NATIONAL WILDLIFE MINI PROJECT

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Description

Project designed to overcome problems/issues faced during manual data record system. It aims at giving accurate idea of expenses involved and profit gained by tourism. It also aims at giving details about any considered animal. The data can be updated on regular basis. The National Wildlife Database Management System keeps the record of Animals, Staffs, Place and Tourism details of a considered place (E.g. Mumbai Park, Zoo).

The details of animals include animal type id, name, nutrition provided, number of same species, etc. The place details includes place id, name, address and total animals at that place. The staff details includes name, staff id, age, gender and their role at that place. The tourism details includes tourism id, an amount of money spend *public* expenditures and also the located city. The data stored is accessible only after authentication. The data cannotbe shared with anyone without any authentication. Terms and Conditions apply for security purposes. This system helps user to get faster, accurate and reliable data. It enables updation and deletion of the data.

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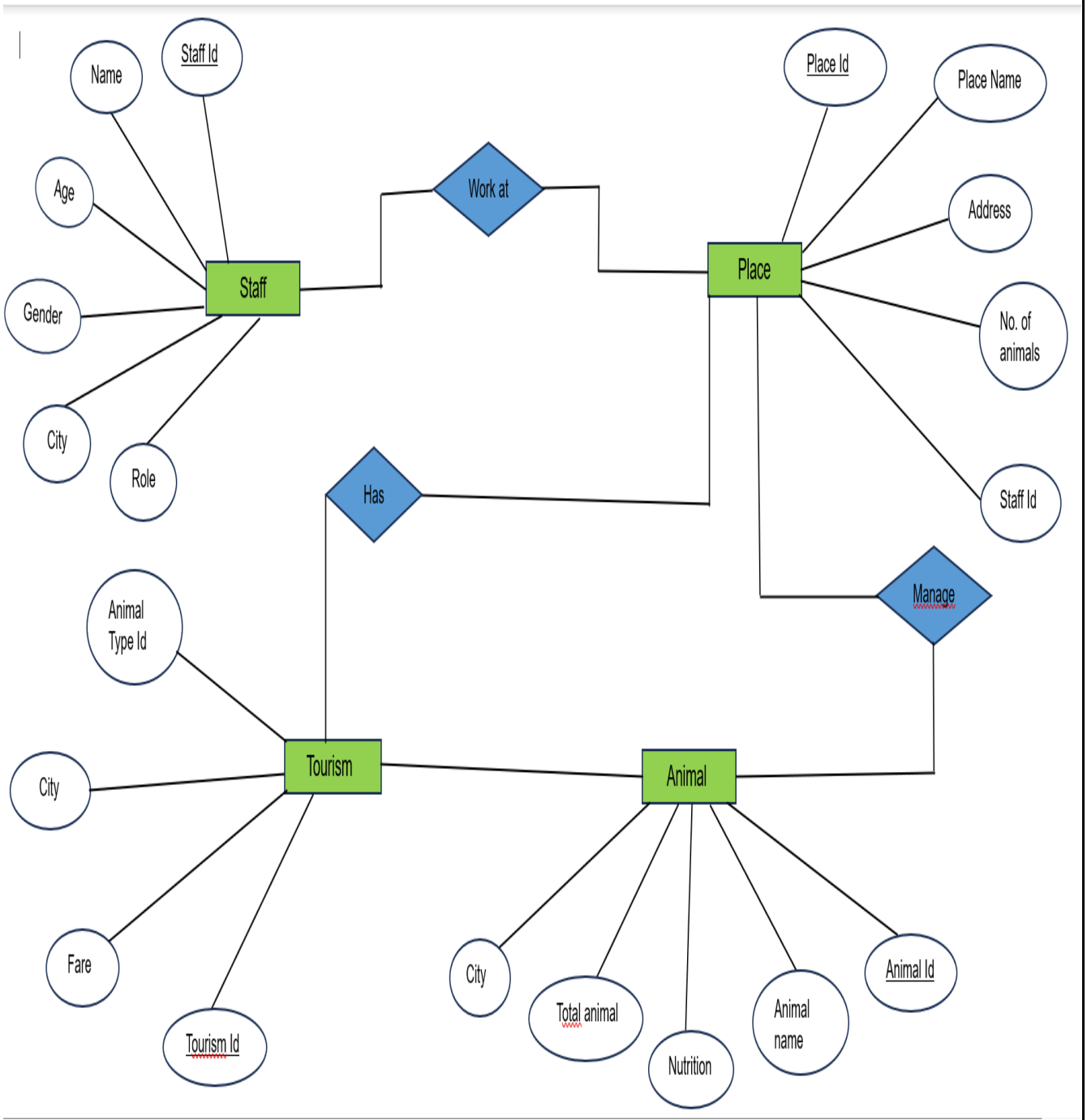
Introduction

