

VOLUNTEER APPLICATION OF MS GRADUATES IN COMPUTER SCIENCE

CSE 5335-001- WEB DATA MANAGEMENT

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Database Schema

Group 3 Team Members

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Database Schema

Through a structured volunteer program, the computer science master's degree applicant volunteer application tackles the job issues faced by fresh graduates. As of right now, we have created using MySQL; however, depending on other database tools for application performance, there may be minor schema modifications depending on dependencies; ideally, these are the primary components used.

```
User (  
  UserID INT PRIMARY KEY,  
  Name VARCHAR,  
  Email VARCHAR,  
  Password VARCHAR,  
  Contact VARCHAR,  
  Role VARCHAR,  
  Permissions VARCHAR,  
  SessionToken VARCHAR,  
  EmailVerified BOOLEAN  
)
```

```
Graduate (  
  UserID INT PRIMARY KEY,  
  GraduationDate DATE,  
  DepartmentID INT FOREIGN KEY REFERENCES Department(DeptID),  
  JobStatus VARCHAR,  
  WorkHours INT  
)
```

Professor (
 UserID INT PRIMARY KEY,
 DepartmentID INT FOREIGN KEY REFERENCES Department(DeptID)
)

Department (
 DeptID INT PRIMARY KEY,
 DepartmentName VARCHAR
)

Task (
 TaskID INT PRIMARY KEY,
 Title VARCHAR,
 Description VARCHAR,
 StartDate DATE,
 Deadline DATE,
 Priorities VARCHAR,
 UserID INT FOREIGN KEY REFERENCES User(UserID)
)

Report (
 ReportID INT PRIMARY KEY,
 Summary VARCHAR,
 Justification VARCHAR,
 Attachments VARCHAR,
 UserID INT FOREIGN KEY REFERENCES User(UserID)
)

ChatMessage (
 MessageID INT PRIMARY KEY,
 SenderID INT FOREIGN KEY REFERENCES User(UserID),
 ReceiverID INT FOREIGN KEY REFERENCES User(UserID),
 MessageText VARCHAR,
 Timestamp DATETIME
)

PerformanceReport (
 PerformanceReportID INT PRIMARY KEY,
 PerformanceSummary VARCHAR,
 ProfessorID INT FOREIGN KEY REFERENCES Professor(UserID),
 GraduateID INT FOREIGN KEY REFERENCES Graduate(UserID),
 DepartmentID INT FOREIGN KEY REFERENCES Department(DeptID),
 ImmigrationReportStatus VARCHAR
)

User Table:

- **UserID:** Unique identifier for each user.
- **Name:** Full name of the user.
- **Email:** Email address associated with the user.
- **Password:** Securely stored password for user authentication.

- **Contact:** Contact information for the user.
- **Role:** Role or position of the user within the system.
- **Permissions:** Specific permissions granted to the user.
- **SessionToken:** Token used for maintaining user sessions.
- **EmailVerified:** Boolean indicating whether the user's email has been verified.

Graduate Table:

- **UserID:** Unique identifier linking to the corresponding user.
- **GraduationDate:** Date of the user's graduation.
- **DepartmentID:** Foreign key referencing the department to which the graduate belongs.
- **JobStatus:** Current employment status of the graduate.
- **WorkHours:** Number of hours the graduate is expected to work.

Professor Table:

- **UserID:** Unique identifier linking to the corresponding user.
- **DepartmentID:** Foreign key referencing the department to which the professor belongs.

Department Table:

- **DeptID:** Unique identifier for each department.
- **DepartmentName:** Name of the department.

Task Table:

- **TaskID:** Unique identifier for each task.
- **Title:** Title or name of the task.
- **Description:** Detailed description of the task.
- **StartDate:** Date when the task is initiated.
- **Deadline:** Date by which the task should be completed.
- **Priorities:** Priority levels assigned to the task.
- **UserID:** Foreign key referencing the user responsible for the task.

Report Table:

- **ReportID:** Unique identifier for each report.
- **Summary:** Brief summary of the report.
- **Justification:** Justification or reasoning behind the report.
- **Attachments:** Reference to any attached files or documents.
- **UserID:** Foreign key referencing the user associated with the report.

ChatMessage Table:

- **MessageID:** Unique identifier for each chat message.
- **SenderID:** Foreign key referencing the user sending the message.
- **ReceiverID:** Foreign key referencing the user receiving the message.
- **MessageText:** Text content of the chat message.
- **Timestamp:** Date and time when the message was sent.

PerformanceReport Table:

- **PerformanceReportID:** Unique identifier for each performance report.
- **PerformanceSummary:** Summary of the user's performance.
- **ProfessorID:** Foreign key referencing the professor associated with the report.
- **GraduateID:** Foreign key referencing the graduate associated with the report.
- **DepartmentID:** Foreign key referencing the department related to the report.
- **ImmigrationReportStatus:** Status of the immigration report for the user.