ward's performance

# 3. Tools and Technologies Used

- **PHP**

  PHP was used for server-side scripting. Since in this assignment, all the PHP code was used for web-development, it was mostly embedded into HTML code.

- **MySQL**

  MySQL is an open-source relational database management system (RDBMS). It a central component of the LAMP (Linux-Apache-MySQL-PHP) stack in web-development.

- **JavaScript**

  JS is s high-level, dynamic and interpreted language. It is used alongside HTML and CSS for WWW contention production. We have used it for web-development mainly for associating actions with events such as mouse-click, key-up etc.

- **CSS**

  CSS stands for Cascading Style Sheets. It is used in the designing of HTML pages. We have used it because it can a lot of work as it helps to control the layout of multiple HTML pages at once.

- **HTML**

  HyperText Markup Language (HTML) is the standard markup language used to create web pages. Along with CSS, and JavaScript, we have used HTML to create visually engaging web pages required for our project.

- **JQuery**

  JQuery is cross-platform JS library. We have used it to simplify the client-side scripting of HTML in your project.

- **AJAX**

  AJAX stands for Asynchronous JavaScript and XML. WE have used it to perform certain asynchronous operations that were required in certain web pages in our project.

- **Bootstrap**

  Bootstrap is a HTML, CSS and JavaScript framework for developing mobile-first websites. We have used this framework extensively for creating webpages for our project.

# 4. Other Libraries And Code Snippets Used

- **Kartik File Uploader**

  This plugin was used to setup an advanced file picker/upload control built to work specially with Bootstrap CSS3 styles.

- **Bootstrap Form Helpers**

  Bootstrap Form Helpers is a collection of jQuery plugins which was used to build better forms.

- **Form Validator**

  This plugin was used to validate form fields designed for Bootstrap.

- **Full-Calendar**

  FullCalendar is a drag-and-drop jQuery plugin for displaying events on a full-sized calendar. This calendar was used for displaying for students' homepage.

- **TimeCircles**

  TimeCircles is a JQuery plugin used for creating a countdown or count up timer with circular design.

- **Nice-Scroll**

  Nice-Scroll is a JQuery plugin used to build nice scrollbars with a very similar IOS/mobile styles.

- **Font-Awesome**

  Font Awesome is a collection of scalable vector icons that can instantly be customized - size, color, drop shadow etc. can be done using CSS.

- **Time-duration Picker**

  This is a plugin to select the duration of time as per our requirement.

# 5. Tables in the Database

The SQL tables present is our database are as follows :

- ### Admin

  This table stores the list of all the users who are Admins of the Course Management System. Its fields' details are as follows :

```
mysql> describe Admin;
+--------------+--------------+------+-----+---------+----------------+
| Field        | Type         | Null | Key | Default | Extra          |
+--------------+--------------+------+-----+---------+----------------+
| UID          | int(11)      | NO   | PRI | NULL    | auto_increment |
| Name         | varchar(50)  | NO   |     | NULL    |                |
| username     | varchar(50)  | NO   |     | NULL    |                |
| DOB          | date         | NO   |     | NULL    |                |
| Address      | varchar(100) | NO   |     | NULL    |                |
| MobileNo     | varchar(20)  | NO   |     | NULL    |                |
| City         | varchar(50)  | NO   |     | NULL    |                |
| State        | varchar(50)  | NO   |     | NULL    |                |
| Country      | varchar(50)  | NO   |     | NULL    |                |
| email_id     | varchar(50)  | NO   |     | NULL    |                |
| Password     | varchar(100) | YES  |     | NULL    |                |
| SecurityQues | varchar(100) | NO   |     | NULL    |                |
| SecurityAns  | varchar(100) | NO   |     | NULL    |                |
| Photo        | varchar(100) | YES  |     | NULL    |                |
| JoinDate     | datetime     | YES  |     | NULL    |                |
+--------------+--------------+------+-----+---------+----------------+
15 rows in set (0.01 sec)
```

