TURTLEBACK ZOO
DELIVERABLE - 3

CS631 – 001

Team - 1

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Turtleback Zoo Phase 1 - Goals

Goal of the project phase 3 is to develop a comprehensive and efficient system that enables the effective management and organization of various aspects within a zoo environment .The features of this zoo management application include visitor admissions, financial tracking, animal and species management, enclosure and building management, employee management, and thorough reports for efficient zoo operations and decision-making.

Implementation

Problems Faced

· **Data Integrity Challenges:**

- Ensuring consistent data integrity across tables.
- Managing relationships and foreign key constraints.

· **Report Generation:**

- Designing efficient queries for generating management reports.
- Addressing challenges related to aggregations, filtering, and sorting.

· **Testing and Debugging:**

- Comprehensive testing of SQL queries under various scenarios.
- Debugging issues related to query performance, data discrepancies, or unexpected results.

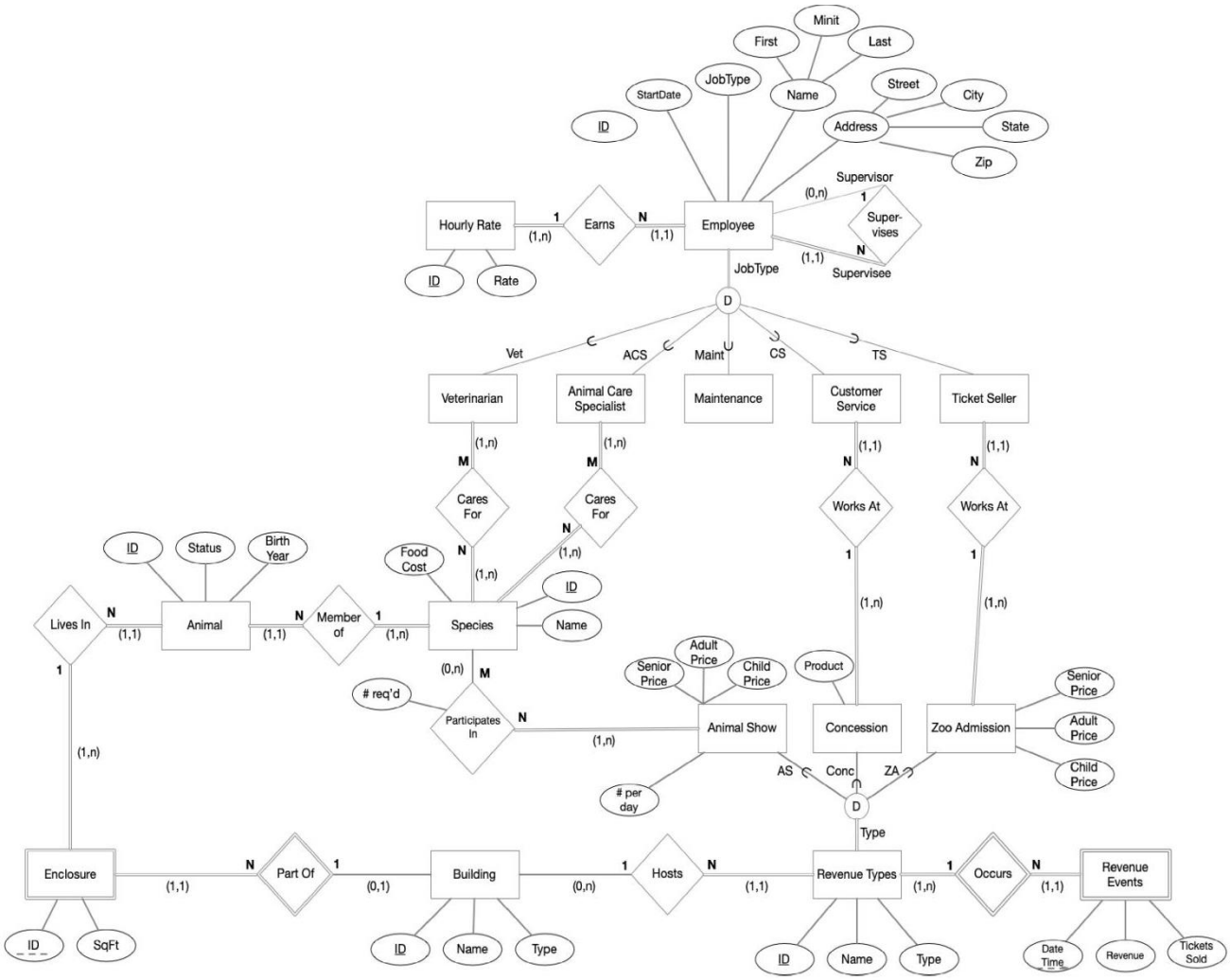
· **Handling Large Datasets:**

- Efficiently managing and querying large datasets, especially for reports.
- Implementing indexing and other strategies for improved query performanc

· **Complex Queries and Joins:**

- Designing and optimizing complex SQL queries, especially for reporting purposes.
- Handling multiple joins for retrieving comprehensive information

ER Diagram:



Turtleback Zoo EER Diagram

Relational Schema:

