Table Design

**User Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| UserID | INT | Primary Key | Unique identifier for users. |
| Username | VARCHAR | Unique | User's username for login. |
| Password | VARCHAR |  | User's password (hashed and salted for security). |
| Email | VARCHAR |  | User's email address for communication. |
| Role | VARCHAR |  | User's role (Student, Teacher, Admin). |

**Student Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| Student\_id | INT | Primary Key | Unique identifier for student. |
| First\_name | VARCHAR |  | Additional Information |
| Last\_name | VARCHAR |  |  |
| Email | VARCHAR |  |  |
| Username | VARCHAR | Unique | student username for login |
| Password | VARCHAR |  | student password |
| Department | VARCHAR | Foreign Key |  |

**Teacher Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| Teacher\_id | INT | Primary Key | Unique identifier for teacher. |
| First\_name | VARCHAR |  | Additional Information |
| Last\_name | VARCHAR |  |  |
| Email | VARCHAR |  |  |
| Username | VARCHAR | Unique | Teacher username for login |
| Password | VARCHAR |  | Teacher password |
| Department | VARCHAR | Foreign Key |  |

**Course Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| Course\_id | INT | Primary Key | Unique identifier for course. |
| Course\_name | VARCHAR |  | Name of Course |

**Question Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| Question\_id | INT | Primary Key | Unique identifier for Question |
| Course\_id | INT | Foreign Key | Reference as the course |
| Question-text | TEXT |  | Text for the Question |
| options | TEXT |  |  |
| Correct-answer | VARCHAR |  |  |

**Course\_Teacher Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| ID | INT | Primary Key | Unique identifier for course-teacher associations. |
| CourseID | INT | Foreign Key | Reference to the course |
| TeacherID | INT | Foreign Key | Reference to the teacher. |
| AssignmentID | INT | Foreign Key | Reference to assigned assignments. |
| NoteID | INT | Foreign Key | Reference to assigned notes. |

**Assignment Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| AssignmentID | INT | Primary Key | Unique identifier for assignments. |
| CourseID | INT | Foreign Key | Reference to the associated course. |
| TeacherID | INT | Foreign Key | Reference to the assigning teacher. |
| Title | VARCHAR |  | Title of the assignment |
| Description | TEXT |  | Description of the assignment. |
| Deadline | DATETIME |  | Deadline for assignment submission. |

**Note Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| NoteID |  | Primary Key | Unique identifier for notes. |
| CourseID |  | Foreign Key | Reference to the associated course. |
| TeacherID | INT | Foreign Key | Reference to the creating teacher. |
| Title | VARCHAR |  | Title of the note. |
| Content | TEXT |  | Content of the note. |
| UploadDate | DATETIME |  | Date when the note was uploaded. |

**Exam Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| ExamID | INT | Primary Key | Unique identifier for exams. |
| SetID | INT | Foreign Key | Reference to the question set for the exam. |
| CourseID | INT | Foreign Key | Reference to the associated course. |
| TeacherID | INT | Foreign Key | Reference to the creating teacher. |
| ExamTitle | VARCHAR |  | Title of the exam. |
| ExamDateTime | DATETIME |  | Date and time when the exam takes place. |

**Certificate Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| CertificateID | INT | Primary Key | Unique identifier for certificates. |
| StudentID | INT | Foreign Key | Reference to the student receiving the certificate. |
| CourseID | INT | Foreign Key | Reference to the associated course. |
| DateIssued | DATETIME |  | Date when the certificate was issued. |

**TeacherApproval Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Constraints** | **Description** |
| **ApprovalID** | **INT** | **Primary Key** | **Unique identifier for teacher approvals.** |
| **TeacherID** | **INT** | **Foreign Key** | **Reference to the teacher seeking approval.** |
| **AdminID** | **INT** | **Foreign Key** | **Reference to the approving administrator.** |
| **ApprovalStatus** | **VARCHAR** |  | **Approval status (e.g., Approved, Declined).** |
| **SalarySet** | **DECIMAL** |  | **Salary set for the teacher upon approval.** |