### 🧾 ****Normalization of EMS Payroll Database****

The design of the EMS Payroll database adheres to the **Third Normal Form (3NF)** to ensure data integrity and eliminate redundancy. Here's how normalization is applied:

### ✅ ****First Normal Form (1NF):****

All tables contain **atomic values** (e.g., a single phone number, one attendance entry per row).

There are **no repeating groups** or multi-valued attributes.

Each record is **uniquely identifiable** using a **primary key** (e.g., employee\_id, attendance\_id).

### ✅ ****Second Normal Form (2NF):****

All **non-key attributes** are **fully functionally dependent** on the entire primary key.

For example, in the **PAYROLL** table, attributes like basic\_salary, deductions, and net\_salary depend entirely on payroll\_id, not just employee\_id.

### ✅ ****Third Normal Form (3NF):****

There are **no transitive dependencies**.

For instance, employee salary details are stored in the **PAYROLL** table, not in **EMPLOYEE**, avoiding duplication.

Departments are separated into a different table to avoid repeating department data across employees.

### 🔄 ****Benefits of Normalization in EMS:****

**Reduces data redundancy** (no repeating data across multiple tables).

**Improves data integrity and consistency**.

**Enables efficient queries and updates**.

**Supports scalability** as new features are added (like benefits, tax slabs, etc.).