The purpose of our National Wildlife Database Management is to provide a simple tool in order to ease the existing manual data record system like expenses involved and profit gainedby tourism, details about any considered animal, places and staff working etc.

It will reduce considerably the difficulties faced on existing system, with minimum error and difficulties.

The main objective of the proposed system is to provide a user-friendly interface.

ER Diagram


Name
Staff Id
Age
Work at
Place Id
Place Name
Address
Staff
Place
Gender
No. of animals
City
Role
Has
Staff Id
Manage
Animal Type Id
Tourism
Animal
City
Fare
Tourism Id
City
Total animal
Nutrition
Animal name
Animal Id

Structure of Tables

Tables:

This tables contains the details of all the National Wildlife Database Management. In this wildlife_management database there are four different tables, such as staff information, place information, animal information and tourism information.

```
MariaDB [wildlife_management]> show tables;
+------------------------------+
| Tables_in_wildlife_management |
+------------------------------+
| animal_info                  |
| place_info                   |
| staff_info                   |
| tourism_info                 |
+------------------------------+
4 rows in set (0.067 sec)
```

Staff Info:

This table contains the details of all the staff information. This table provide staff id, name, age, gender, staff role at that place and belongs to which city.

```
MariaDB [wildlife_management]> desc staff_info;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| Staff_ID   | int(11)     | NO   | PRI | NULL    |       |
| Staff_Name | varchar(30) | YES  |     | NULL    |       |
| Age        | int(11)     | YES  |     | NULL    |       |
| Gender     | varchar(20) | YES  |     | NULL    |       |
| City       | varchar(30) | YES  |     | NULL    |       |
| Staff_Role | varchar(40) | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
6 rows in set (0.121 sec)
```

Place Info:

This table contains the details of all the place information. This table provide place id, in this place which national park or zoo available that name, address and total animals at that place.

```
MariaDB [wildlife_management]> desc place_info;
+--------------+------------+------+-----+---------+-------+
| Field        | Type       | Null | Key | Default | Extra |
+--------------+------------+------+-----+---------+-------+
| Place_ID     | int(11)    | NO   | PRI | NULL    |       |
| Name         | varchar(30) | YES |     | NULL    |       |
| Address      | varchar(30) | YES |     | NULL    |       |
| No_of_animals | int(11)   | YES |     | NULL    |       |
| Staff_ID     | int(11)    | YES | MUL | NULL    |       |
+--------------+------------+------+-----+---------+-------+
5 rows in set (0.070 sec)
```

Animal Info:

This table contains the details of all the animal information. This table provide animal type id, name, nutrition provided, city and number of same species.

```
MariaDB [wildlife_management]> desc animal_info;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| Animal_Type_ID | int(11)     | NO   | PRI | NULL    |       |
| Animal_Name    | varchar(30) | YES  |     | NULL    |       |
| Nutrition_Name | varchar(30) | YES  |     | NULL    |       |
| Total_Animals  | int(11)     | YES  |     | NULL    |       |
| City           | varchar(30) | YES  |     | NULL    |       |
+----------------+-------------+------+-----+---------+-------+
5 rows in set (0.101 sec)
```

Tourism Info:

This table contains the details of all the tourism information. This table provide tourism id, an amount of money spend and also the located city.

```
MariaDB [wildlife_management]> desc tourism_info;
+---------------+------------+------+-----+---------+-------+
| Field         | Type       | Null | Key | Default | Extra |
+---------------+------------+------+-----+---------+-------+
| Tourism_ID    | int(11)    | NO   | PRI | NULL    |       |
| Fare          | int(11)    | YES  |     | NULL    |       |
| City          | varchar(30)| YES  |     | NULL    |       |
| Animal_Type_ID| int(11)    | YES  | MUL | NULL    |       |
+---------------+------------+------+-----+---------+-------+
4 rows in set (0.026 sec)
```