USER GUIDE

SQL Commands of Create Table

```
CREATE TABLE EMPLOYEE
(id INT NOT NULL,
startDate DATE,
jobType VARCHAR(15),
first VARCHAR(15) NOT NULL,
minit CHAR,
last VARCHAR(15) NOT NULL,
street VARCHAR(20),
city VARCHAR(15),
state VARCHAR(15),
zip INT,
hourlyrateID INT,
supervisorID INT,
concessionRevenueID INT,
zooAdmissionRevenueID INT,
PRIMARY KEY (id),
CONSTRAINT sup_id FOREIGN KEY (supervisorID) REFERENCES EMPLOYEE(id)
) ;



CREATE TABLE HourlyRate
(id INT NOT NULL,
rate DOUBLE PRECISION NOT NULL,
PRIMARY KEY (id)
) ;

ALTER TABLE EMPLOYEE
ADD CONSTRAINT emp_HR_ID FOREIGN KEY (hourlyrateID) REFERENCES HourlyRate(id)
ON DELETE CASCADE;

CREATE TABLE SPECIES
(id INT NOT NULL,
name VARCHAR(15) NOT NULL,
foodCost DOUBLE PRECISION NOT NULL,
PRIMARY KEY (id)
) ;


CREATE TABLE ENCLOSURE
(id INT NOT NULL,
buildingId INT,
sqft DOUBLE PRECISION NOT NULL,
PRIMARY KEY (id)
) ;
```

```
CREATE TABLE ANIMAL
(id INT NOT NULL,
buildingId INT,
speciesId INT,
status VARCHAR(15),
birthYear DATE,
enclosureId INT,
PRIMARY KEY (id),
CONSTRAINT sp_id FOREIGN KEY (speciesId) REFERENCES SPECIES(id),
CONSTRAINT en_id FOREIGN KEY (enclosureId) REFERENCES ENCLOSURE(id)
) ;



CREATE TABLE BUILDING
(id INT NOT NULL,
name VARCHAR(10),
type VARCHAR(10),
PRIMARY KEY (id)
) ;


ALTER TABLE ENCLOSURE
ADD CONSTRAINT  enc_bld_ID FOREIGN KEY (buildingId) REFERENCES BUILDING(id)
ON DELETE CASCADE;

CREATE TABLE Revenue_Types
(revenueTypeId INT NOT NULL,
name VARCHAR(15),
type VARCHAR(15),
buildingId INT,
PRIMARY KEY (revenueTypeId),
CONSTRAINT  bldn_ID FOREIGN KEY (buildingId) REFERENCES BUILDING(id)
) ;



CREATE TABLE Revenue_Events
(dateTime DATE NOT NULL,
revenueId INT NOT NULL,
ticketsSold DOUBLE PRECISION,
