

Entities and Attributes

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Animal

ID	Datatypes	Description	Constraints	Relationship
AnimalID	VARCHAR(15)	Unique RowID	PRIMARY KEY	
Name	VARCHAR(50)	Name of the Animal	NOT NULL	
Age	INT	Age of Animal	NOT NULL	
SpeciesID	VARCHAR(10)	SpeciesID from Species	FOREIGN KEY	Many-to-One
AquisitionID	INT	AcquisitionID from Acqusition	FOREIGN KEY	Many-to-One
CageID	INT	CageID from Cage	FOREIGN KEY	Many-to-One

Species

ID	Datatypes	Description	Constraints	Relationship
SpeciesID	VARCHAR(10)	Unique RowID	PRIMARY KEY	
Species	VARCHAR(50)	Unique Identifier for Species of Animal	NOT NULL	
GenusID	VARCHAR(50)	Genus of Species	FOREIGN KEY	Many-to-One
CountryID	INT	CountryID from Country	FOREIGN KEY	Many-to-Many
StatusID	INT	StatusID from Status	FOREIGN KEY	Many-to-One

Genus

ID	Datatypes	Description	Constraints	Relationship
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GenusID	VARCHAR(10)	Unique RowID	PRIMARY KEY	
Name	VARCHAR(50)	Name of Genus	NOT NULL	
FamilyID	VARCHAR(10)	FamilyID from Family	FOREIGN KEY	Many-to-One

Family

ID	Datatypes	Description	Constraints	Relationship
FamilyID	VARCHAR(10)	Unique RowID	PRIMARY KEY	
Name	VARCHAR(50)	Name of Family	NOT NULL	

Acquisition

ID	Datatypes	Description	Constraints	Relationship
AcquisitionID	INT	Unique RowID	PRIMARY KEY	
Date	DATE	Date Animal was acquired by the zoo	NOT NULL	
ZooBorn	BOOLEAN	Was the animal born in the zoo?	NOT NULL	One-to-One

Country

ID	Datatypes	Description	Constraints	Relationship
CountryID	INT	Unique RowID	PRIMARY KEY	
Name	VARCHAR(50)	Name of Country	NOT NULL	
ContinentID	INT	ContinentID from Continent	FOREIGN KEY	Many-to-One

Continent

ID	Datatypes	Description	Constraints	Relationship
ContinentID	INT	Unique RowID	PRIMARY KEY	

Name	VARCHAR(50)	Name of Continent	NOT NULL	
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cStatus

ID	Datatypes	Description	Constraints	Relationship
StatusID	VARCHAR(5)	Unique RowID	PRIMARY KEY	
Name	VARCHAR(50)	Name of Conservation Status	NOT NULL	

Exhibit Zones

ID	Datatypes	Description	Constraints	Relationship
ExhibitID	VARCHAR(10)	Unique RowID	PRIMARY KEY	
Name	VARCHAR(50)	Exhibit Zone Name	NOT NULL	
ZoneID	INT	ZoneID from Zone	FOREIGN KEY	Many-to-One

Cage

ID	Datatypes	Description	Constraints	Relationship
CageID	INT	Unique RowID	PRIMARY KEY	
Name	VARCHAR(50)	Cage Name	NOT NULL	
ExhibitID	VARCHAR(10)	ExhibitID from Exhibit Zones	FOREIGN KEY	Many-to-One

Zone

ID	Datatypes	Description	Constraints	Relationship
ZoneID	INT	Unique RowID	PRIMARY KEY	
Name	VARCHAR(6)	Zone Name	NOT NULL	

Employees

ID	Datatypes	Description	Constraints	Relationship
EmployeeID	INT	Unique RowID	PRIMARY KEY	
Name	VARCHAR(50)	Name of Employee	NOT NULL	
PositionID	VARCHAR(6)	PositionID from Position	FOREIGN KEY	One-to-One

emPosition

ID	Datatypes	Description	Constraints	Relationship
PositionID	VARCHAR(6)	Unique RowID	PRIMARY KEY	
Name	VARCHAR(50)	Name of Position	NOT NULL	