- ### Assessment

  This table stores the details associated with each assessment i.e. the date on which the student had attempted the assessment, the teacher who had created the assessment, the duration of the assessment and the total marks of the assessment. . Its fields' details are as follows :

```
mysql> describe Assessment;
+-------------+----------+------+-----+---------+----------------+
| Field       | Type     | Null | Key | Default | Extra          |
+-------------+----------+------+-----+---------+----------------+
| AID         | int(11)  | NO   | PRI | NULL    | auto_increment |
| StartDate   | datetime | NO   |     | NULL    |                |
| UID         | int(11)  | YES  |     | NULL    |                |
| Duration    | time     | YES  |     | NULL    |                |
| Total_Marks | int(11)  | YES  |     | NULL    |                |
+-------------+----------+------+-----+---------+----------------+
5 rows in set (0.01 sec)
```

- ### BelongsTo

  This table stores which department each course, which has been approved by the Admin, belongs to. Its fields' details are as follows :

```
mysql> describe BelongsTo;
+-------+---------+------+-----+---------+-------+
| Field | Type    | Null | Key | Default | Extra |
+-------+---------+------+-----+---------+-------+
| DID   | int(11) | YES  | MUL | NULL    |       |
| CID   | int(11) | YES  | MUL | NULL    |       |
+-------+---------+------+-----+---------+-------+
2 rows in set (0.15 sec)
```

- ### BelongsTo_Aux

  This table is an auxiliary version of the BelongsTo table and it stores the departments corresponding to all the courses which have or have not yet been approved by the admin. Its fields' details are as follows :

```
mysql> describe BelongsTo_Aux;
+-------+---------+------+-----+---------+-------+
| Field | Type    | Null | Key | Default | Extra |
+-------+---------+------+-----+---------+-------+
| DID   | int(11) | YES  | MUL | NULL    |       |
| CID   | int(11) | YES  | MUL | NULL    |       |
+-------+---------+------+-----+---------+-------+
2 rows in set (0.06 sec)
```

o **Book**

This table stores the details of each book i.e. name of the book, author of the book and the name of the file corresponding to the book, for all the books that are to be referred for the courses that have been approved by the admin. Its fields' details are as follows :

```
mysql> describe Book;
+--------+---------+------+-----+---------+----------------+
| Field  | Type    | Null | Key | Default | Extra          |
+--------+---------+------+-----+---------+----------------+
| BID    | int(11) | NO   | PRI | NULL    | auto_increment |
| Name   | text    | YES  |     | NULL    |                |
| Author | text    | YES  |     | NULL    |                |
| PDF    | text    | YES  |     | NULL    |                |
+--------+---------+------+-----+---------+----------------+
4 rows in set (0.01 sec)
```

o **Book_Aux**

This table is an auxiliary version of the Book table and it stores the details of all the books i.e. books that are to be referred for courses that may or may not have been approved by the admin yet. Its fields' details are as follows :

```
mysql> describe Book_Aux;
+--------+---------+------+-----+---------+----------------+
| Field  | Type    | Null | Key | Default | Extra          |
+--------+---------+------+-----+---------+----------------+
| BID    | int(11) | NO   | PRI | NULL    | auto_increment |
| Name   | text    | YES  |     | NULL    |                |
| Author | text    | YES  |     | NULL    |                |
| PDF    | text    | YES  |     | NULL    |                |
+--------+---------+------+-----+---------+----------------+
4 rows in set (0.03 sec)
```

o **Course**

This table stores the details of all the courses that have been approved by the admin. The details are the name of the course, the credits of the course, the syllabus of the course, the cost of the course, the pre-requisites required for the course and the course-id of the course. Its fields' details are as follows :

```
mysql> describe Course;
+-------------+---------------+------+-----+---------+----------------+
| Field       | Type          | Null | Key | Default | Extra          |
+-------------+---------------+------+-----+---------+----------------+
| CID         | int(11)       | NO   | PRI | NULL    | auto_increment |
| CourseName  | varchar(50)   | NO   |     | NULL    |                |
| Credits     | int(11)       | NO   |     | NULL    |                |
| Syllabus    | varchar(1000) | NO   |     | NULL    |                |
| cost        | float         | YES  |     | 0       |                |
| PreRequisite| mediumtext    | YES  |     | NULL    |                |
| CourseID    | text          | NO   |     | NULL    |                |
+-------------+---------------+------+-----+---------+----------------+
7 rows in set (0.03 sec)
```

