User = (Username, Password, Email)

Staff = (Username [fk1])

fk1: Username->User.Username

Visitor =(Username [fk2])

fk2: Username->User.Username

Admin = (Username [fk3])

fk3: Username->User.Username

Note = (Username[fk4], Time, Text, AnimalName, AnimalSpecies[fk5])

fk4: Username->Staff.Username

fk5: AnimalName, AnimalSpecies->Animal.Name, Animal.Species

Animal(Name, Species, Type, Age, Place[fk6])

fk6: Place-> Exhibit.Name, Place is non-null

Shows(Name, Date and time, Locate-at[fk7], Hostby[fk8])

fk7: Locate-at-> Exhibit.Name, Locate-at is non-null

fk8: Hostby->Staff.Username, Hostby is non-null

Exhibit(Name, Water Feature, Size)

VisitShow(Username[fk9], Showname, Showdate[fk10])

fk9: Username->Visitor.Username

fk10: Showname, Showdate->Shows.Name, Shows.Date and time

VisitExhibit (Username[fk11], Exhibitname[fk12], Datetime)

fk11: Username->Visitor.Username

fk12: Exhibitname->Exhibit.Name

CREATE TABLE User(

Username VARCHAR(25) NOT NULL,

Email VARCHAR(25) NOT NULL,

Password VARCHAR(50),

PRIMARY KEY (Username),

UNIQUE (Email)

);

CREATE TABLE Staff(

Username VARCHAR(25) NOT NULL,

PRIMARY KEY (Username),

FOREIGN KEY (Username)

REFERENCES User(Username) ON DELETE CASCADE ON UPDATE

);

CREATE TABLE Visitor(

Username VARCHAR(25) NOT NULL,

PRIMARY KEY (Username),

FOREIGN KEY (Username) REFERENCES User(Username) ON DELETE CASCADE ON UPDATE CASCADE

);

CREATE TABLE Admin(

Username VARCHAR(25) NOT NULL,

PRIMARY KEY (Username),

FOREIGN KEY (Username)

REFERENCES User(Username) ON DELETE CASCADE ON UPDATE CASCADE

);

CREATE TABLE Note(

Username VARCHAR(25) NOT NULL,

AnimalName VARCHAR(25) NOT NULL,

AnimalSpecies VARCHAR(25) NOT NULL,

Times DATETIME NOT NULL,

Texts VARCHAR(255) NOT NULL,

CONSTRAINT NOTEKEY PRIMARY KEY (Username, AnimalName, AnimalSpecies, Times),

FOREIGN KEY (Username) REFERENCES User(Username) ON DELETE CASCADE ON UPDATE CASCADE,

FOREIGN KEY (AnimalName, AnimalSpecies) REFERENCES Animal(Name, Species) ON DELETE CASCADE ON UPDATE CASCADE

);

CREATE TABLE Animal(

Name VARCHAR(25) NOT NULL,

Species VARCHAR(25) NOT NULL,

Type VARCHAR(25),

Age INT ,

Place VARCHARr(25),

CONSTRAINT AnimalKEY PRIMARY KEY (Name, Species),

FOREIGN KEY(Place) REFERENCES Exhibit (Name) ON DELETE CASCADE ON UPDATE CASCADE

);

CREATE TABLE Shows(

Name VARCHAR(25) NOT NULL,

DateAndTime DATETIME NOT NULL,

LocateAt VARCHAR(25),

Hostby VARCHAR(25),

CONSTRAINT SHOWKEY PRIMARY KEY (Name, DateAndTime),

FOREIGN KEY (LocateAt) REFERENCES Exhibit (Name) ON DELETE CASCADE ON UPDATE CASCADE,

FOREIGN KEY(Hostby) REFERENCES Staff (Username) ON DELETE CASCADE ON UPDATE CASCADE

);

CREATE TABLE Exhibit(

Name VARCHAR(25) NOT NULL PRIMARY KEY,

WaterFeature BOOL,

Size INT

);

CREATE TABLE VisitShow (

Username VARCHAR(25) NOT NULL,

Showname VARCHAR(25) NOT NULL,

Showdate DATETIME NOT NULL,

CONSTRAINT NOTEKEY PRIMARY KEY (Username, Showname, Showdate ),

FOREIGN KEY(Username) REFERENCES Visitor (Username) ON DELETE CASCADE ON UPDATE CASCADE,

FOREIGN KEY (Showname, Showdate) REFERENCES Shows(Name, DateAndTime) ON DELETE CASCADE ON UPDATE CASCADE

);

CREATE TABLE VisitExhibit (

Username VARCHAR(25) NOT NULL,

Exhibitname VARCHAR(25) NOT NULL,

Datetime DATETIME NOT NULL,

PRIMARY KEY (Exhibitname),

FOREIGN KEY (Exhibitname) REFERENCES Exhibit(Name) ON DELETE CASCADE ON UPDATE CASCADE,

FOREIGN KEY(Username) REFERENCES Visitor(Username) ON DELETE CASCADE ON UPDATE CASCADE

);