# ER Diagram for Order Management System | Entity Relationship Diagram

In this post, we will know how to create ER Diagram for Order Management System. Thus, we will provide definitions and explanations for easy understanding and clarity. Along with it are a step-by-step guide on how to create an ER Diagram.

With that being said...

The ER diagram for Order Management System, reveals the relationship of its entities to form the project database design. It shows the logical structure of the system database and design. It is done by identifying the order process **entities**, their **properties**, and the **interactions** between them.

Thus, database design is represented using ER diagrams from the order management system project. This database diagram becomes the reference for the system's data storage, which will serve as a data destination and source.

## Order Management System ER Diagram: Details

The table provides an overview of the ER Diagram for the Order Management System. It provides a complete summary of the project's information.

| Name: | Order Management System ER Diagram |
|---|---|
| **Abstract**: | The order management system ER diagram shows the relationship between various entities. It can be thought of as a blueprint for your system (project) structure. |
| **Diagram**: | **ER Diagram is also known** as Entity Relationship Diagram |
| **Tools Used**: | Diagraming tools that provide ER diagram symbols. |
| **Users**: | **Website, Applications, and Software.** |
| **Designer**: | Sourcecodehero.com |

*Order Management System ER Diagram: Details*

## What is an ER Diagram?

The ER Diagram also refers to the database design of the order management system. It is the graphical representation of the relationships between all system entities. It consists mostly of **Entities, Attributes,** and **Relationships.**

In addition, the Order management system ER Diagram is utilized in DBMS to construct and troubleshoot relational databases. It operates most effectively with DFD (Data Flow Diagram), which is accountable for data transportation.

With the help of an ER diagram, it would be considerably simpler to develop the database design for the order management system.

Along with this, the system function objective is to encode consumer data and transactions. Additionally, the order management administrator must have access to customer data for inventory and reporting purposes. The data used in transactions must be handled and protected and the use of ER diagram is required for the Order Management System.

# Importance of ER Diagram

The significance of ER diagram for an order management system is that it facilities the modeling of its data storage or database. It is the basis for building the database foundation for the project. This entity-relationship diagram (ERD) helps define the data types to be stored, including their attributes and properties.

In addition, the ER diagram describes an entity relationship with other entities. ER diagrams are utilized for all other real-world tasks. In relation to its data flow diagram, the ER diagram for order management system is used to display the details and attributes of the data store.

Hence, constructing a relational database is essential because it lets us visualize how data is generally associated.

# ERD in Software Engineering

In software Engineering ERD or entity relationship diagram is used in planning and software development phase.

It helps in the identification of various system components and their interrelationships. So, Order Management System ER Diagram is acting as the foundation of its DFD(Data flow Diagram).

Therefore, database design of the Order Management System is the same as its ERD. They were utilized to highlight the order management system database design for data storage in order to identify the data to be saved and their qualities. This is intended to tell developers about the data storage structure of the system.

# Entity-Relationship (ER) Diagram for Order Management System

**ER Diagram of Order Management System** shows the included entities (data) and their supposed functions (attributes). Each of them was represented by a table to illustrate their characteristics and relationships with each other.

