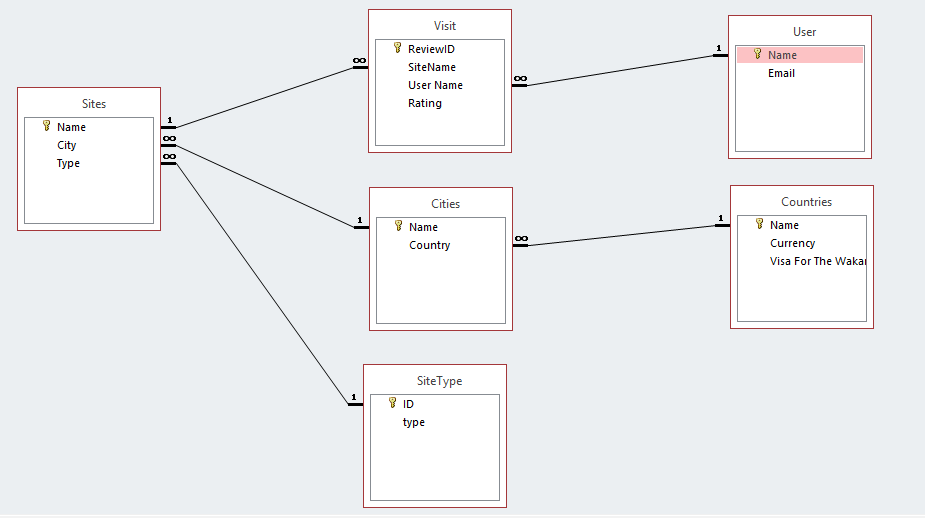
**F27WD Web Design and Databases**

Coursework 2 Assignment

# Relational diagram:



The above diagram is the relational diagram for the travel database.

Following are the primary keys and foreign keys of each table:

1. Countries
   1. Name – Primary Key
2. Cities
   1. Name – Primary Key
   2. Country – Foreign Key
3. SiteType
   1. ID – Primary Key
4. Sites
   1. Name – Primary Key
   2. City – Foreign Key
   3. Type – Foreign Key
5. Visit
   1. ReviewID – Primary Key
   2. User Name – Secondary Key
   3. SiteName – Secondary Key
6. User
   1. Name - Primary Key

# SQL Codes to implement the database:

CREATE TABLE countries(

name VARCHAR(50) PRIMARY KEY,

currency VARCHAR(50),

visaForWakanda TINYINT

)ENGINE=INNODB;

CREATE TABLE cities(

name VARCHAR(50) PRIMARY KEY,

country VARCHAR(50),

FOREIGN KEY (country) REFERENCES countries(name)

)ENGINE=INNODB;

CREATE TABLE siteType(

id INT AUTO\_INCREMENT PRIMARY KEY,

type VARCHAR(30)

)ENGINE=INNODB;

CREATE TABLE sites(

name VARCHAR(50) PRIMARY KEY,

city VARCHAR(50),

type INT,

FOREIGN KEY (city) REFERENCES cities(name),

FOREIGN KEY (type) REFERENCES siteType(id)

)ENGINE=INNODB;

CREATE TABLE visit(

reviewId INT AUTO\_INCREMENT PRIMARY KEY,

siteName VARCHAR(100),

userName VARCHAR(50),

rating INT,

FOREIGN KEY (siteName) REFERENCES sites(name)

)ENGINE=INNODB;

CREATE TABLE user(

name VARCHAR(30) PRIMARY KEY,

email VARCHAR(30)

)ENGINE=INNODB;

## Below are the SQL code to insert the values into the table:

INSERT INTO countries VALUES('Georgia', 'Iari',1);

INSERT INTO countries VALUES('Honduras', 'Iempira', 0);

INSERT INTO countries VALUES('Kazakhstan', 'Tenge', 1);

INSERT INTO countries VALUES('Mongolia', 'Togrog', 0);

INSERT INTO countries VALUES('Tanzania', 'Shilling', 1);

INSERT INTO cities VALUES('Tbilisi', 'Georgia');

INSERT INTO cities VALUES('Batumi', 'Georgia');

