Model.5 Entity Relationship(ER) Diagram of a Normalized Data Table <bh.github><wikipedia>

History: Chen, E-R model
Purpose: describes the inter-relationships of things and items of interest in a specific domain of knowledge. Developed by Peter Chen at MIT, the diagrams facilitate the designs of systems, such as databases advancing from
• conceptual data model to
• logical data model to
• physical data model

The example on the right is a hybrid not showing the main entity, a person and their horse, at a horseshow event.

Lines express cardinality.

Chen, P. P. S. (1976). The entity-relationship model—toward a unified view of data.

UserLogin (0)

PK	UserID int identity
	UserLoginTimeStamp datetime
	LoginLocation varchar(30)
	...

ShowClasses (C)

PK	Class_ID int identity
	Name varchar(50)
	Description varchar(100)
	NumEntries int

AnimalDetail (E)

PK	Animal_ID int identity
	Name varchar(50)
	USEF_ID int
	Color varchar(20)
	Sex varchar(20)
	Contact_Number int
	Height real
	Age int
	MeasureCard_ID int
	Trainer_Name varchar(50)
FK2	OwnerID
FK2	RiderID

HorseShow (A)

PK FK1	HorseShow_ID int identity
	Contact_Name varchar(50)
	Contact_Number int
	Address varchar(50)
	Total_Shows int
	Region varchar(30)

ShowDetail (B)

PK	ShowID int identity
	Show_Count int
FK1	HorseShow_ID int
	Parking_Fee int

Rider (F)

PK	Rider_ID int identify
	Name varchar(50)
	Address varchar(100)
	Age int
	Contact_Phone int
	SS_Num int
	USEF_Num int

Owner (D)

PK FK2	Owner_ID int identity
	Name varchar(50)
	StreetAddress varchar(100)
	SSNum int
	ContactPhone int
	USEFNum int
	SignedName varchar(40)

Billing (G)

PK	Payment_ID int identity
FK3	Animal_ID int
	Total_Classes int
	Balance real
	Total_Paid real
FK4	RiderID int
FK5	OwnerID int