Contents of Tables

Staff Info:

```
MariaDB [wildlife_management]> select* from staff_info;
+----------+--------------+------+--------+---------+--------------------+
| Staff_ID | Staff_Name   | Age  | Gender | City    | Staff_Role         |
+----------+--------------+------+--------+---------+--------------------+
|      101 | Shika Kore   |   23 | F      | Mumbai  | Wildlife Admin     |
|      102 | Karan Patil  |   27 | M      | Pune    | Animal Technician  |
|      103 | Poonam Patil |   28 | F      | Nashik  | Wildlife Technician|
|      104 | Kartik Jadav |   24 | M      | Chennai | Wildlife Admin     |
|      105 | Shub Yadav   |   28 | M      | Delhi   | Animal Technician  |
|      106 | Sherya More  |   25 | F      | Mumbai  | Wildlife Technician|
|      107 | Sayli Kene   |   30 | F      | Pune    | Wildlife Admin     |
|      108 | Priya Jadav  |   41 | F      | Nashik  | Animal Technician  |
|      109 | Ganesh Sharma|   35 | M      | Chennai | Wildlife Technician|
|      110 | Pratik Chavan|   26 | M      | Delhi   | Wildlife Admin     |
|      111 | Bhavana Kale |   28 | F      | Mumbai  | Animal Technician  |
|      112 | Shilpa Yadav |   31 | F      | Pune    | Wildlife Technician|
|      113 | Pooja Desale |   23 | F      | Nashik  | Wildlife Admin     |
|      114 | Yogesh Patil |   33 | M      | Chennai | Animal Technician  |
|      115 | Suresh Patil |   33 | M      | Delhi   | Wildlife Technician|
|      116 | Abhi Kande   |   34 | M      | Mumbai  | Wildlife Admin     |
|      117 | Nikhil Shinde|   32 | M      | Pune    | Animal Technician  |
|      118 | Mayur Dange  |   27 | M      | Nashik  | Wildlife Technician|
|      119 | Nitin Garje  |   29 | M      | Chennai | Wildlife Admin     |
|      120 | Vikas Shinde |   31 | M      | Delhi   | Animal Technician  |
+----------+--------------+------+--------+---------+--------------------+
20 rows in set (0.098 sec)
```

Place Info:

```
MariaDB [wildlife_management]> select* from place_info;
+----------+---------------------+---------+--------------+----------+
| Place_ID | Name                | Address | No_of_animals | Staff_ID |
+----------+---------------------+---------+--------------+----------+
|        1 | Todoba National Park | Mumbai  |           45 |      101 |
|        2 | Manas National Park  | Pune    |           30 |      102 |
|        3 | Panna National Park  | Nashik  |           25 |      103 |
|        4 | Gir National Park    | Chennai |           55 |      104 |
|        5 | Jimma National Park  | Delhi   |           20 |      105 |
|        6 | Satpura Park         | Mumbai  |           45 |      106 |
|        7 | Hemis Park           | Pune    |           30 |      107 |
|        8 | Kemis Zoo            | Nashik  |           25 |      108 |
|        9 | Miko Zoo             | Chennai |           55 |      109 |
|       10 | Kimma Park           | Delhi   |           20 |      110 |
|       11 | Sarik Zoo            | Mumbai  |           45 |      111 |
|       12 | Great Park           | Pune    |           30 |      112 |
|       13 | Kanna Zoo            | Nashik  |           25 |      113 |
|       14 | Sirr Park            | Chennai |           55 |      114 |
|       15 | Perii Zoo            | Delhi   |           20 |      115 |
|       16 | Mani Park            | Mumbai  |           45 |      116 |
|       17 | Bika Zoo             | Pune    |           30 |      117 |
|       18 | Surya Zoo            | Nashik  |           25 |      118 |
|       19 | Parr Park            | Chennai |           55 |      119 |
|       20 | New Park             | Delhi   |           20 |      120 |
+----------+---------------------+---------+--------------+----------+
20 rows in set (0.001 sec)
```