o **Course_Aux**

This table stores the details of all the courses that have or have not been approved by the admin. The details are the name of the course, the credits of the course, the syllabus of the course, the cost of the course, the pre-requisites required for the course and the course-id of the course. Its fields' details are as follows :

```
mysql> describe Course_Aux;
+--------------+---------------+------+-----+---------+----------------+
| Field        | Type          | Null | Key | Default | Extra          |
+--------------+---------------+------+-----+---------+----------------+
| CID          | int(11)       | NO   | PRI | NULL    | auto_increment |
| CourseName   | varchar(50)   | NO   |     | NULL    |                |
| Credits      | int(11)       | NO   |     | NULL    |                |
| Syllabus     | varchar(1000) | NO   |     | NULL    |                |
| cost         | float         | YES  |     | 0       |                |
| PreRequisite | mediumtext    | YES  |     | NULL    |                |
| CourseID     | text          | NO   |     | NULL    |                |
+--------------+---------------+------+-----+---------+----------------+
7 rows in set (0.02 sec)
```

## o Department

This table stores the details of each department to which the courses in the system may belong to. The details include the name of the department, the number of courses belonging to the department ('count' column) and the code of the department. Its fields' details are as follows :

```
mysql> describe Department;
+----------+-------------+------+-----+---------+----------------+
| Field    | Type        | Null | Key | Default | Extra          |
+----------+-------------+------+-----+---------+----------------+
| DID      | int(11)     | NO   | PRI | NULL    | auto_increment |
| DeptName | varchar(50) | NO   |     | NULL    |                |
| Count    | int(11)     | YES  |     | 0       |                |
| Code     | text        | YES  |     | NULL    |                |
+----------+-------------+------+-----+---------+----------------+
4 rows in set (0.01 sec)
```

## o Email

This table stores the details of each email that has been sent from one user to another. The details are the subject of the email, the body of the email, the time of sending, the role (among 'Admin', 'Teacher', 'Parent' and 'Student') of the sender and the receiver and whether or not the email has been seen by the receiver. Its fields' details are as follows :

```
mysql> describe Email;
+--------------+---------------+------+-----+---------+----------------+
| Field        | Type          | Null | Key | Default | Extra          |
+--------------+---------------+------+-----+---------+----------------+
| EID          | int(11)       | NO   | PRI | NULL    | auto_increment |
| Subject      | mediumtext    | NO   |     | NULL    |                |
| Body         | mediumtext    | NO   |     | NULL    |                |
| Time         | datetime      | NO   |     | NULL    |                |
| Sender       | int(10) unsigned | NO |    | NULL    |                |
| Receiver     | int(10) unsigned | NO |    | NULL    |                |
| is_seen      | int(10) unsigned | NO |    | 0       |                |
| SenderRole   | varchar(1000) | NO   |     | NULL    |                |
| ReceiverRole | varchar(1000) | NO   |     | NULL    |                |
+--------------+---------------+------+-----+---------+----------------+
9 rows in set (0.01 sec)
```

## o Events

This table stores the details of all the events that are present in the calendar of the student. The details are the name of the event, the description of the event, the start-date of the event, the end-date of the event and the student whose calendar this event belongs to. Its fields' details are as follows :

```
mysql> describe Events;
+-------------+---------------+------+-----+---------+----------------+
| Field       | Type          | Null | Key | Default | Extra          |
+-------------+---------------+------+-----+---------+----------------+
| EID         | int(11)       | NO   | PRI | NULL    | auto_increment |
| UID         | int(11)       | NO   |     | NULL    |                |
| EventName   | mediumtext    | YES  |     | NULL    |                |
| Description | mediumtext    | YES  |     | NULL    |                |
| StartDate   | date          | YES  |     | NULL    |                |
| EndDate     | date          | YES  |     | NULL    |                |
| Completed   | enum('Y','N') | YES  |     | NULL    |                |
| Role        | mediumtext    | YES  |     | NULL    |                |
+-------------+---------------+------+-----+---------+----------------+
8 rows in set (0.00 sec)
```