revenue DOUBLE PRECISION,
PRIMARY KEY (dateTime, revenueId),
CONSTRAINT  rvn_ID FOREIGN KEY (revenueId) REFERENCES Revenue_Types(revenueTypeId)
) ;
```

```
CREATE TABLE Animal_Show
(revenueId INT NOT NULL,
seniorPrice DOUBLE PRECISION,
adultPrice DOUBLE PRECISION,
childPrice DOUBLE PRECISION,
numberPerDay DOUBLE PRECISION,
PRIMARY KEY (revenueID),
CONSTRAINT  as_rvn_ID FOREIGN KEY (revenueId) REFERENCES Revenue_Types(revenueTypeId)
) ;


CREATE TABLE CONCESSION
(revenueId INT NOT NULL,
product VARCHAR(10),
PRIMARY KEY (revenueId),
CONSTRAINT  Crvn_ID FOREIGN KEY (revenueId ) REFERENCES Revenue_Types(revenueTypeId)
) ;

ALTER TABLE EMPLOYEE
ADD CONSTRAINT cncs_ID FOREIGN KEY (concessionRevenueID) REFERENCES CONCESSION(revenueID)
ON DELETE CASCADE;


CREATE TABLE Zoo_Admission
(revenueId INT NOT NULL,
seniorPrice DOUBLE PRECISION,
adultPrice DOUBLE PRECISION,
childPrice DOUBLE PRECISION,
PRIMARY KEY (revenueId),
CONSTRAINT  Za_rvn_ID FOREIGN KEY (revenueId) REFERENCES Revenue_Types(revenueTypeId)
) ;


ALTER TABLE EMPLOYEE
ADD CONSTRAINT zar_ID FOREIGN KEY (zooAdmissionRevenueID) REFERENCES
Zoo_Admission(revenueID)
ON DELETE CASCADE;
```

```
CREATE TABLE Participates_In
(speciesId INT NOT NULL,
animalShowRevenueId INT NOT NULL,
numberRequired INT,
PRIMARY KEY (speciesId, animalShowRevenueId),
CONSTRAINT  sps_ID FOREIGN KEY (speciesId) REFERENCES SPECIES(id),
CONSTRAINT  ASrev_ID FOREIGN KEY (animalShowRevenueId) REFERENCES Animal_Show(revenueId)
) ;


CREATE TABLE Cares_For
(speciesId INT NOT NULL,
employeeId INT NOT NULL,
PRIMARY KEY (speciesId, employeeId ),
CONSTRAINT spcs_id FOREIGN KEY (speciesId) REFERENCES SPECIES(id),
CONSTRAINT emp_id FOREIGN KEY (employeeId) REFERENCES EMPLOYEE(id)
) ;
```