Contact

ID	Datatypes	Description	Constraints	Relationship
ContactID	INT	Unique RowID	PRIMARY KEY	
EmployeeID	INT	EmployeeID from Employee	FOREIGN KEY	One-to-One
Phone	INT	Phone number	NOT NULL	
StreetAd	VARCHAR(50)	Street Address	NOT NULL	
City	VARCHAR(50)	City Name	NOT NULL	
State	CHAR(2)	State Name	NOT NULL	
Zip	INT	Zip code	NOT NULL	

Buildings

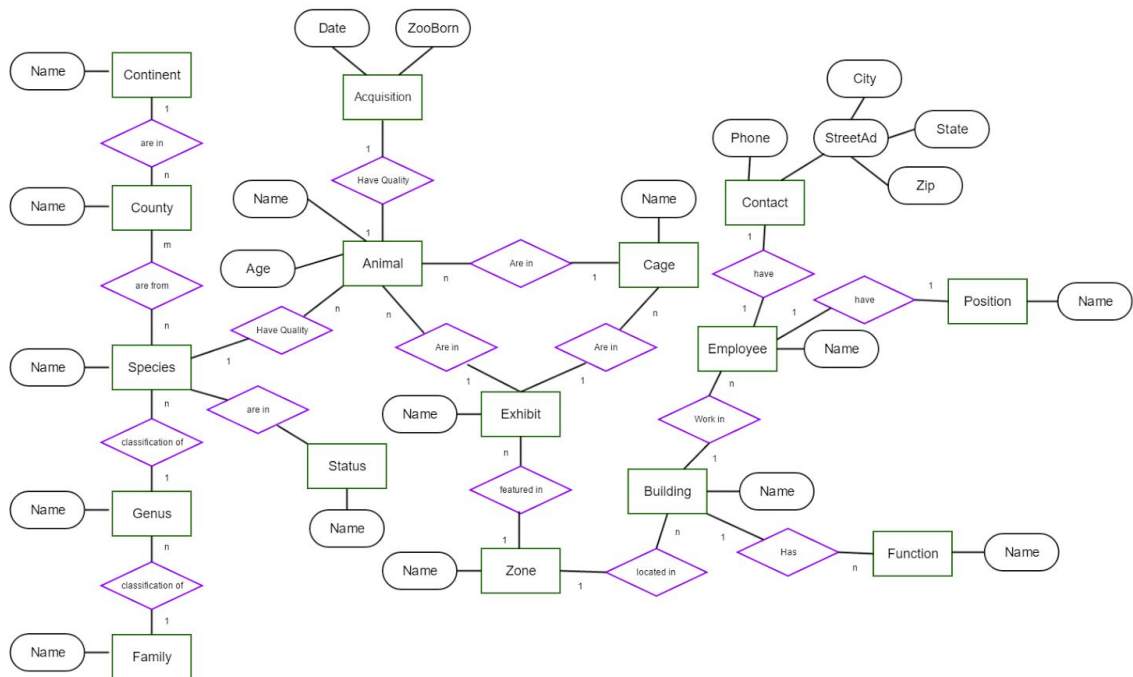
ID	Datatypes	Description	Constraints	Relationship
BuildingID	INT	Unique RowID	PRIMARY KEY	

Name	VARCHAR(50)	Name of the Building	NOT NULL	
ZoneID	INT	ZoneID from Zone	FOREIGN KEY	Many-To-One
FunctionID	INT	FunctionID from Building Function	FOREIGN KEY	One-To-Many
EmployeeID	INT	EmployeeID from Employee	FOREIGN KEY	Many-To-Many

Function

ID	Datatypes	Description	Constraints	Relationship
FunctionID	INT	Unique RowID	PRIMARY KEY	
Function Name	VARCHAR(50)	What does the building do?	NOT NULL	