## o FeedbackFor

This table stores the details of the feedback given by the students after the completion of each course. The details are the rating for the course given by the student, the suggestion for the course given by the student, the student who had given this feedback, whether or not this feedback has been seen by the admin and the course ID for which the feedback was given. The fields' details are as follows :

```
mysql> describe FeedbackFor;
+-------------------+---------------------+------+-----+---------+----------------+
| Field             | Type                | Null | Key | Default | Extra          |
+-------------------+---------------------+------+-----+---------+----------------+
| Rating            | int(10) unsigned    | NO   |     | NULL    |                |
| Suggestion        | mediumtext          | YES  |     | NULL    |                |
| SeenByAdmin       | int(10) unsigned    | YES  |     | 0       |                |
| Feedback_UID      | int(10) unsigned    | NO   | PRI | NULL    | auto_increment |
| Feedback_CourseID | varchar(255)        | NO   |     | NULL    |                |
+-------------------+---------------------+------+-----+---------+----------------+
5 rows in set (0.01 sec)
```

## o HasCompletedAss

This table stores the person who completed a particular assignment, along with the marks obtained by him in the assignment. The fields' details of the table are as follows :

```
mysql> describe HasCompletedAss;
+-----------+---------+------+-----+---------+-------+
| Field     | Type    | Null | Key | Default | Extra |
+-----------+---------+------+-----+---------+-------+
| UID       | int(11) | YES  | MUL | NULL    |       |
| AID       | int(11) | YES  | MUL | NULL    |       |
| completed | int(11) | YES  |     | NULL    |       |
| marksObt  | float   | YES  |     | NULL    |       |
+-----------+---------+------+-----+---------+-------+
4 rows in set (0.03 sec)
```

## o HasSeenLecture

This table stores whether a student has seen a particular lecture belonging to a particular course. The fields' details are as follows :

```
mysql> describe HasSeenLecture;
+-------------+------------------+------+-----+---------+-------+
| Field       | Type             | Null | Key | Default | Extra |
+-------------+------------------+------+-----+---------+-------+
| student_uid | int(10) unsigned | NO   |     | NULL    |       |
| lecture_lid | int(10) unsigned | NO   |     | NULL    |       |
| course_cid  | int(10) unsigned | NO   |     | NULL    |       |
+-------------+------------------+------+-----+---------+-------+
3 rows in set (0.01 sec)
```

## o IsAssessmentOf

This table stores which lecture a particular assessment corresponds to. The filed 'idx' is used to indicate newer versions of assignments corresponding to the same lecture. The fields' details are as follows :

```
mysql> describe IsAssessmentOf;
+-------+---------+------+-----+---------+-------+
| Field | Type    | Null | Key | Default | Extra |
+-------+---------+------+-----+---------+-------+
| AID   | int(11) | YES  | MUL | NULL    |       |
| LID   | int(11) | YES  | MUL | NULL    |       |
| idx   | int(11) | YES  |     | 0       |       |
+-------+---------+------+-----+---------+-------+
3 rows in set (0.02 sec)
```

## o IsBookOf

This table stores which course, which has already been approved by the admin, a particular book belongs to. The fields' details are as follows :

```
mysql> describe IsBookOf;
+-------+---------+------+-----+---------+-------+
| Field | Type    | Null | Key | Default | Extra |
+-------+---------+------+-----+---------+-------+
| CID   | int(11) | NO   | MUL | NULL    |       |
| BID   | int(11) | NO   | MUL | NULL    |       |
| idx   | int(11) | NO   |     | 0       |       |
+-------+---------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

- ## IsBookOf_Aux

  This table stores which course, which may or may not have been approved by the admin, a particular book belongs to. The fields' details are as follows :

```
mysql> describe IsBookOf_Aux;
+-------+---------+------+-----+---------+-------+
| Field | Type    | Null | Key | Default | Extra |
+-------+---------+------+-----+---------+-------+
| CID   | int(11) | NO   | MUL | NULL    |       |
| BID   | int(11) | NO   | MUL | NULL    |       |
| idx   | int(11) | NO   |     | 0       |       |
+-------+---------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