ORDER MANAGEMENT SYSTEM
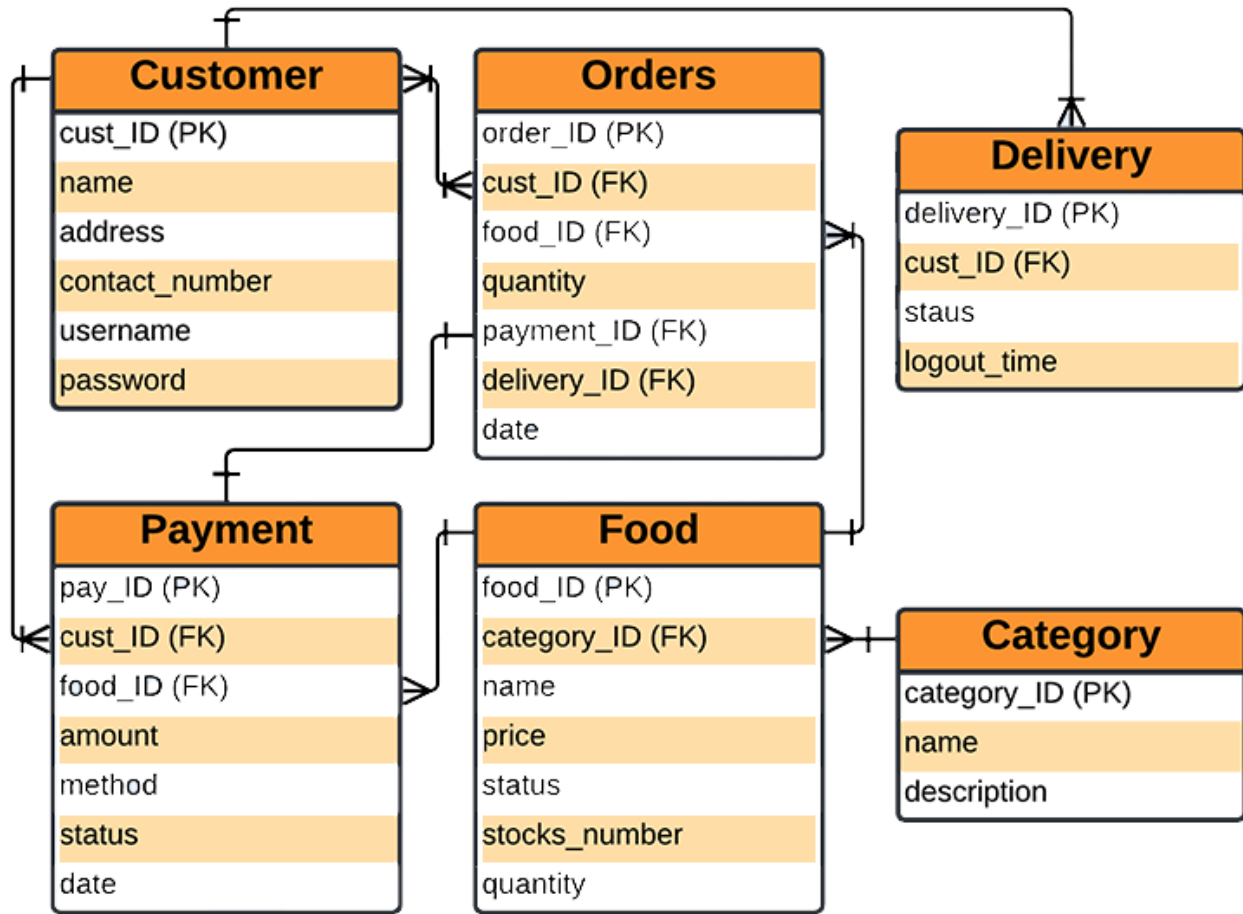
ER DIAGRAM

ORDER MANAGEMENT SYSTEM ER DIAGRAM

The figure above shows the whole purpose of the database design of ER Diagram for the Order Management system. Furthermore, it demonstrates the presence of a database to store all system data and provide user output. Hence, explains the Order Management System's (ER Diagram) database design.

# Order Management System ER Diagram Tables

These tables below provide the complete database table details such as **Field Name**, **Descriptions**, **data types**, and **character lengths**. Afterward, each of these tables represents the characteristics and the attributes of data storage.

So here the **field** column presents the names of each database's attributes, and the **description** column gives the complete thought of each attribute. Moreover, the type column is their data type, and the **length** is for their character lengths.

## Table Name: Customer

| Field | Description | Type | Length |
|---|---|---|---|
| cust_ID (PK) | Customer ID | Int | 11 |
| name | Customer Name | Varchar | 255 |
| address | Customer Address | Text | 255 |
| contact_number | Contact Number | Varchar | 255 |
| username | Username | Varchar | 255 |
| password | Password | Varchar | 255 |

## Table Name: Food

| Field | Description | Type | Length |
|---|---|---|---|
| food_ID (PK) | Food ID | Int | 11 |
| category_ID (FK) | Category ID | Varchar | 255 |
| name | Food Name | Varchar | 255 |
| price | Food Price | Text | |
| status | Food Status | Varchar | 255 |
| stocks_number | Stocks Number | Varchar | 255 |
| quantity | Quantity | Int | 11 |

## Table Name: Category

| Field | Description | Type | Length |
|---|---|---|---|
| category_ID (PK) | Category ID | Int | 11 |
| name | Category Name | Varchar | 255 |
| description | Description | Text | |