SQL Commands that Populates Table

```
-- Insert data into EMPLOYEE table
INSERT INTO EMPLOYEE (VALUES(1, TO_DATE('2010-01-15', 'YYYY-MM-DD'), 'Manager', 'John', 'D', 'Doe', '123 Main St', 'Cityville', 'CA', 12345, 1, NULL, 2, 3);
INSERT INTO EMPLOYEE VALUES(2, TO_DATE('2015-03-20', 'YYYY-MM-DD'), 'Zookeeper', 'Jane', 'M', 'Smith', '456 Oak Ave', 'Townburg', 'NY', 56789, 2, 1, 1, NULL);
INSERT INTO EMPLOYEE VALUES (3, TO_DATE('2018-07-10', 'YYYY-MM-DD'), 'Caretaker', 'Robert', 'L', 'Johnson', '789 Pine Blvd', 'Villagetown', 'TX', 98765, 3, 1, NULL, 4);
INSERT INTO EMPLOYEE VALUES(4, TO_DATE('2012-05-28', 'YYYY-MM-DD'), 'Security', 'Emily', 'R', 'Williams', '101 Cedar Ln', 'Hamletville', 'FL', 54321, 4, NULL, 6, 5);
INSERT INTO EMPLOYEE VALUES(5, TO_DATE('2017-11-12', 'YYYY-MM-DD'), 'Cashier', 'Michael', 'J', 'Brown', '222 Elm St', 'Citytown', 'AZ', 67890, 5, 1, 7, 6);
INSERT INTO EMPLOYEE VALUES(6, TO_DATE('2013-08-22', 'YYYY-MM-DD'), 'Janitor', 'Sarah', 'A', 'Jones', '333 Birch Ave', 'Ruraltown', 'GA', 13579, 6, 1, 8, 7);
INSERT INTO EMPLOYEE VALUES(7, TO_DATE('2016-09-05', 'YYYY-MM-DD'), 'Educator', 'Daniel', 'P', 'Miller', '444 Maple Dr', 'Suburbville', 'WA', 24680, 7, 1, 4, NULL);
INSERT INTO EMPLOYEE (VALUES(8, TO_DATE('2014-04-14', 'YYYY-MM-DD'), 'Ticket Seller', 'Olivia', 'S', 'Davis', '555 Pine Ln', 'Countryside', 'OH', 97531, 8, 1 , 4 , 8);
INSERT INTO EMPLOYEE VALUES(9, TO_DATE('2019-01-18', 'YYYY-MM-DD'), 'Guide', 'James', 'K', 'Taylor', '666 Oak Dr', 'Villageville', 'NC', 35791, 9, 1, 2, 9);
INSERT INTO EMPLOYEE (VALUES(10, TO_DATE('2011-12-01', 'YYYY-MM-DD'), 'Gift Shop Clerk', 'Emma', 'F', 'Wilson', '777 Cedar Blvd', 'Cityland', 'MI', 80234, 10, 1, 1, 10);
```

```
-- Insert data into HourlyRate table
INSERT INTO HourlyRate  VALUES(1, 15.5);
INSERT INTO HourlyRate  VALUES(2, 18.0);
INSERT INTO HourlyRate  VALUES(3, 20.25);
INSERT INTO HourlyRate  VALUES(4, 22.0);
INSERT INTO HourlyRate  VALUES(5, 25.5);
INSERT INTO HourlyRate  VALUES(6, 19.75);
INSERT INTO HourlyRate  VALUES(7, 21.0);
INSERT INTO HourlyRate  VALUES(8, 23.5);
INSERT INTO HourlyRate  VALUES(9, 26.0);
INSERT INTO HourlyRate  VALUES(10, 24.75);

-- Insert data into SPECIES table
INSERT INTO SPECIES  VALUES(1, 'Lion', 150.0);
INSERT INTO SPECIES  VALUES(2, 'Tiger', 120.0);
INSERT INTO SPECIES  VALUES(3, 'Elephant', 200.0);
INSERT INTO SPECIES  VALUES(4, 'Giraffe', 100.0);
INSERT INTO SPECIES  VALUES(5, 'Penguin', 50.0);
INSERT INTO SPECIES  VALUES(6, 'Kangaroo', 80.0);
INSERT INTO SPECIES  VALUES(7, 'Zebra', 110.0);
INSERT INTO SPECIES  VALUES(8, 'Panda', 180.0);
INSERT INTO SPECIES  VALUES(9, 'Leopard', 130.0);
INSERT INTO SPECIES  VALUES(10, 'Gorilla', 160.0);

