

ER Diagram for Login Process | Entity Relationship Diagram

In this article, we learn how to make **ER diagram for user login process**. These ER diagram for the user login process illustrates the entity relationships within the database.

This also describes the database or data storage structure of the system. This is accomplished by identifying the login process entities, their properties, and their relationships.

ER diagrams are used to construct the database for the user login procedure. Furthermore, this database diagram serves as the true foundation for the system's data storage, which will serve as the data destination and source.

Login Process ER Diagram: Details

The table shows the overall description of the **Login Process ER Diagram**. It has a complete overview of the project's information.

Name:	User Login Process ER Diagram
Abstract:	The user login process 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:	Diagramming tools that provide ER diagram symbols.
Users:	Website, Applications, and Software.
Designer:	Sourcecodehero.com

Login Process ER Diagram: Details

What is the User Login Process?

A [login page](#) is a software interface that requires user identification and authentication, which is often achieved by entering a username and password. Thus, login may offer access to the full system or only a subset.

In addition, SSO is a session and user authentication service that enables access to the system using a single set of login credentials, such as a username and password.

During the login process login is used...

The [website's login form](#) is simple, and users submit their credentials there. The information is thereafter sent to the authentication server, where it is compared against all of the server's user

information. When a match is detected, the system verifies the user's identity before granting access to their accounts.

Definition of User Login Process ER Diagram

The ER Diagram of the user login process is referred to as the software database design. This ER Diagram is a graphical representation of the relationships between all system elements. It consists mostly of **Entities, Attributes, and Relationships**.

Moreover, ER Diagram is used to build and troubleshoot the System's relational database. It works best with [DFD \(Data Flow Diagram\)](#), which is responsible for data movement.

Importance of ER Diagram for User Login Process

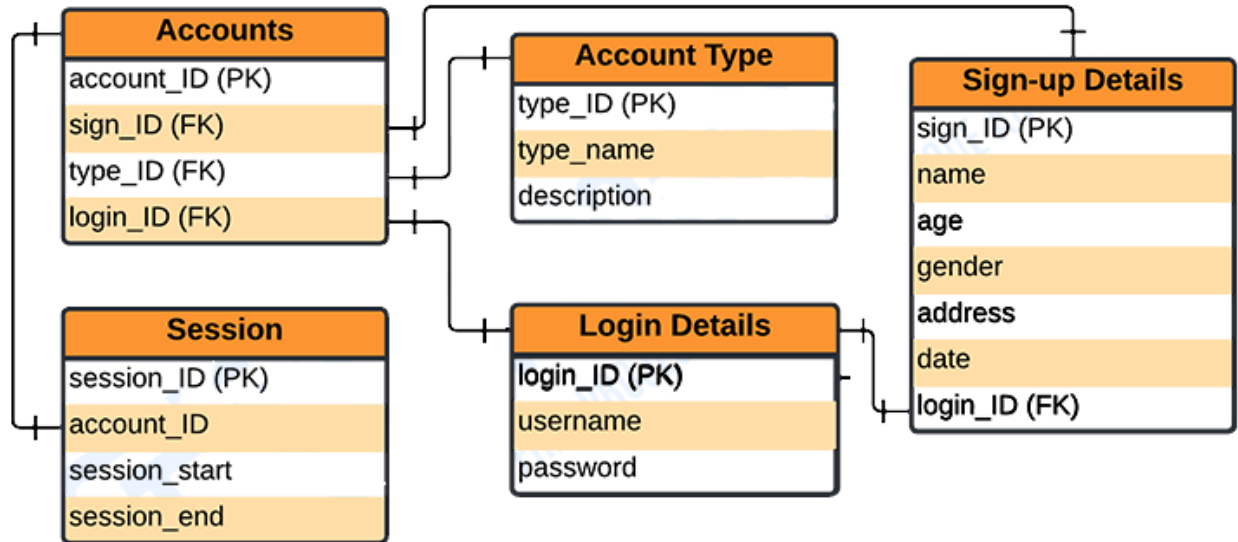
The importance of ER diagram for the user login process is that it facilitates the modeling of its data storage or database. In fact, it is the basis for building the database foundation for the project. In addition this entity-relationship diagram (ERD) helps define the data types to be stored, including their attributes and properties.