INSERT INTO cities VALUES('Tegucigalpa', 'Honduras');

INSERT INTO cities VALUES('San Pedro Sula', 'Honduras');

INSERT INTO cities VALUES('Astana', 'Kazakhstan');

INSERT INTO cities VALUES('Almaty', 'Kazakhstan');

INSERT INTO cities VALUES('UlaanBaatar', 'Mongolia');

INSERT INTO cities VALUES('Darkhan', 'Mongolia');

INSERT INTO cities VALUES('Dodoma', 'Tanzania');

INSERT INTO cities VALUES('Zanzibar', 'Tanzania');

INSERT INTO siteType (type) VALUES ('Food & Drink');

INSERT INTO siteType (type) VALUES ('Zoo');

INSERT INTO siteType (type) VALUES ('Museum');

INSERT INTO siteType (type) VALUES ('Park');

INSERT INTO siteType (type) VALUES ('Architect');

INSERT INTO sites (name,city,type) VALUES ('Almaty Zoo','Almaty',2);

INSERT INTO sites (name,city,type) VALUES ('Baiterek Tower','Astana',5);

INSERT INTO sites (name,city,type) VALUES ('Batumi City Zoo','Batumi',2);

INSERT INTO sites (name,city,type) VALUES ('Cerveceria La 20','San Pedro Sula',1);

INSERT INTO sites (name,city,type) VALUES ('Dino Park Almaty','Almaty',4);

INSERT INTO sites (name,city,type) VALUES ('Gaddafi Mosque','Dodoma',5);

INSERT INTO sites (name,city,type) VALUES ('Gandantegchinlen Monastery','UlaanBaatar',5);

INSERT INTO sites (name,city,type) VALUES ('Heart Of Batumi','Batumi',1);

INSERT INTO sites (name,city,type) VALUES ('Jozani Chwaka Bay','Zanzibar',4);

INSERT INTO sites (name,city,type) VALUES ('Kharaagiin Khiid','Darkhan',5);

INSERT INTO sites (name,city,type) VALUES ('La Tiagra National Park','Tegucigalpa',4);

INSERT INTO sites (name,city,type) VALUES ('Mtatsminda Park','Tbilisi',4);

INSERT INTO sites (name,city,type) VALUES ('Museum of Darkhan-Uul','Darkhan',3);

INSERT INTO sites (name,city,type) VALUES ('Narikala','Tbilisi',5);

INSERT INTO sites (name,city,type) VALUES ('National Museum','Astana',3);

INSERT INTO sites (name,city,type) VALUES ('Old Fort Of Zanzibar','Zanzibar',5);

INSERT INTO sites (name,city,type) VALUES ('Restaurante La Cumbre','Tegucigalpa',1);

INSERT INTO sites (name,city,type) VALUES ('Sipe','Dodoma',1);

INSERT INTO sites (name,city,type) VALUES ('Soup Bar Restaurant','UlaanBaatar',1);

INSERT INTO sites (name,city,type) VALUES ('Zizima Eco Water Park','San Pedro Sula',4);

INSERT INTO visit (siteName,userName,rating) VALUES ('Old Fort Of Zanzibar','Naofumi',2);

INSERT INTO visit (siteName,userName,rating) VALUES ('Old Fort Of Zanzibar','Ashab',4);

INSERT INTO visit (siteName,userName,rating) VALUES ('Batumi City Zoo','Musa',3);

INSERT INTO visit (siteName,userName,rating) VALUES ('Gaddafi Mosque','Musa',5);

INSERT INTO visit (siteName,userName,rating) VALUES ('Gandantegchinlen Monastery','Ahsan',5);

INSERT INTO visit (siteName,userName,rating) VALUES ('Jozani Chwaka Bay','Abed',2);

INSERT INTO visit (siteName,userName,rating) VALUES ('Jozani Chwaka Bay','Naofumi',3);

INSERT INTO visit (siteName,userName,rating) VALUES ('Mtatsminda Park','Ashab',5);

INSERT INTO visit (siteName,userName,rating) VALUES ('Narikala','Musa',3);