Animal Info:

```
MariaDB [wildlife_management]> select* from animal_info;
+---------------+------------+---------------+--------------+---------+
| Animal_Type_ID | Animal_Name | Nutrition_Name | Total_Animals | City    |
+---------------+------------+---------------+--------------+---------+
|          1110 | Tiger      | Proteins      |           15 | Mumbai  |
|          1111 | Lion       | Fats          |           10 | Pune    |
|          1112 | Elephant   | Vitamins      |           15 | Nashik  |
|          1113 | Rabbit     | Fibre         |           20 | Chennai |
|          1114 | Deer       | Protenis      |           25 | Delhi   |
|          1115 | Horse      | Fats          |           25 | Mumbai  |
|          1116 | Beer       | Vitamins      |           35 | Pune    |
|          1117 | Monkey     | Fibre         |           40 | Nashik  |
|          1118 | Cat        | Proteins      |           45 | Chennai |
|          1119 | Tiger      | Fats          |           50 | Delhi   |
|          1120 | Lion       | Vitamins      |           55 | Mumbai  |
|          1121 | Elephant   | Fibre         |           60 | Pune    |
|          1122 | Rabbit     | Proteins      |           50 | Nashik  |
|          1123 | Deer       | Fats          |           40 | Chennai |
|          1124 | Horse      | Vitamins      |           35 | Delhi   |
|          1125 | Beer       | Fibre         |           25 | Mumbai  |
|          1126 | Monkey     | Proteins      |           35 | Pune    |
|          1127 | Cat        | Fats          |           10 | Nashik  |
|          1128 | Tiger      | Vitamins      |           20 | Chennai |
|          1129 | Lion       | Fibre         |           25 | Delhi   |
+---------------+------------+---------------+--------------+---------+
20 rows in set (0.001 sec)
```

Tourism Info:

```
MariaDB [wildlife_management]> select* from tourism_info;
+------------+------+---------+----------------+
| Tourism_ID | Fare | City    | Animal_Type_ID |
+------------+------+---------+----------------+
|          1 |  150 | Mumbai  |           1110 |
|          2 |  250 | Pune    |           1111 |
|          3 |  300 | Nashik  |           1112 |
|          4 |  350 | Chennai |           1113 |
|          5 |  400 | Delhi   |           1114 |
|          6 |  500 | Mumbai  |           1115 |
|          7 |  150 | Pune    |           1116 |
|          8 |  250 | Nashik  |           1117 |
|          9 |  300 | Chennai |           1118 |
|         10 |  350 | Delhi   |           1119 |
|         11 |  400 | Mumbai  |           1120 |
|         12 |  500 | Pune    |           1121 |
|         13 |  150 | Nashik  |           1122 |
|         14 |  250 | Chennai |           1123 |
|         15 |  300 | Delhi   |           1124 |
|         16 |  350 | Mumbai  |           1125 |
|         17 |  400 | Pune    |           1126 |
|         18 |  500 | Nashik  |           1127 |
|         19 |  150 | Chennai |           1128 |
|         20 |  250 | Delhi   |           1129 |
+------------+------+---------+----------------+
20 rows in set (0.050 sec)
```

Subqueries

What is the name of the wildlife technician who works at the Panna National Park?

SELECT Staff_Name FROM Staff_info WHERE Staff_Role = 'Wildlife Technician' AND City = 'Nashik';

```
MariaDB [Wildlife_Management]> SELECT Staff_Name FROM Staff_info WHERE Staff_Role = 'Wildlife Technician' AND City = 'Nashik';
+--------------+
| Staff_Name   |
+--------------+
| Poonam Patil |
```

What is the name of the wildlife technician who is based in the same city as the park with the most animals?

SELECT Staff_Name FROM Staff_info WHERE Staff_Role = 'Wildlife Technician' AND City = (SELECT City FROM Place_info ORDER BY No_of_animals DESC LIMIT 1);

```
MariaDB [Wildlife_Management]> SELECT Staff_Name FROM Staff_info WHERE Staff_Role = 'Wildlife Technician' AND City = (SELECT City FROM Place_info ORDER BY No_of_animals DESC LIMIT 1 );
+--------------+
| Staff_Name   |
+--------------+
| Poonam Patil |
| Sherya More  |
| Ganesh Sharma |
| Shilpa Yadav |
| Suresh Patil |
| Mayur Dange  |
+--------------+
6 rows in set (0.001 sec)
```