Additionally, the ER Diagram describes an entity's relationships with other entities. ER Diagrams are utilized for all other real-world tasks (database designs).

User Login ER Diagram

User Login Process Entity Relationship Diagram illustrates the system entity and the supposed functions for each relationship. Also, it is the project's alleged database design and describes the information that would be contained in the registration system, its qualities, and its relationship to other information (entity).

LOGIN PROCESS



ER DIAGRAM

Login Process ER Diagram

The above figure illustrates the entity-relationship model for the login process. It is used to explain how the back end of the project's database operates. The tables are designed to match the system's specifications and provide far more particular information about each entity.

ER Diagram for User Login Process Tables

These tables below provide the complete database table details such as **Field Name, Descriptions, data types, and character lengths.**

Table Name: Accounts

Field	Description	Type	Length
account_ID (PK)	Account ID	Int	11
sign_ID (FK)	Sign-up ID	Int	11
type_ID (FK)	Type ID	Int	11
login_ID (FK)	Login ID	Int	11

Table Name: Session

Field	Description	Type	Length
session_ID (PK)	Face ID	Int	11
account_ID (FK)	Student ID	Int	11
session_start	Session Start	Varchar	255
session_end	Session End	Varchar	255

Table Name: Account Type

Field	Description	Type	Length
type_ID (PK)	Account Type ID	Int	11
type_name	Type Name	Varchar	255
description	Description	Text	

Table Name: Login Details

Field	Description	Type	Length
login_ID (PK)	Login ID	Int	11
username	Username	Varchar	255
password	Password	Varchar	255

Table Name: Signup Details

Field	Description	Type	Length
sign_ID (PK)	Sign-up ID	Int	11
name	Name	Varchar	255
age	Age	Int	11
gender	Gender	Varchar	255
address	Address	Text	
date	Date	Date	
login_ID (FK)	Login ID	Int	11

How to create ER Diagram for User Login Process with Cardinality Ratio

Time needed: 5 minutes.

Steps in building the **ER Diagram for User Login Process with Cardinality Ratio**.

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

Entity Relationship Diagram - illustrates the data structure of a project. It uses symbols to clarify its components and their interactions. Before constructing the ER Diagram, you must become familiar with its symbols and applications.

ER Diagram Symbols:

- **Fields:** Fields are the parts of a table that define the entity's characteristics. In the database that the ERD models, attributes are commonly thought of as rows.
- **Keys** are techniques to categorize data qualities. It is used to organize ER diagrams and assist users in modeling their databases to ensure that they are efficient. This is also used to connect different tables in a database.
 - **Primary Key:** identifies a single entity instance which means a unique attribute or set of attributes.
 - **Foreign Key:** is produced when data attributes have one too many relationships with other entities.

ER Diagram Cardinalities:

The styling and conclusion 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 creation of your ER Diagram by finalizing the entities required for your login process. This entity is represented by a rectangle, and you should leave plenty of space in your design for their addition in the next phases.

A group of comparable entities with shared properties is an entity set. In a database management system, an entity is a table or its property. Therefore, an ER diagram displays 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, think about the qualities you'll need to characterize each entity. The details of the various entities outlined in a conceptual ER diagram are supplied as attributes.

Characteristics of an entity, a many-to-many relationship, or a one-to-one relationship are all examples of attributes. Multivalued attributes can be assigned to several values.

The entity's attributes were represented by ovals and can be seen in the tables of the login system er diagram. These attributes can be a primary key or a foreign key in the database design of the project. Your ER diagram design could also be converted to the database of the system by declaring your right entities and their attributes.

- **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:

In Summary, the User Login Process ER diagram is used to design and develop User Login System.

- It helps to create a fully-functional system.
- It helps to create and perceive the back end of the system or software.
- It holds the data that enter and exit the system.