-- Insert data into BUILDING table
INSERT INTO BUILDING  VALUES(1, 'Building A', 'Exhibit');
INSERT INTO BUILDING  VALUES(2, 'Building B', 'Enclosure');
INSERT INTO BUILDING  VALUES(3, 'Building C', 'Theater');
INSERT INTO BUILDING  VALUES(4, 'Building D', 'Cafeteria');
INSERT INTO BUILDING  VALUES(5, 'Building E', 'Entrance');
INSERT INTO BUILDING  VALUES(6, 'Building F', 'Gift Shop');
INSERT INTO BUILDING  VALUES(7, 'Building G', 'Restrooms');
INSERT INTO BUILDING  VALUES(8, 'Building H', 'Play Area');
INSERT INTO BUILDING  VALUES(9, 'Building I', 'Admin');
INSERT INTO BUILDING  VALUES(10, 'Building J', 'Park Lot');

-- Insert data into ENCLOSURE table
INSERT INTO ENCLOSURE  VALUES(1, 2, 5000.0);
INSERT INTO ENCLOSURE  VALUES(2, 2, 4500.0);
INSERT INTO ENCLOSURE  VALUES(3, 2, 6000.0);
INSERT INTO ENCLOSURE  VALUES(4, 2, 5500.0);
INSERT INTO ENCLOSURE VALUES(5, 2, 4800.0);
INSERT INTO ENCLOSURE  VALUES(6, 2, 5200.0);
INSERT INTO ENCLOSURE  VALUES(7, 2, 4700.0);
INSERT INTO ENCLOSURE  VALUES(8, 2, 5100.0);
INSERT INTO ENCLOSURE  VALUES(9, 2, 5800.0);
INSERT INTO ENCLOSURE   VALUES(10, 2, 5300.0);
```

```
-- Insert data into ANIMAL table
INSERT INTO ANIMAL  VALUES(1, 2, 1, 'Healthy', TO_DATE('2015-05-20', 'YYYY-MM-DD'), 1);
INSERT INTO ANIMAL  VALUES(2, 2, 2, 'Sick', TO_DATE('2018-10-15', 'YYYY-MM-DD'), 2);
INSERT INTO ANIMAL  VALUES(3, 2, 3, 'Healthy', TO_DATE('2016-07-03', 'YYYY-MM-DD'), 3);
INSERT INTO ANIMAL  VALUES(4, 2, 4, 'Healthy', TO_DATE('2019-02-28', 'YYYY-MM-DD'), 4);
INSERT INTO ANIMAL  VALUES(5, 2, 5, 'Sick', TO_DATE('2017-12-10', 'YYYY-MM-DD'), 5);
INSERT INTO ANIMAL  VALUES(6, 2, 6, 'Healthy', TO_DATE('2014-08-22', 'YYYY-MM-DD'), 6);
INSERT INTO ANIMAL  VALUES(7, 2, 7, 'Healthy', TO_DATE('2015-11-05', 'YYYY-MM-DD'), 7);
INSERT INTO ANIMAL  VALUES(8, 2, 8, 'Sick', TO_DATE('2018-04-14', 'YYYY-MM-DD'), 8);
INSERT INTO ANIMAL  VALUES(9, 2, 9, 'Healthy', TO_DATE('2016-09-18', 'YYYY-MM-DD'), 9);
INSERT INTO ANIMAL  VALUES(10, 2, 10, 'Healthy', TO_DATE('2013-12-01', 'YYYY-MM-DD'), 10);
INSERT INTO ANIMAL  VALUES(11, 2, 3, 'Healthy', TO_DATE('2019-06-12', 'YYYY-MM-DD'), 3);
INSERT INTO ANIMAL  VALUES(12, 2, 7, 'Sick', TO_DATE('2018-04-05', 'YYYY-MM-DD'), 7);
INSERT INTO ANIMAL  VALUES(13, 2, 2, 'Healthy', TO_DATE('2017-11-28', 'YYYY-MM-DD'), 2);
INSERT INTO ANIMAL  VALUES(14, 2, 8, 'Healthy', TO_DATE('2015-10-20', 'YYYY-MM-DD'), 8);
INSERT INTO ANIMAL  VALUES(15, 2, 1, 'Sick', TO_DATE('2016-09-03', 'YYYY-MM-DD'), 1);
INSERT INTO ANIMAL  VALUES(16, 2, 5, 'Healthy', TO_DATE('2014-07-15', 'YYYY-MM-DD'), 5);
INSERT INTO ANIMAL  VALUES(17, 2, 4, 'Healthy', TO_DATE('2018-02-10', 'YYYY-MM-DD'), 4);