Write a query, Which animals have the same nutrition as the animals with animal_type_id 1115 and 1118 in the wildlife management database?

select* from animal_info where Nutrition_Name in (select Nutrition_Name from animal_info where animal_type_id in(1115,1118));

```
MariaDB [wildlife_management]> select* from animal_info where Nutrition_Name in (select Nutrition_Name from animal_info where animal_type_id in(1115,1118));
+---------------+-------------+----------------+--------------+---------+
| Animal_Type_ID | Animal_Name | Nutrition_Name | Total_Animals | City    |
+---------------+-------------+----------------+--------------+---------+
|          1110 | Tiger       | Proteins       |           15 | Mumbai  |
|          1111 | Lion        | Fats           |           10 | Pune    |
|          1115 | Horse       | Fats           |           25 | Mumbai  |
|          1118 | Cat         | Proteins       |           45 | Chennai |
|          1119 | Tiger       | Fats           |           50 | Delhi   |
|          1122 | Rabbit      | Proteins       |           50 | Nashik  |
|          1123 | Deer        | Fats           |           40 | Chennai |
|          1126 | Monkey      | Proteins       |           35 | Pune    |
|          1127 | Cat         | Fats           |           10 | Nashik  |
+---------------+-------------+----------------+--------------+---------+
9 rows in set (0.199 sec)
```

Write a query ,Get the average fare for each animal type?

SELECT Animal_Name, (SELECT AVG(Fare) FROM Tourism_info WHERE Animal_Type_ID = a.Animal_Type_ID) AS Avg_Fare FROM Animal_info AS a GROUP BY Animal_Name;

```
MariaDB [Wildlife_Management]> SELECT Animal_Name, (SELECT AVG(Fare) FROM Tourism_info WHERE Animal_Type_ID = a.Animal_Type_ID) AS Avg_Fare FROM Animal_info AS a GROUP BY Animal_Name;
+-------------+----------+
| Animal_Name | Avg_Fare |
+-------------+----------+
| Beer        | 150.0000 |
| Cat         | 300.0000 |
| Deer        | 400.0000 |
| Elephant    | 300.0000 |
| Horse       | 500.0000 |
| Lion        | 250.0000 |
| Monkey      | 250.0000 |
| Rabbit      | 350.0000 |
| Tiger       | 150.0000 |
+-------------+----------+
9 rows in set (0.001 sec)
```

Write a query to find the second highest fare in tourism information?

MariaDB [wildlife_management]> select MAX(fare) as fare from tourism_info where fare < (select MAX(fare) from tourism_info);

```
MariaDB [wildlife_management]> select MAX(fare) as fare from tourism_info where fare < (select MAX(fare) from tourism_info);
+------+
| fare |
+------+
|  400 |
+------+
1 row in set (0.001 sec)
```

Joins

Display the all place id of staff, where staff working in specific places?

MariaDB [wildlife_management]> select staff_info.Staff_ID, staff_info.Staff_name,place_info.Place_Id from staff_info INNER JOIN place_info ON (staff_info.Staff_Id = place_info.Staff_Id);

Staff_ID	Staff_name	Place_Id
101	Shika Kore	1
102	Karan Patil	2
103	Poonam Patil	3
104	Kartik Jadav	4
105	Shub Yadav	5
106	Sherya More	6
107	Sayli Kene	7
108	Priya Jadav	8
109	Ganesh Sharma	9
110	Pratik Chavan	10
111	Bhavana Kale	11
112	Shilpa Yadav	12
113	Pooja Desale	13
114	Yogesh Patil	14
115	Suresh Patil	15
116	Abhi Kande	16
117	Nikhil Shinde	17
118	Mayur Dange	18
119	Nitin Garje	19
120	Vikas Shinde	20

20 rows in set (0.001 sec)

Which query would provide the staff information, including their IDs, names, and corresponding place IDs where they work, by performing a left join between the "Staff_info" and "Place_info" tables?

