Entity Relationship Diagram Tutorial: A Foundation

The Database Blueprint.

Database : A collection of infomation organized for easy storage, managements, updates and retrieval.

- ERD's provide SWE with a visual way to understand how infomation is related and how it works together before building.

Entity : An object, like a person, place, or thing, that is tracked in the database

Example : Online Store
  Key entities : Customer, order, product

- Attribute : A property or trait that describes an entity.

Customer ID	First Name	Last Name	City
30016	John	Smith	Cape Town
30017	Jane	Doe	Pretoria

The entity is the table, the attributes are colomns (the infomation)

Nouns → Entity
Adjective → Attributes
Verb → ? Relationship

Relationship : Describes how entities will work / interact with each other. This connects with the entity.

Cardinality : Defines a relationship in a numerical context, using minimums and maximums.

A customer can have zero or many orders. An order must have only one customer.

.Primary key: An attribute or field that uniquely identifies every record within a table (certain)

Primary key (PK) rules:
↳ Must be unique
↳ Must be never changing
↳ Must be never null (blank)

~~Foreg~~ Foreign key (FK) : A primary key from one entity that is used in another entity to create a link between them.

Entity : User
          Contact

Attributes :
        User entity :   ID
                        username
                        password

        Contact entity :   ID
                           first name
                           surname
                           email
                           user id

Relationships :
        One user -> many contacts
        One user -> zero contacts

Primary key : User
               Contact

Foreign key : Contact