

To design an Entity-Relationship (ER) diagram for the described MySQL database system and then convert it into tables, we'll need to identify the entities, their attributes, and the relationships between them.

ER Diagram

Entities and Attributes:

1. Employee

- EmployeeID (Primary Key)
- FirstName
- LastName
- HireDate
- DepartmentID (Foreign Key)
- LocationID (Foreign Key)

2. Department

- DepartmentID (Primary Key)
- DepartmentName
- LocationID (Foreign Key)

3. Location

- LocationID (Primary Key)
- LocationName
- Address
- City
- State
- ZipCode

Relationships:

- **Employee-Department:** Each employee is assigned to one department (1 relationship).
- **Department-Location:** Each department is located in one location (M:1 relationship).
- **Location-Department:** Each location can accommodate multiple departments (relationship).

ER DIAGRAM:

Here is a visual representation of ER diagram

```
+-----+
| Employee |
+-----+
| - Employee ID |
| - Name      |
| - Email     |
| - Phone Number|
| - Department ID|
+-----+
|
```

```

      |
      v
+-----+
| Department |
+-----+
| - Department ID |
| - Department Name |
| - Location ID   |
+-----+
      |
      |
      v
+-----+
| Location   |
+-----+
| - Location ID |
| - Location Address|
| - City       |
| - State      |
| - Country    |

```

Employee Table

Column Name	Data Type	Constraints
employee_id	int	PRIMARY KEY
Name	varchar(50)	
Email	varchar(100)	
phone_number	varchar(20)	
department_id	int	FOREIGN KEY

Department Table

Column Name	Data Type	Constraints
department_id	int	PRIMARY KEY
department_name	varchar(50)	
location_id	int	FOREIGN KEY

Location Table

Column Name	Data Type	Constraints
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Column Name	Data Type	Constraints
location_id	int	PRIMARY KEY
location_address	varchar(100)	
City	varchar(50)	
State	varchar(50)	
Country	varchar(50)	