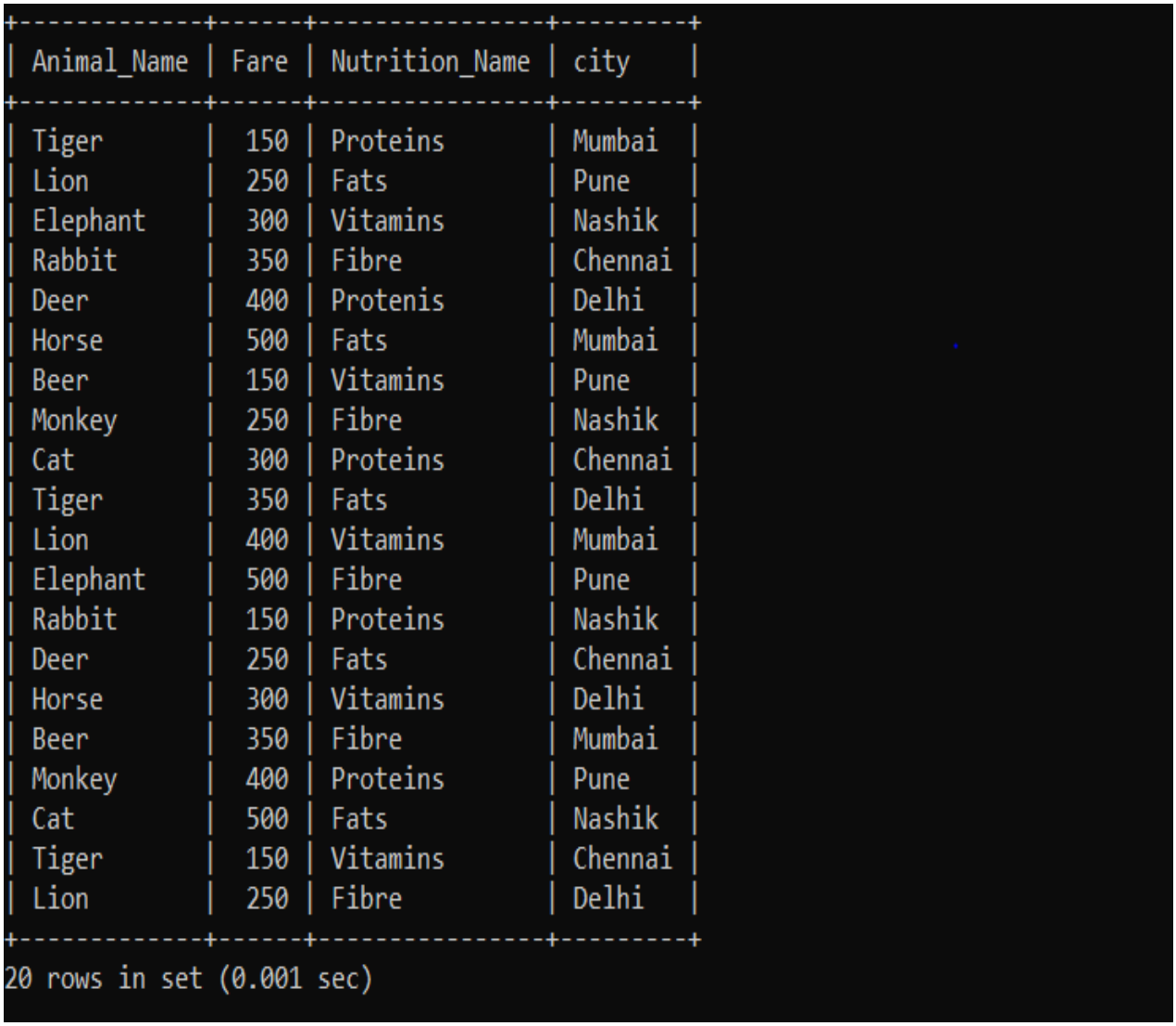
MariaDB [wildlife_management]> select staff_info.Staff_Id, place_info.Place_Id,staff_info.Staff_Name, place_info.Name from Staff_info LEFT JOIN Place_info ON(staff_info.Staff_Id = place_info.Staff_Id);