## Table Name: Payment

| Field | Description | Type | Length |
|---|---|---|---|
| pay_ID (PK) | Payment ID | Int | 11 |
| cust_ID (FK) | Customer ID | Int | 11 |
| food_ID (FK) | Food ID | Int | 11 |
| amount | Amount | Varchar | 255 |
| method | Payment Method | Varchar | 255 |
| status | Payment Status | Varchar | 255 |
| date | Date of Payment | Date | |

**Table Name: Orders**

| Field | Description | Type | Length |
|---|---|---|---|
| order_ID (PK) | Order ID | Int | 11 |
| cust_ID (FK) | Customer ID | Int | 11 |
| food_ID (FK) | Food ID | Int | 11 |
| quantity | Quantity Orders | Int | 11 |
| payment_ID (FK) | Payment ID | Int | 11 |
| delivery_ID (FK) | Delivery ID | Int | 11 |
| date | Date of Order | Date | |

**Table Name: Delivery**

| Field | Description | Type | Length |
|---|---|---|---|
| delivery_ID (PK) | Employee Id | Int | 11 |
| cust_ID (FK) | First Name | Varchar | 30 |
| status | Last Name | Varchar | 30 |

The tables given will be the basis for developers on how would they would work on the **order management system database design**. It has the complete description of the database and will be applied to the program as data storage the same as the names given to each of the tables.

# How to Create ER Diagram

Time needed: 5 minutes.

Steps in building the **ER Diagram for Order Management System with Cardinality Ratio**.

- **Step 1: Familiarize the ER Diagram (Entity Relationship Diagram) Symbols and Cardinality**

  The Entity Relationship Diagram is the structure of the data types in a project. It uses symbols to clarify the relationships of each entity.
  Their symbols and applications must be familiarized before you build the ER Diagram.

  **ER Diagram Symbols**:
  • **Fields**: It is the parts of a table that define the entity's characteristics.
  • **Keys:** are techniques to categorize data qualities. It helps users model efficient databases, arranges ER diagrams, and connects database tables.
  - Primary Key: identifies a single entity instance which means a unique attribute or set of attributes.
  - Foreign Key: is created when data attributes have one too many relationships with other entities.

**ER Diagram Cardinalities:**
The styling and end of a line indicate cardinality and ordinality.
Cardinality refers to the maximum number of ways an instance of one thing can be connected to instances of another entity.
While Ordinality refers to the fewest ways a single instance of an entity can be linked to another instance.

- **Step 2: Finalize the entities included**

  Begin the construction of your ER Diagram by determining which entities must be included in your bank reservation system. This entity is represented by a rectangle, and you should leave ample space in your design for their addition in subsequent phases.

  A group of comparable entities with shared properties is an entity set. In a database reservation system, an entity is a table or its property. Consequently, an ER diagram depicts the entire logical structure of a database by illustrating the links between tables and their properties.

- **Step 3: Add the attributes of each entity**

  After finalizing the entities, consider the characteristics that will define each one. As characteristics, a conceptual ER diagram specifies the particulars of the many things depicted. Attributes include characteristics of an entity, a many-to-many relationship, and a one-to-one relationship. Multiple values can be assigned to multivalued properties.

  The attributes of the entity were represented by ovals in the tables of the bank reservation system er diagram. In the database design for this project, these properties can be either primary or foreign keys. By declaring the appropriate entities and their properties, your ER diagram design could also be translated to the system's database.

- **Step 4: Describe the relationships (cardinality) between entities and attributes**

  To plot relationships between the ERD you will need the entities, their attributes, and relationships. You will base the data structure from the evaluated information to have the exact Entity Relationship Diagram.

  A relationship is an association that describes how two entities interact. At the connector's endpoints, the cardinality is indicated by a crow's foot.

  One-to-one, one-to-many, and many-to-many are the three most common cardinal relationships. It's the maximum number of times an instance of one entity can be linked to instances of another entity.

## Conclusion

Wrapping up, ER diagram for Order Management System helps to create a fully-functional system. Other than that it will help you in conceptualizing the backend of the software. Finally, ER diagram holds all the data that enter and exit in the system.

## Inquiries

If you have inquiries or suggestions about the **ER Diagram for Order Management System**, just leave us your comments below. We would be glad to know to concerns and suggestions and be part of your learning.