- ## IsMaterialOf

  This table stores which course, which has been approved by the admin, a particular lecture belongs to. Its fields' details are as follows :

```
mysql> describe IsMaterialOf;
+-------+---------+------+-----+---------+-------+
| Field | Type    | Null | Key | Default | Extra |
+-------+---------+------+-----+---------+-------+
| CID   | int(11) | NO   | MUL | NULL    |       |
| LID   | int(11) | NO   | MUL | NULL    |       |
| idx   | int(11) | YES  |     | NULL    |       |
+-------+---------+------+-----+---------+-------+
3 rows in set (0.02 sec)
```

- ## IsMaterialOf_Aux

  This table stores which course, which may or may not have been approved by the admin, a particular lecture belongs to. Its fields' details are as follows :

```
mysql> describe IsMaterialOf_Aux;
+-------+---------+------+-----+---------+-------+
| Field | Type    | Null | Key | Default | Extra |
+-------+---------+------+-----+---------+-------+
| CID   | int(11) | NO   | MUL | NULL    |       |
| LID   | int(11) | NO   | MUL | NULL    |       |
| idx   | int(11) | YES  |     | NULL    |       |
+-------+---------+------+-----+---------+-------+
3 rows in set (0.02 sec)
```

- ## IsParentOf

  This table stores who is the parent of which student. Its fields' details are as follows :

```
mysql> describe IsParentOf;
+-------------+------------------+------+-----+---------+-------+
| Field       | Type             | Null | Key | Default | Extra |
+-------------+------------------+------+-----+---------+-------+
| uid_parent  | int(10) unsigned | NO   |     | NULL    |       |
| uid_student | int(10) unsigned | NO   |     | NULL    |       |
+-------------+------------------+------+-----+---------+-------+
2 rows in set (0.01 sec)
```

- ## IsQuestionOf

  This table stores which assignment a particular question belongs to. Its fields' details are as follows :

```
mysql> describe IsQuestionOf;
+-------+---------+------+-----+---------+-------+
| Field | Type    | Null | Key | Default | Extra |
+-------+---------+------+-----+---------+-------+
| QID   | int(11) | YES  | MUL | NULL    |       |
| AID   | int(11) | YES  | MUL | NULL    |       |
+-------+---------+------+-----+---------+-------+
2 rows in set (0.02 sec)
```

- ## IsTeaching

  This table stores which courses are taught by a particular teacher and what is the status of approval of that course. This status is decided by the field 'idx' (0 corresponds to 'created' state, 1 corresponds to 'sent for approval' state, 2 corresponds to 'approved' state and 3 corresponds to 'rejected' state). Its fields' details are as follows :

```
mysql> describe IsTeaching;
+---------------+------------------+------+-----+---------+-------+
| Field         | Type             | Null | Key | Default | Extra |
+---------------+------------------+------+-----+---------+-------+
| UID           | int(11)          | NO   | MUL | NULL    |       |
| CID           | int(11)          | NO   |     | NULL    |       |
| idx           | int(11)          | YES  |     | NULL    |       |
| SeenByTeacher | int(10) unsigned | YES  |     | 0       |       |
+---------------+------------------+------+-----+---------+-------+
4 rows in set (0.12 sec)
```

- ## Lecture

  This table stores the filenames corresponding to the PDF and videos for each lecture corresponding to any course that has been approved by the admin. Its fields' details are as follows :

```
mysql> describe Lecture;
+-------+----------+------+-----+---------+----------------+
| Field | Type     | Null | Key | Default | Extra          |
+-------+----------+------+-----+---------+----------------+
| LID   | int(11)  | NO   | PRI | NULL    | auto_increment |
| Text  | longtext | YES  |     | NULL    |                |
| PDF   | text     | YES  |     | NULL    |                |
| Video | text     | YES  |     | NULL    |                |
+-------+----------+------+-----+---------+----------------+
4 rows in set (0.01 sec)
```