INSERT INTO ANIMAL  VALUES(18, 2, 6, 'Sick', TO_DATE('2017-05-22', 'YYYY-MM-DD'), 6);
INSERT INTO ANIMAL  VALUES(19, 2, 9, 'Healthy', TO_DATE('2016-08-18', 'YYYY-MM-DD'), 9);
INSERT INTO ANIMAL  VALUES(20, 2, 10, 'Healthy', TO_DATE('2013-11-25', 'YYYY-MM-DD'), 10);
INSERT INTO ANIMAL  VALUES(21, 2, 6, 'Sick', TO_DATE('2017-05-22', 'YYYY-MM-DD'), 9);
INSERT INTO ANIMAL  VALUES(22, 2, 9, 'Healthy', TO_DATE('2016-08-18', 'YYYY-MM-DD'), 9);
INSERT INTO ANIMAL VALUES(23, 2, 10, 'Healthy', TO_DATE('2013-11-25', 'YYYY-MM-DD'), 1);
INSERT INTO ANIMAL  VALUES(24, 2, 8, 'Healthy', TO_DATE('2015-10-20', 'YYYY-MM-DD'), 1);
INSERT INTO ANIMAL  VALUES(25, 2, 1, 'Sick', TO_DATE('2016-09-03', 'YYYY-MM-DD'), 1);
INSERT INTO ANIMAL  VALUES(26, 2, 5, 'Healthy', TO_DATE('2014-07-15', 'YYYY-MM-DD'), 5);
INSERT INTO ANIMAL  VALUES(27, 2, 4, 'Healthy', TO_DATE('2018-02-10', 'YYYY-MM-DD'), 4);
```

```
-- Insert data into Revenue_Types table
INSERT INTO Revenue_Types (revenueTypeId, name, type, buildingId) VALUES(1, 'Ticket Sales', 'Admission', 5);
INSERT INTO Revenue_Types (revenueTypeId, name, type, buildingId) VALUES(2, 'Concess Sales', 'Concession', 4);
INSERT INTO Revenue_Types (revenueTypeId, name, type, buildingId) VALUES(3, 'Show sales', 'Show', 3);
INSERT INTO Revenue_Types (revenueTypeId, name, type, buildingId) VALUES(4, 'Gift Shop', 'Retail', 6);
```

```
INSERT INTO Revenue_Types (revenueTypeId, name, type, buildingId) VALUES(5, 'Parking Fees', 'Miscellaneous', 10);
INSERT INTO Revenue_Types (revenueTypeId, name, type, buildingId) VALUES(6, 'Memberships', 'Membership', 5);
INSERT INTO Revenue_Types (revenueTypeId, name, type, buildingId) VALUES(7, 'Donations', 'Miscellaneous', 9);
INSERT INTO Revenue_Types (revenueTypeId, name, type, buildingId) VALUES(8, 'Rentals', 'Miscellaneous', 1);
INSERT INTO Revenue_Types (revenueTypeId, name, type, buildingId) VALUES(9, 'Education show', 'Program', 3);
INSERT INTO Revenue_Types (revenueTypeId, name, type, buildingId) VALUES(10, 'Special Events', 'Event', 2);

-- Insert data into Revenue_Events table
INSERT INTO Revenue_Events VALUES(TO_DATE('2023-01-15', 'YYYY-MM-DD'), 1, 200.0, 1500.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2023-02-20', 'YYYY-MM-DD'), 2, 50.0, 300.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2023-03-10', 'YYYY-MM-DD'), 3, 100.0, 1000.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2023-04-05', 'YYYY-MM-DD'), 4, NULL, 800.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2023-05-12', 'YYYY-MM-DD'), 5, NULL, 200.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2023-06-28', 'YYYY-MM-DD'), 6, 120.0, 900.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2023-07-15', 'YYYY-MM-DD'), 7, NULL, 400.