ER Diagram

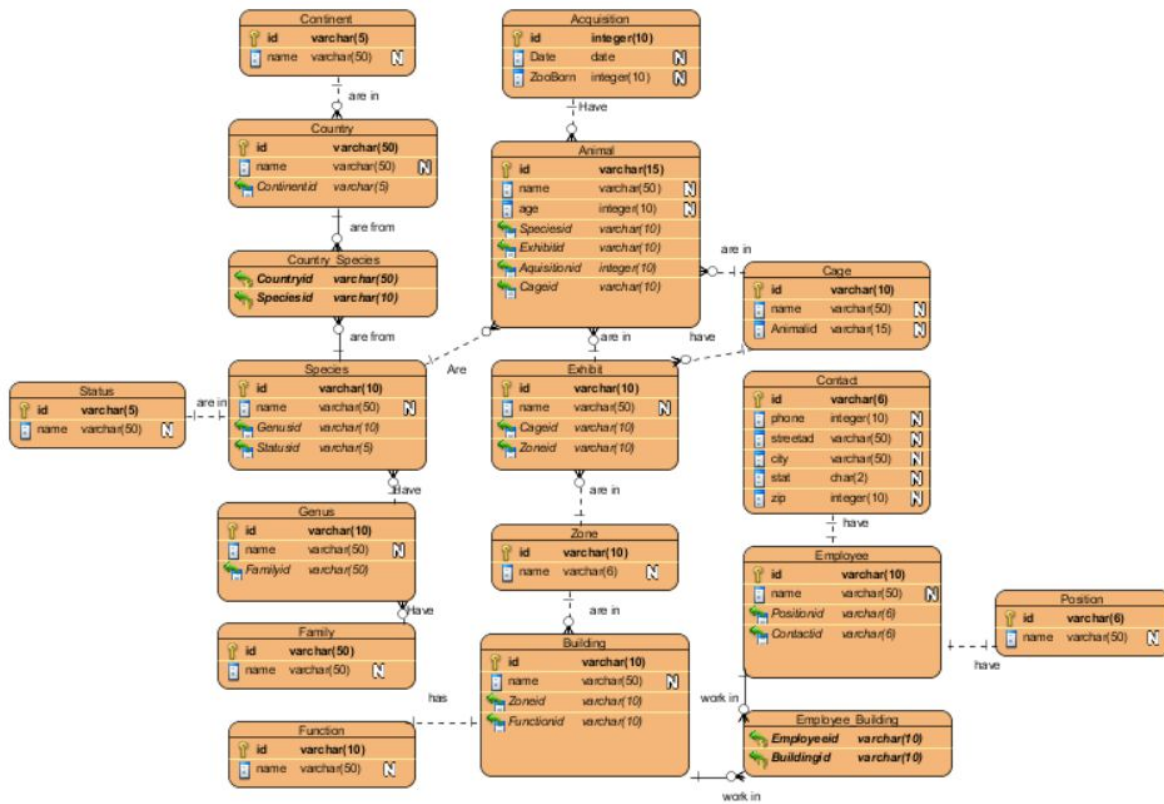


The diagram illustrates the following entities and their attributes:

- Continent**: id (PK), name, N
- Country**: id (PK), name, Continentid (FK), N
- Acquisition**: id (PK), Date, ZooBorn, N
- Animal**: id (PK), name, age, Speciesid (FK), Exhibitid (FK), Acquisitionid (FK), Cagedid (FK), N
- Cage**: id (PK), name, Animalid (FK), N
- Status**: id (PK), name, N
- Species**: id (PK), name, Genusid (FK), Statusid (FK), N
- Exhibit**: id (PK), name, Cagedid (FK), Zoneid (FK), N
- Contact**: id (PK), phone, streetid, city, email, zip, N
- Genus**: id (PK), name, Familyid (FK), N
- Zone**: id (PK), name, N
- Employee**: id (PK), name, Positionid (FK), Contactid (FK), N
- Family**: id (PK), name, N
- Building**: id (PK), name, Zoneid (FK), Functionid (FK), N
- Position**: id (PK), name, N
- Function**: id (PK), name, N
- Employee Building**: Employeeid (FK), Buildingid (FK), N

Key relationships include:

- Continent (1) are in Country (N)
- Country (1) are from Country Species (N)
- Country Species (1) are from Species (N)
- Species (1) are in Status (N)
- Species (1) have Genus (N)
- Genus (1) have Family (N)
- Family (1) has Function (N)
- Acquisition (1) have Animal (N)
- Animal (1) are in Exhibit (N)
- Animal (1) are in Cage (N)
- Animal (1) have Contact (N)
- Exhibit (1) are in Zone (N)
- Zone (1) are in Building (N)
- Building (1) work in Employee Building (N)
- Employee (1) have Position (N)
- Employee (1) work in Employee Building (N)
- Employee Building (1) work in Employee Building (N)



Web Based Application

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