INSERT INTO visit (siteName,userName,rating) VALUES ('National Museum','Naofumi',2);

INSERT INTO visit (siteName,userName,rating) VALUES ('Restaurante La Cumbre','Ahsan',3);

INSERT INTO visit (siteName,userName,rating) VALUES ('Sipe','Abed',4);

INSERT INTO visit (siteName,userName,rating) VALUES ('Zizima Eco Water Park','Ahsan',3);

INSERT INTO visit (siteName,userName,rating) VALUES ('Zizima Eco Water Park','Musa',1);

INSERT INTO visit (siteName,userName,rating) VALUES ('Almaty Zoo','Naofumi',1);

INSERT INTO visit (siteName,userName,rating) VALUES ('Baiterek Tower','Abed',3);

INSERT INTO visit (siteName,userName,rating) VALUES ('Dino Park Almaty','Ashab',5);

INSERT INTO visit (siteName,userName,rating) VALUES ('Kharaagiin Khiid','Musa',3);

INSERT INTO visit (siteName,userName,rating) VALUES ('Museum of Darkhan-Uul','Abed',2);

INSERT INTO visit (siteName,userName,rating) VALUES ('Cerveceria La 20','Ahsan',4);

INSERT INTO user VALUES('Abed', 'miss.nothit@tiktok.com');

INSERT INTO user VALUES('Ahsan', 'light.san@yahoo.com');

INSERT INTO user VALUES('Ashab', 'mightypeasant@gmail.com');

INSERT INTO user VALUES('Musa', 'anime.trash@gmail.com');

INSERT INTO user VALUES('Naofumi', 'n.hate@hotmail.com');

# SQL queries

1. **The following query selects the cities that has museum**

SELECT cities.name FROM cities

JOIN sites ON cities.name = sites.city

JOIN siteType ON sites.type = siteType.id

WHERE siteType.type = "museum";

1. **The following query selects cities that a citizen of Wakanda can visit without visa. This query uses JOIN function**

SELECT cities.name

FROM cities

JOIN countries ON cities.country = countries.name

WHERE countries.visaForWakanda = 0;

1. **The query below follows the same query as before but does not use the JOIN function**

SELECT cities.name

FROM cities, countries

WHERE cities.country = countries.name AND countries.visaForWakanda = 0;

1. **This query selects all the users that visited the site “Zizima Eco Water Park”.**

SELECT visit.userName

FROM visit

WHERE visit.siteName = "Zizima Eco Water Park";

1. **This is query to suggest users which countries to visit according to their ratings. The ratings of each country is the average ratings of the sites in the country.**

SELECT countries.name,AVG(visit.rating) as TravelRating,

COUNT(visit.rating) as NumberOfRatings

FROM countries

JOIN cities ON cities.country = countries.name

JOIN sites ON sites.city = cities.name

JOIN visit ON visit.siteName = sites.name

GROUP BY countries.name

ORDER BY TravelRating DESC;

1. **The following query shows which type of sites a user visits the most**

SELECT x.userName, x.type

FROM(

SELECT Distinct visit.userName, siteType.type, COUNT(siteType.type) as num

FROM visit

JOIN sites ON sites.name = visit.siteName

JOIN siteType ON siteType.id = sites.type

GROUP BY visit.userName ,siteType.type

ORDER BY num DESC

)x

GROUP BY userName;

1. **This query selects the most rated park out of all the countries**

SELECT sites.name as "Best Park", visit.rating

FROM sites

JOIN visit ON visit.siteName=sites.name

JOIN sitetype ON sites.type=sitetype.id

WHERE siteType.type = "Park"

GROUP BY siteType.type

ORDER BY AVG(visit.rating) DESC;

# PHP

## First Task

The php code for the first task is given below. The highlighted parts are the ones that got edited :

<?php

include "pdo.php";

$selected\_site\_type = $\_POST["site\_type"];

echo "<html><body>";

echo "<form action='sites.php' method='post'>";

echo "<select name='site\_type'>";

$result = $pdo->query("SELECT DISTINCT type FROM siteType ORDER BY id");

while ($row = $result->fetch()) {

$type = $row["type"];

if ($type == $selected\_site\_type) {

$option = "<option selected>";

