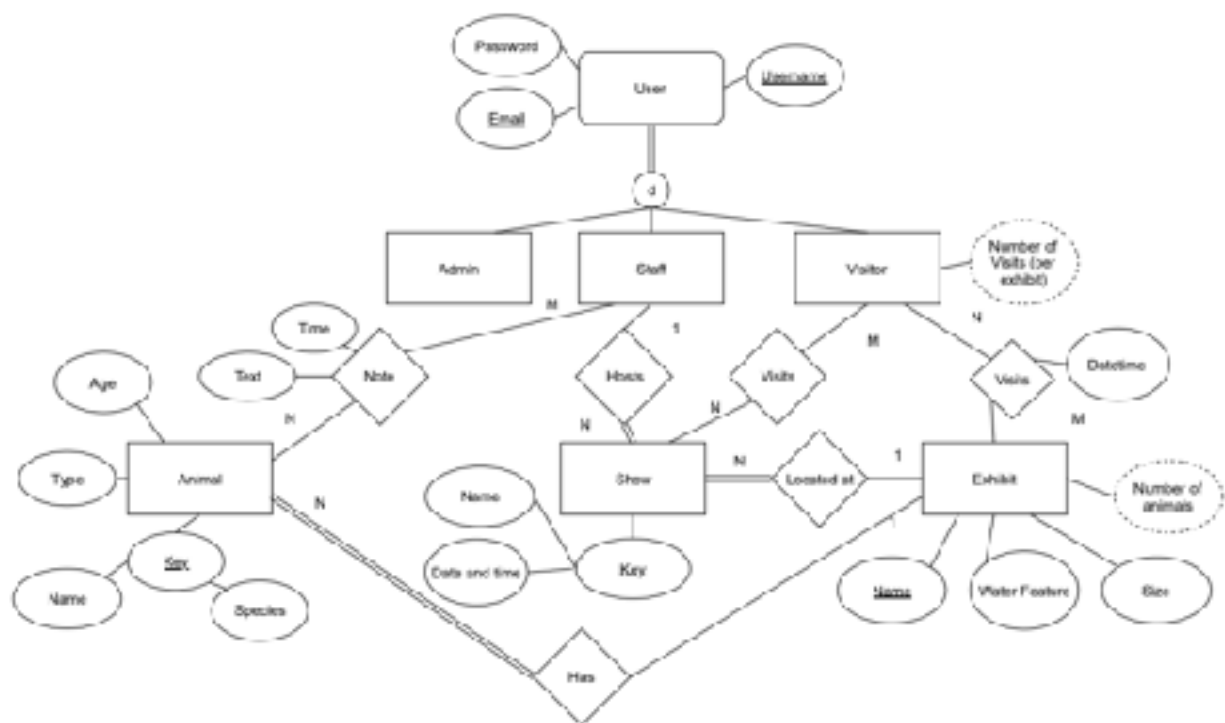# TEAM 32

Phase 3

Robin Luo (hluo76)

Hanying Pan (hpan48)

Yiheng Qi (yqi72)

Zongyi Li (zli732)

Lu Tong (ltong39)

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
);
```

```sql
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

);
```

```sql
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

);
```

```sql
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

);
```