- ## Lecture_Aux

  This table stores the filenames corresponding to the PDF and videos for each lecture corresponding to any course that has or has not been approved by the admin. Its fields' details are as follows :

```
mysql> describe Lecture_Aux;
+-------+----------+------+-----+---------+----------------+
| Field | Type     | Null | Key | Default | Extra          |
+-------+----------+------+-----+---------+----------------+
| LID   | int(11)  | NO   | PRI | NULL    | auto_increment |
| Text  | longtext | YES  |     | NULL    |                |
| PDF   | text     | YES  |     | NULL    |                |
| Video | text     | YES  |     | NULL    |                |
+-------+----------+------+-----+---------+----------------+
4 rows in set (0.01 sec)
```

- ## Parent

This table stores the list of all the users who are Parents of some students studying in the Course Management System. Its fields' details are as follows :

```
mysql> describe Parent;
+--------------+--------------+------+-----+---------+----------------+
| Field        | Type         | Null | Key | Default | Extra          |
+--------------+--------------+------+-----+---------+----------------+
| UID          | int(11)      | NO   | PRI | NULL    | auto_increment |
| Name         | varchar(50)  | NO   |     | NULL    |                |
| username     | varchar(50)  | NO   |     | NULL    |                |
| DOB          | date         | NO   |     | NULL    |                |
| Address      | varchar(100) | NO   |     | NULL    |                |
| MobileNo     | varchar(20)  | NO   |     | NULL    |                |
| City         | varchar(50)  | NO   |     | NULL    |                |
| State        | varchar(50)  | NO   |     | NULL    |                |
| Country      | varchar(50)  | NO   |     | NULL    |                |
| email_id     | varchar(50)  | NO   |     | NULL    |                |
| Password     | varchar(100) | YES  |     | NULL    |                |
| SecurityQues | varchar(100) | NO   |     | NULL    |                |
| SecurityAns  | varchar(100) | NO   |     | NULL    |                |
| Photo        | varchar(100) | YES  |     | NULL    |                |
| JoinDate     | datetime     | YES  |     | NULL    |                |
+--------------+--------------+------+-----+---------+----------------+
15 rows in set (0.10 sec)
```

- ## Question

This table stores the question-text, answer-text, marks and 4 options corresponding to each question. Its fields' details are as follows :

```
mysql> describe Question;
+-------------+---------------+------+-----+---------+----------------+
| Field       | Type          | Null | Key | Default | Extra          |
+-------------+---------------+------+-----+---------+----------------+
| QID         | int(11)       | NO   | PRI | NULL    | auto_increment |
| ques        | mediumtext    | NO   |     | NULL    |                |
| ans         | mediumtext    | NO   |     | NULL    |                |
| marks       | float         | NO   |     | NULL    |                |
| isObjective | enum('Y','N') | NO   |     | NULL    |                |
| option1     | mediumtext    | YES  |     | NULL    |                |
| option2     | mediumtext    | YES  |     | NULL    |                |
| option3     | mediumtext    | YES  |     | NULL    |                |
| option4     | mediumtext    | YES  |     | NULL    |                |
+-------------+---------------+------+-----+---------+----------------+
9 rows in set (0.00 sec)
```

- ## RegisteredFor

This table stores which courses have been taken by which students and also the start=date of joining of each course for all students. Its fields' details are as follows :

```
mysql> describe RegisteredFor;
+-----------+---------------+------+-----+---------+-------+
| Field     | Type          | Null | Key | Default | Extra |
+-----------+---------------+------+-----+---------+-------+
| CID       | int(11)       | YES  | MUL | NULL    |       |
| UID       | int(11)       | YES  | MUL | NULL    |       |
| StartDate | datetime      | YES  |     | NULL    |       |
| EndDate   | datetime      | YES  |     | NULL    |       |
| Passed    | enum('Y','N') | YES  |     | NULL    |       |
| GradeObt  | varchar(10)   | YES  |     | NULL    |       |
+-----------+---------------+------+-----+---------+-------+
6 rows in set (0.01 sec)
```