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2023-08-22', 'YYYY-MM-DD'), 8, 30.0, 600.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2023-09-10', 'YYYY-MM-DD'), 9, NULL, 1200.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2023-10-18', 'YYYY-MM-DD'), 10, 15.0, 250.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2023-01-14', 'YYYY-MM-DD'), 1, 200.0, 1500.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2023-02-21', 'YYYY-MM-DD'), 2, 50.0, 300.0);
INSERT INTO Revenue_Events  VALUES(TO_DATE('2022-03-10', 'YYYY-MM-DD'), 3, 100.0, 1000.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2022-04-05', 'YYYY-MM-DD'), 4, NULL, 800.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2022-05-12', 'YYYY-MM-DD'), 5, NULL, 200.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2022-06-28', 'YYYY-MM-DD'), 6, 120.0, 900.0);


INSERT INTO Revenue_Events VALUES(TO_DATE('2022-07-15', 'YYYY-MM-DD'), 7, NULL, 400.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2022-08-22', 'YYYY-MM-DD'), 8, 30.0, 600.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2022-09-10', 'YYYY-MM-DD'), 9, NULL, 1200.0);
INSERT INTO Revenue_Events VALUES(TO_DATE('2022-10-18', 'YYYY-MM-DD'), 10, 15.0, 250.0);
INSERT INTO Revenue_Events  VALUES (TO_DATE('2023-11-01', 'YYYY-MM-DD'), 3, 50.0, 500.0);
INSERT INTO Revenue_Events  VALUES (TO_DATE('2023-12-15', 'YYYY-MM-DD'), 4, 80.0, 800.0);
INSERT INTO Revenue_Events  VALUES (TO_DATE('2024-01-20', 'YYYY-MM-DD'), 5, 120.0, 1200.0);
INSERT INTO Revenue_Events  VALUES (TO_DATE('2024-02-10', 'YYYY-MM-DD'), 6, 90.0, 900.0);
INSERT INTO Revenue_Events  VALUES (TO_DATE('2024-03-05', 'YYYY-MM-DD'), 7, 150.0, 1500.0);
INSERT INTO Revenue_Events  VALUES (TO_DATE('2024-04-18', 'YYYY-MM-DD'), 8, 100.0, 1000.0);
INSERT INTO Revenue_Events  VALUES (TO_DATE('2024-05-22', 'YYYY-MM-DD'), 9, 70.0, 700.0);
INSERT INTO Revenue_Events  VALUES (TO_DATE('2024-06-28', 'YYYY-MM-DD'), 10, 110.0, 1100.0);
INSERT INTO Revenue_Events  VALUES (TO_DATE('2024-07-15', 'YYYY-MM-DD'), 1, 180.0, 1800.0);


-- Insert data into Animal_Show table
INSERT INTO Animal_Show (revenueId, seniorPrice, adultPrice, childPrice, numberPerDay) VALUES(1, 10.0, 15.0, 8.0, 2);
INSERT INTO Animal_Show (revenueId, seniorPrice, adultPrice, childPrice, numberPerDay) VALUES(2, 12.0, 18.0, 10.0, 1);
INSERT INTO Animal_Show (revenueId, seniorPrice, adultPrice, childPrice, numberPerDay) VALUES(3, 8.0, 12.0, 6.0, 3);
INSERT INTO Animal_Show (revenueId, seniorPrice, adultPrice, childPrice, numberPerDay) VALUES(4, 11.0, 16.0, 9.0, 2);
```

```
INSERT INTO Animal_Show (revenueId, seniorPrice, adultPrice, childPrice, numberPerDay) VALUES(5, 13.0, 20.0, 11.0, 1);
