**Student Table**

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Indexing Strategy |
| StudentID (PK) | VARCHAR | Fast searching for students’ information. |
| Full Name | VARCHAR (255) | Useful for searching for students by name. |
| CourseID (FK) | INT | Index to speed up lookups by course. |
| Email | VARCHAR (255) | Fast search by email. |
| Password | VARCHAR (255) |  |
| Year Level | INT | For sorting student by year level. |
| UserID (FK) | INT | Index for joining with the user table. |

**Course Table**

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Indexing Strategy |
| CourseID (PK) | INT |  |
| Course Name | VARCHAR (255) | Faster searches by course name. |
| College | VARCHAR (255) | Useful for filtering courses by college. |

**Attendance Table**

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Indexing Strategy |
| AttendanceID (PK) | INT |  |
| EventID (FK) | INT | Faster event-based attendance lookups. |
| StudentID (FK) | VARCHAR (255) | Quick search for student attendance. |
| Check\_In\_Time | DATETIME | Useful for querying attendance records within specific time ranges. |
| Check\_Out\_Time | DATETIME |  |
| Checkpoint | VARCHAR (255) |  |
| Status | ENUM | Quick filtering by attendance status. |

**Event Table**

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Indexing Strategy |
| EventID (PK) | INT |  |
| EventName | VARCHAR (255) | Useful for searching events by name. |
| Date & Time | DATETIME | Fasters the searching of events schedules |
| Location | VARCHAR (255) | Useful for filtering events by location. |
| OrganizerID (FK) | INT | Faster sorting by organizer |

**Student Officer Table**

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Indexing Strategy |
| OfficerID (PK) | INT | Fast lookups using the officer’s unique identifier. |
| Name | VARCHAR (255) | Useful if you frequently search officers by name. |
| Position | VARCHAR (255) | Useful if you frequently filter officers by their position. |
| Email | VARCHAR (255) | Fast officer’s lookups |
| Password | VARCHAR (255) |  |
| UserID (FK) | INT | Optimizes join with user |

**Event Organizer Table**

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Indexing Strategy |
| OrganizerID (PK) | INT |  |
| Name | VARCHAR (255) | Useful if you frequently search for organizers by name. |
| Email | VARCHAR (255) | Faster lookup by email. |
| Password | VARCHAR (255) |  |
| UserID (FK) | INT | Optimize joins with user. |

**User Table**

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Indexing Strategy |
| UserID (PK) | INT |  |
| RoleID (FK) | INT | Quick sorting by role |
| Email | VARCHAR (255) | Faster user searches |
| Name | VARCHAR (255) |  |
| FaceID (FK) | INT | Optimizes biometric lookups |

**Role Table**

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Indexing Strategy |
| RoleID (PK) | INT |  |
| Role Name | VARCHAR (255) | Faster role lookups |

**User Roles Table**

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Indexing Strategy |
| UserID (FK) | INT | Optimizes user-role mapping |
| RoleID (FK) | INT | Optimizes user-role mapping |

**Face Table**

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Indexing Strategy |
| FaceID (PK) | INT |  |
| UserID (FK) | INT | Quick look up for facial recognition |

**Officer Event Table**

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Indexing Strategy |
| OfficerID (FK) | INT | Quick searches for the event officers |
| EventID (FK) | INT | Quick officer-event search |