### ○ Response

This table stores which answer was marked by which user for a question and whether the marked answer was correct or not. Also the marks obtained for each response are stored. Its fields' details are as follows :

```
mysql> describe Response;
+----------+---------------+------+-----+---------+-------+
| Field    | Type          | Null | Key | Default | Extra |
+----------+---------------+------+-----+---------+-------+
| QID      | int(11)       | YES  | MUL | NULL    |       |
| UID      | int(11)       | YES  | MUL | NULL    |       |
| ans      | mediumtext    | YES  |     | NULL    |       |
| marksObt | float         | YES  |     | NULL    |       |
| wow      | enum('Y','N') | YES  |     | NULL    |       |
+----------+---------------+------+-----+---------+-------+
5 rows in set (0.12 sec)
```

### ○ Student

This table stores the list of all the users who are Students studying in the Course Management System. Its fields' details are as follows :

```
mysql> describe Student;
+---------------+--------------+------+-----+---------+----------------+
| Field         | Type         | Null | Key | Default | Extra          |
+---------------+--------------+------+-----+---------+----------------+
| UID           | int(11)      | NO   | PRI | NULL    | auto_increment |
| Name          | varchar(50)  | NO   |     | NULL    |                |
| username      | varchar(50)  | NO   |     | NULL    |                |
| DOB           | date         | NO   |     | NULL    |                |
| Address       | varchar(100) | NO   |     | NULL    |                |
| MobileNo      | varchar(20)  | NO   |     | NULL    |                |
| City          | varchar(50)  | NO   |     | NULL    |                |
| State         | varchar(50)  | NO   |     | NULL    |                |
| Country       | varchar(50)  | NO   |     | NULL    |                |
| email_id      | varchar(50)  | NO   |     | NULL    |                |
| Password      | varchar(100) | YES  |     | NULL    |                |
| SecurityQues  | varchar(100) | NO   |     | NULL    |                |
| SecurityAns   | varchar(100) | NO   |     | NULL    |                |
| Photo         | varchar(100) | YES  |     | NULL    |                |
| JoinDate      | datetime     | YES  |     | NULL    |                |
| CGPA          | float        | YES  |     | NULL    |                |
| CreditsCleared| int(11)      | YES  |     | 0       |                |
+---------------+--------------+------+-----+---------+----------------+
17 rows in set (0.20 sec)
```

### ○ StudentProgress

This table stores whether a student has completed a lecture or not and also his/her notes corresponding to that lecture. Its fields' details are as follows :

```
mysql> describe StudentProgress;
+---------------+------------+------+-----+---------+-------+
| Field         | Type       | Null | Key | Default | Extra |
+---------------+------------+------+-----+---------+-------+
| UID           | int(11)    | NO   | MUL | NULL    |       |
| LID           | int(11)    | NO   |     | NULL    |       |
| has_completed | int(11)    | YES  |     | NULL    |       |
| notes         | mediumtext | YES  |     | NULL    |       |
+---------------+------------+------+-----+---------+-------+
4 rows in set (0.02 sec)
```

### ○ Teacher

This table stores the list of all the users who are Teachers teaching in the Course Management System. Its fields' details are as follows :

```
mysql> describe Teacher;
+--------------+--------------+------+-----+---------+----------------+
| Field        | Type         | Null | Key | Default | Extra          |
+--------------+--------------+------+-----+---------+----------------+
| UID          | int(11)      | NO   | PRI | NULL    | auto_increment |
| Name         | varchar(50)  | NO   |     | NULL    |                |
| username     | varchar(50)  | NO   |     | NULL    |                |
| DOB          | date         | NO   |     | NULL    |                |
| Address      | varchar(100) | NO   |     | NULL    |                |
| MobileNo     | varchar(20)  | NO   |     | NULL    |                |
| City         | varchar(50)  | NO   |     | NULL    |                |
| State        | varchar(50)  | NO   |     | NULL    |                |
| Country      | varchar(50)  | NO   |     | NULL    |                |
| email_id     | varchar(50)  | NO   |     | NULL    |                |
| Password     | varchar(100) | YES  |     | NULL    |                |
| SecurityQues | varchar(100) | NO   |     | NULL    |                |
| SecurityAns  | varchar(100) | NO   |     | NULL    |                |
| Photo        | varchar(100) | YES  |     | NULL    |                |
| JoinDate     | datetime     | YES  |     | NULL    |                |
+--------------+--------------+------+-----+---------+----------------+
15 rows in set (0.02 sec)
```