INSERT INTO Animal_Show (revenueId, seniorPrice, adultPrice, childPrice, numberPerDay) VALUES(6, 9.0, 14.0, 7.0, 2);
INSERT INTO Animal_Show (revenueId, seniorPrice, adultPrice, childPrice, numberPerDay) VALUES(7, 15.0, 22.0, 12.0, 1);
INSERT INTO Animal_Show (revenueId, seniorPrice, adultPrice, childPrice, numberPerDay) VALUES(8, 14.0, 21.0, 10.0, 3);
INSERT INTO Animal_Show (revenueId, seniorPrice, adultPrice, childPrice, numberPerDay) VALUES(9, 10.0, 15.0, 8.0, 2);
INSERT INTO Animal_Show (revenueId, seniorPrice, adultPrice, childPrice, numberPerDay) VALUES(10, 12.0, 18.0, 10.0, 1);
```

```
-- Insert data into CONCESSION table
INSERT INTO CONCESSION  VALUES(2, 'Popcorn');
INSERT INTO CONCESSION  VALUES(1, 'Soda');
INSERT INTO CONCESSION  VALUES(3, 'Candy');
INSERT INTO CONCESSION  VALUES(4, 'Hot Dog');
INSERT INTO CONCESSION  VALUES(5, 'Nachos');
INSERT INTO CONCESSION  VALUES(6, 'Pretzel');
INSERT INTO CONCESSION  VALUES(7, 'Ice Cream');
INSERT INTO CONCESSION  VALUES(8, 'Chips');
INSERT INTO CONCESSION  VALUES(9, 'Burger');
INSERT INTO CONCESSION ( VALUES(10, 'Fries');

-- Insert data into Zoo_Admission table
INSERT INTO Zoo_Admission  VALUES(1, 10.0, 20.0, 10.0);
INSERT INTO Zoo_Admission  VALUES(2, 12.0, 25.0, 15.0);
INSERT INTO Zoo_Admission  VALUES(3, 15.0, 30.0, 18.0);
INSERT INTO Zoo_Admission  VALUES(4, 10.0, 18.0, 8.0);
INSERT INTO Zoo_Admission  VALUES(5, 13.0, 22.0, 12.0);
INSERT INTO Zoo_Admission  VALUES(6, 14.0, 28.0, 14.0);
INSERT INTO Zoo_Admission  VALUES(7, 12.0, 24.0, 10.0);
INSERT INTO Zoo_Admission  VALUES(8, 11.0, 23.0, 11.0);
INSERT INTO Zoo_Admission  VALUES(9, 14.0, 26.0, 16.0);
INSERT INTO Zoo_Admission  VALUES(10, 15.0, 32.0, 20.0);

-- Insert data into Participates_In table
INSERT INTO Participates_In VALUES(1, 3, 2);
INSERT INTO Participates_In VALUES(2, 3, 1);
INSERT INTO Participates_In  VALUES(3, 3, 3);
INSERT INTO Participates_In VALUES(4, 3, 2);
INSERT INTO Participates_In  VALUES(5, 3, 1);
INSERT INTO Participates_In VALUES(6, 6, 1);
INSERT INTO Participates_In  VALUES(7, 6, 2);
INSERT INTO Participates_In VALUES(8, 6, 1);
INSERT INTO Participates_In VALUES(9, 6, 3);
INSERT INTO Participates_In VALUES(10, 6, 2);
```

```
-- Insert data into Cares_For table
INSERT INTO Cares_For  VALUES(1, 1);
INSERT INTO Cares_For  VALUES(2, 2);
INSERT INTO Cares_For  VALUES(3, 3);
INSERT INTO Cares_For  VALUES(4, 4);
INSERT INTO Cares_For  VALUES(5, 5);
INSERT INTO Cares_For  VALUES(6, 6);
INSERT INTO Cares_For  VALUES(7, 7);
INSERT INTO Cares_For  VALUES(8, 8);
INSERT INTO Cares_For  VALUES(9, 9);
INSERT INTO Cares_For  VALUES(10, 10);
```

SOURCE CODE:

APPLICATION SCREENSHOTS