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Individual Assignment

Database Management System

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Name of Project Saloon Management System

The Saloon Management System is designed to help manage the day-to-day operations of a saloon. It tracks services offered to customers, appointments, staff information, customer details, billing, and payments. The system will allow customers to book appointments, pay for services, and get a detailed history of their past visits. Staff members will be able to manage appointments and provide services efficiently.

**ERD (Entity Relationship Diagram):** The **Entity-Relationship Diagram (ERD)** for the **Saloon Management System** visually represents the system’s entities (tables) and their relationships. It helps to organize and structure the data logically, showing how different components of the system interact.

**Entities:**

**Customer** (Customer ID, Name, Contact, Email, Address)

**Service** (Service\_ID, Service\_Name, Description, Price)

**Staff** (Staff\_ID, Name, Position, Salary)

**Payment** (Payment\_ID, Amount, Payment Date, Payment Method)

**LDM (Logical Data Model):**

The LDM would define the relationships between these entities in a more normalized manner:

**Customer (Customer ID, Name, Contact, Email, Address)**

**Service (Service\_ID, Service\_Name, Description, Price)**

**Staff (Staff\_ID, Name, Position, Salary)**

**Payment (Payment\_ID, Amount, Payment Date, Payment Method)**

|  |
| --- |
| **Customers** |
| customer ID(PK)  Name  Contact number  Email  Address |

|  |
| --- |
| **Staff** |
| Staff ID(PK)  StaffName  Position  Salary |

|  |
| --- |
| **Services** |
| ServicesID(PK)  ServiceName  Description  Price |

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|  |
| --- |
| **Payments** |
| Payment ID(PK)  Customer ID(FK)  Staff(FK)  Serivice(fk)  Amount  Payment Date  Payment Method |

**Relationships**

One Customer can have many Payments.

One Service can be linked to many Payments but is provided by only one Staff member.

One Staff member can provide many Services.

### ****(Physical Data Model):****

The physical model defines how the data will be stored in the database and its structure.

**Customer Table**:

Columns: Customer ID (PK), Name, Contact, Email (Unique), Address

**Service Table**:

Columns: Service ID (PK), Service Name, Description, Price

**Staff Table**:

Columns: Staff ID (PK), Name, Position, Salary

**Payment Table**:

Columns: Payment ID (PK), Amount, Payment Date, Payment Method, Customer ID (FK)

**Data Dictionary**

A **Data Dictionary** in the context of a **Salon Management System** provides a detailed description of the tables, fields, relationships, and constraints used to store and manage data for various salon operations, such as managing customers, services, appointments, payments, and staff. Here is a breakdown of how a data dictionary might look for a Salon Management System.

CUSTOMER\_ID

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| NAME | | DATA TYPE | | CONSTRAINTS | | DESCRIPTION |
| Customer\_id | | int | | Primary key, AUTO\_INCREMENT | | Unique identifier for each customer. |
| name | | Varchar (255) | | Not null | | Full name of the customer. |
| contact | | Varchar (20) | | Not null | | Contact phone number of the customer. |
| Email | | Varchar (255) | | Not null | | Customer email address (must be unique). |
| address | Varchar (500) | | Not null | | Address of the customer. | |

SERVICE\_ID

|  |  |  |  |
| --- | --- | --- | --- |
| Column  name | Data type | constraints | description |
| Serviced | int | Primary key, auto\_increment | Unique identifier for each service. |
| Service \_name | Varchar (100) | Not null | Name of the service (e.g.,” web design”). |
| description | text | nullable | A detailed description of the service |
| price | Decimal (10,2) | Not null | Price of the service (e.g.199.00). |

STAFF\_ID

|  |  |  |  |
| --- | --- | --- | --- |
| COLUMN  NAME | DATA TYPE | CONSTRAINTS | DESRIPTION |
| Staff\_id | int | Primary key, AUTO\_INCREMENT | Unique identifier for each staff member. |
| name | Varchar (255) | Not null | Full name of the staff member. |
| position | Varchar (100) | Not null | The position or role of the staff member? (e.g.,” manager”). |
| salary | Decimal (15,2) | Not null | Monthly salary of the staff member. |

PAYMENT\_ID

|  |  |  |  |
| --- | --- | --- | --- |
| COLUMN NAME | DATA TYPE | CONSTRAINTS | DESCRIPTION |
| Payment\_id | int | Primary key, auto increment | Unique identifier for each payment. |
| amount | Decimal (10,2) | Not null | Total payment amount (e.g.., 100.00). |
| Payment date | Date time | Not null | Date and time of payment. |
| Payment method | Varchar (50) | Not null | Payment customer (customer\_, |
| Customer\_id | int | Foreign key, not null | References customer(customer\_id),  Linking payment to the customer. |