} else {

$option = "<option>";

}

echo $option . $type . "</option>";

}

echo "</select>";

echo "<input type='submit' value='Submit'>";

echo "</form>";

if ($selected\_site\_type) {

echo "<table border = 1>";

echo "<tr><th align='left'>Site Name</th>

<th align='left'>City</th>

<th align='left'>Country</th>

<th align='left'>Visa for the citizens of Wakanda</th>

</tr>";

$stmt = $pdo->prepare("SELECT sites.name, sites.city, cities.country, countries.visaForWakanda

FROM sites

JOIN siteType ON sites.type = siteType.id

JOIN cities ON sites.city = cities.name

JOIN countries ON cities.country = countries.name

WHERE siteType.type = ?");

$stmt->execute([$selected\_site\_type]);

while ($row = $stmt->fetch()) {

echo "<tr><td>" . $row["name"] . "</td>

<td>" . $row["city"] . "</td>

<td>" . $row["country"] . "</td>

<td>" . $row["visaForWakanda"] . "</td>

</tr>";

}

}

echo "</table>";

echo "</body></html>";

?>

## Second task:

Following php is code is for the second task :

<?php

include "pdo.php";

$selected\_site\_type = $\_POST["site\_type"];

echo "<html><body>";

echo "<form action='user.php' method='post'>";

echo "<select name='site\_type'>";

$result = $pdo->query("SELECT name FROM user ORDER BY name");

while ($row = $result->fetch()) {

$type = $row["name"];

if ($type == $selected\_site\_type) {

$option = "<option selected>";

} else {

$option = "<option>";

}

//unlike java, concantation in php works with dots

echo $option . $type . "</option>";

}

echo "</select>";

echo "<input type='submit' value='Submit'>";

echo "</form>";

//changed

if ($selected\_site\_type) {

echo "<table border = 1>";

echo "<tr><th align='left'>User Name</th>

<th align='left'>Visited Site</th>

<th align='left'>Rating</th>

</tr>";

$stmt = $pdo->prepare("SELECT visit.userName, visit.siteName, visit.rating

FROM visit

WHERE visit.userName = ?");

$stmt->execute([$selected\_site\_type]);

//creating the table

while ($row = $stmt->fetch()) {

echo "<tr><td>" . $row["userName"] . "</td>

<td>" . $row["siteName"] . "</td>

<td>" . $row["rating"] . "</td>

</tr>";

}

}

echo "</table>";

echo "</body></html>";

?>

## Third task:

PHP code for the third task is given below:

<?php

include "pdo.php";

$selected\_site\_type = $\_POST["site\_type"];

echo "<html><body>";

echo "<form action='cities.php' method='post'>";

echo "<select name='site\_type'>";

$result = $pdo->query("SELECT name FROM cities ORDER BY name");

while ($row = $result->fetch()) {

$type = $row["name"];

if ($type == $selected\_site\_type) {

$option = "<option selected>";

} else {

$option = "<option>";

}

//unlike java, concantation in php works with dots

echo $option . $type . "</option>";

}

echo "</select>";

echo "<input type='submit' value='Submit'>";

echo "</form>";

//changed

if ($selected\_site\_type) {

echo "<table border = 1>";

echo "<tr>

<th align='left'>City</th>

<th align='left'>Site</th>

<th align='left'>Average Rating</th>

</tr>";

$stmt = $pdo->prepare("SELECT sites.city, sites.name,

AVG(visit.rating) as AverageRating

FROM sites

JOIN visit ON sites.name = visit.siteName

WHERE sites.city = ?

GROUP BY sites.name");

$stmt->execute([$selected\_site\_type]);

//creating the table

while ($row = $stmt->fetch()) {

echo "<tr>

<td>" . $row["city"] . "</td>

<td>" . $row["name"] . "</td>

<td>" . $row["AverageRating"] . "</td>

</tr>";

}

}

echo "</table>";

echo "</body></html>";

?>

# Effort Points:

Mohammed Ashab Uddin: 12

Ahsan Nawab Khan: 11

Abdul Latif: 10

Musa Boush: 7