Staff_Id	Place_Id	Staff_Name	Name
101	1	Shika Kore	Todoba National Park
102	2	Karan Patil	Manas National Park
103	3	Poonam Patil	Panna National Park
104	4	Kartik Jadav	Gir National Park
105	5	Shub Yadav	Jimma National Park
106	6	Sherya More	Satpura Park
107	7	Sayli Kene	Hemis Park
108	8	Priya Jadav	Kemis Zoo
109	9	Ganesh Sharma	Miko Zoo
110	10	Pratik Chavan	Kimma Park
111	11	Bhavana Kale	Sarik Zoo
112	12	Shilpa Yadav	Great Park
113	13	Pooja Desale	Kanna Zoo
114	14	Yogesh Patil	Sirr Park
115	15	Suresh Patil	Perii Zoo
116	16	Abhi Kande	Mani Park
117	17	Nikhil Shinde	Bika Zoo
118	18	Mayur Dange	Surya Zoo
119	19	Nitin Garje	Parr Park
120	20	Vikas Shinde	New Park

20 rows in set (0.001 sec)

What are the names, fares, nutrition, and cities of animals that are featured in tourism?

MariaDB [wildlife_management]> select animal_info.Animal_Name, tourism_info.Fare,animal_info.Nutrition_Name, tourism_info.city from Animal_info RIGHT JOIN Tourism_info ON(animal_info.Animal_type_Id = Tourism_info.Animal_Type_Id);



Animal_Name	Fare	Nutrition_Name	city
Tiger	150	Proteins	Mumbai
Lion	250	Fats	Pune
Elephant	300	Vitamins	Nashik
Rabbit	350	Fibre	Chennai
Deer	400	Protenis	Delhi
Horse	500	Fats	Mumbai
Beer	150	Vitamins	Pune
Monkey	250	Fibre	Nashik
Cat	300	Proteins	Chennai
Tiger	350	Fats	Delhi
Lion	400	Vitamins	Mumbai
Elephant	500	Fibre	Pune
Rabbit	150	Proteins	Nashik
Deer	250	Fats	Chennai
Horse	300	Vitamins	Delhi
Beer	350	Fibre	Mumbai
Monkey	400	Proteins	Pune
Cat	500	Fats	Nashik
Tiger	150	Vitamins	Chennai
Lion	250	Fibre	Delhi

20 rows in set (0.001 sec)

Which query would combine the results of a left join and right join between the "Animal_info" and "Tourism_info" tables, including all columns from both tables, based on the matching animal type IDs?

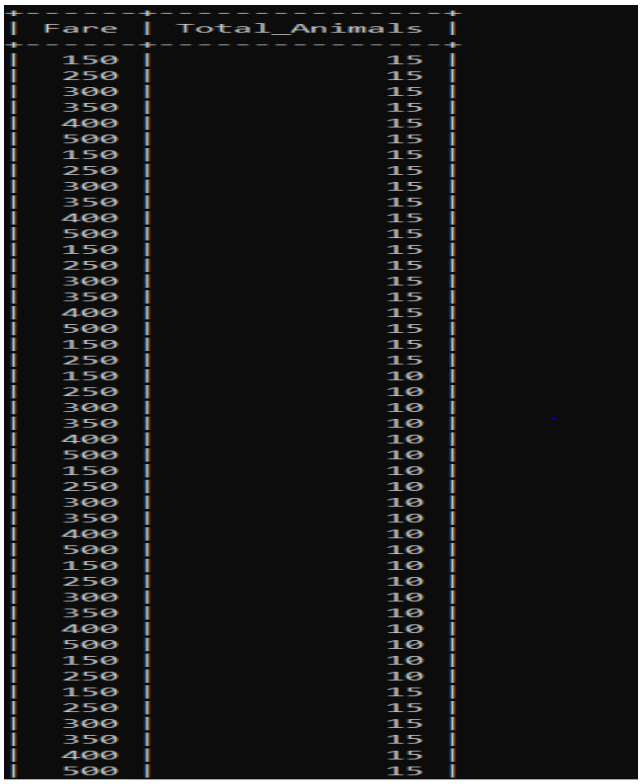
MariaDB [wildlife_management]> select* from Animal_info LEFT JOIN Tourism_info ON(animal_info.Animal_type_Id = Tourism_info.Animal_Type_Id) UNION select* from Animal_info RIGHT JOIN Tourism_info ON(animal_info.Animal_type_Id = Tourism_info.Animal_Type_Id);

Animal_Type_ID	Animal_Name	Nutrition_Name	Total_Animals	City	Tourism_ID	Fare	City	Animal_Type_ID
1110	Tiger	Proteins	15	Mumbai	1	150	Mumbai	1110
1111	Lion	Fats	10	Pune	2	250	Pune	1111
1112	Elephant	Vitamins	15	Nashik	3	300	Nashik	1112
1113	Rabbit	Fibre	20	Chennai	4	350	Chennai	1113
1114	Deer	Protenis	25	Delhi	5	400	Delhi	1114
1115	Horse	Fats	25	Mumbai	6	500	Mumbai	1115
1116	Beer	Vitamins	35	Pune	7	150	Pune	1116
1117	Monkey	Fibre	40	Nashik	8	250	Nashik	1117
1118	Cat	Proteins	45	Chennai	9	300	Chennai	1118
1119	Tiger	Fats	50	Delhi	10	350	Delhi	1119
1120	Lion	Vitamins	55	Mumbai	11	400	Mumbai	1120
1121	Elephant	Fibre	60	Pune	12	500	Pune	1121
1122	Rabbit	Proteins	50	Nashik	13	150	Nashik	1122
1123	Deer	Fats	40	Chennai	14	250	Chennai	1123
1124	Horse	Vitamins	35	Delhi	15	300	Delhi	1124
1125	Beer	Fibre	25	Mumbai	16	350	Mumbai	1125
1126	Monkey	Proteins	35	Pune	17	400	Pune	1126
1127	Cat	Fats	10	Nashik	18	500	Nashik	1127
1128	Tiger	Vitamins	20	Chennai	19	150	Chennai	1128
1129	Lion	Fibre	25	Delhi	20	250	Delhi	1129

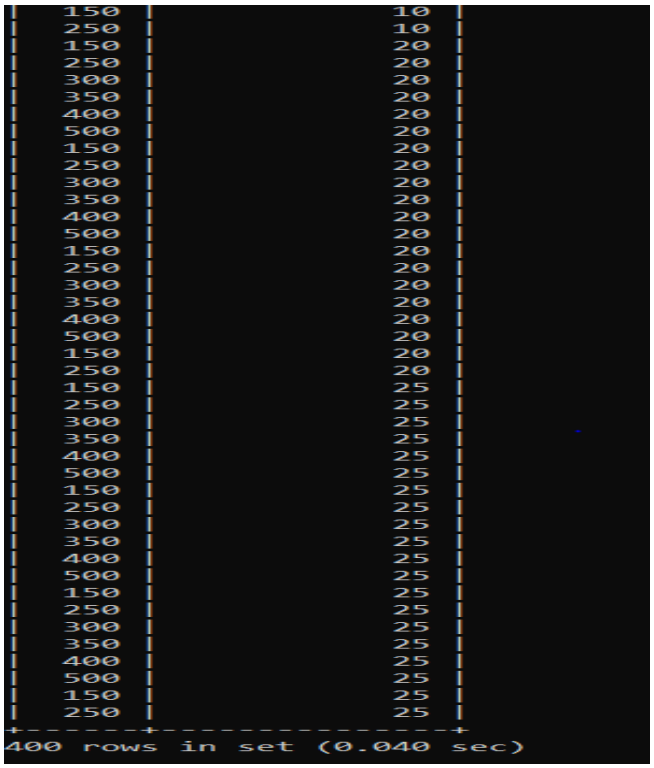
20 rows in set (0.001 sec)

What are the fares and total number of animals for all combinations of tourism information and animal information?

MariaDB [wildlife_management]> select tourism_info.Fare,animal_info.Total_Animals from tourism_info CROSS JOIN animal_info;



Fare	Total_Animals
150	15
250	15
300	15
350	15
400	15
500	15
150	15
250	15
300	15
350	15
400	15
500	15
150	15
250	15
300	15
350	15
400	15
500	15
150	15
250	15
150	10
250	10
300	10
350	10
400	10
500	10
150	10
250	10
300	10
350	10
400	10
500	10
150	10
250	10
300	10
350	10
400	10
500	10
150	10
250	10
150	15
250	15
300	15
350	15
400	15
500	15



150	10
250	10
150	20
250	20
300	20
350	20
400	20
500	20
150	20
250	20
300	20
350	20
400	20
500	20
150	20
250	20
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150	25
250	25
300	25
350	25
400	25
500	25
150	25
250	25

400 rows in set (0.040 sec)