Heritage University 03-04-24

Mathematics and Computer Science Dept. due: 03-10-24

Database II

Homework 5

(XAMPP, MongoDB)

1.Consider the database: booksa and the tables: books and authors.

The books data:

books:

|  |  |  |
| --- | --- | --- |
| t\_id | title | pages |
| 1 | Mathematics | 120 |
| 2 | Python | 150 |

The book 1 has two authors : Ellen Star, Peter Arct. The book 2 has also two authors: Victor Mata and Paul Mark.

Please do the following:

a.create the database and the tables using PHP, MySQL

b.insert data for the tables using PHP, MySQL

c.create the booksauth.php script that print the following report using PHP,MySQL .

For each book:

Title: Mathematics

Author: ‘Ellen Stay’

Pages: 120

The same format for the other author. Analogous printing for the 2nd book.

Use screenshot when it is needed.

**CODE: (I did a, b, c in one PHP script)**

<!-- Q1 A, B, & C : booksa database -->

<!DOCTYPE HTML>

<html lang="en">

<head>

<meta charset="UTF-8">

<title>booksa</title>

</head>

<body>

<?php

//connect to myPHPadmin SQL Server

$dbc = @mysqli\_connect('localhost', 'root', '');

//drop database if it exists

$query = "DROP DATABASE IF EXISTS booksa";

if (!mysqli\_query($dbc, $query))

echo "Error in dropping the database: " . mysqli\_error($dbc);

//query to create DATABASE booksa

$query = "CREATE DATABASE booksa";

if (!mysqli\_query($dbc, $query))

echo "Error creating database: " . mysqli\_error($dbc);

//select booksa to use

$query = "USE booksa";

if (!mysqli\_query($dbc, $query))

echo "Error selecting database: " . mysqli\_error($dbc);

//query to create TABLE books

$query = "CREATE TABLE IF NOT EXISTS books(

t\_id INT AUTO\_INCREMENT,

title VARCHAR(255) NOT NULL,

pages INT NOT NULL,

PRIMARY KEY (t\_id)

)";

if (!mysqli\_query($dbc, $query))

echo "Error creating car table: " . mysqli\_error($dbc);

//query to add VALUES to books TABLE

$query = "INSERT INTO books VALUES

(DEFAULT, 'Mathematics', 120),

(DEFAULT, 'Python', 150)";

if (!mysqli\_query($dbc, $query))

echo "Error inserting data into books table: " . mysqli\_error($dbc);

//query to create make TABLE

$query = "CREATE TABLE IF NOT EXISTS authors(

a\_id INT AUTO\_INCREMENT,

lname VARCHAR(50) NOT NULL,

fname VARCHAR(50) NOT NULL,

PRIMARY KEY (a\_id)

)";

if (!mysqli\_query($dbc, $query))

echo "Error creating make table: " . mysqli\_error($dbc);

//query to add VALUES to make table

$query = "INSERT INTO authors VALUES

(DEFAULT, 'Star', 'Ellen'),

(DEFAULT, 'Arct', 'Peter'),

(DEFAULT, 'Mata', 'Victor'),

(DEFAULT, 'Mark', 'Paul')";

if (!mysqli\_query($dbc, $query))

echo "Error inserting data into authors table: " . mysqli\_error($dbc);

//query to create book\_and\_author TABLE

$query = "CREATE TABLE IF NOT EXISTS book\_and\_author(

book\_id INT,

author\_id INT,

FOREIGN KEY (book\_id) REFERENCES books(t\_id),

FOREIGN KEY (author\_id) REFERENCES authors(a\_id)

)";

if (!mysqli\_query($dbc, $query))

echo "Error creating owner table: " . mysqli\_error($dbc);

//query to add VALUES to book\_and\_author TABLE

$query = "INSERT INTO book\_and\_author VALUES

(1, 1),

(1, 2),

(2, 3),

(2, 4)";

if (!mysqli\_query($dbc, $query))

echo "Error inserting data into make table: " . mysqli\_error($dbc);

// get the query to display values

$query = "SELECT books.title, authors.fname, authors.lname, books.pages FROM books

JOIN book\_and\_author as BA ON books.t\_id = BA.book\_id

JOIN authors ON BA.author\_id = authors.a\_id

ORDER BY books.t\_id";

//run the query

$result = mysqli\_query($dbc, $query);

//count the number of returned rows

$num = mysqli\_num\_rows($result);

if ($num > 0)

{

//shows all values in car table

while ($row = mysqli\_fetch\_assoc($result))

echo '<p>Title: ' . $row['title'] . '<br>

Author: ' . $row['fname'] . ' ' . $row['lname'] . '<br>

Pages: ' . $row['pages'] . '<br></p>';

mysqli\_free\_result($result); //free up space

} elseif ($result) { //empty query result

echo "Query returned zero results";

mysqli\_free\_result($result); //free up space

} else { //error with query

echo "Error retrieving query result: " . mysqli\_error($dbc);

}

mysqli\_close($dbc);

?>

</body>

</html>

**OUTPUT:**

A screenshot of a computer

Description automatically generated

2.Create a blog(collection) with a spot (document). (MongoDB)

The spot will be created using a local variable (spot) with keys: “title”, ”content”, and “date”.

(as Javascript).

The blog(collection) will have the spot document.

use blog;

var spot = [

{

title : "Today is Tomorrow",

content : "Philosphy",

date : new Date("2024-03-04")

},

{

title : "Top 5 Taco Trucks of All Time",

content : "Food",

date : new Date("2024-03-05")

},

{

title : "Python For Beginners",

content : "Computer Programming",

date : new Date("2024-03-06")

},

{

title : "SpongeBob Ep. 20 Review",

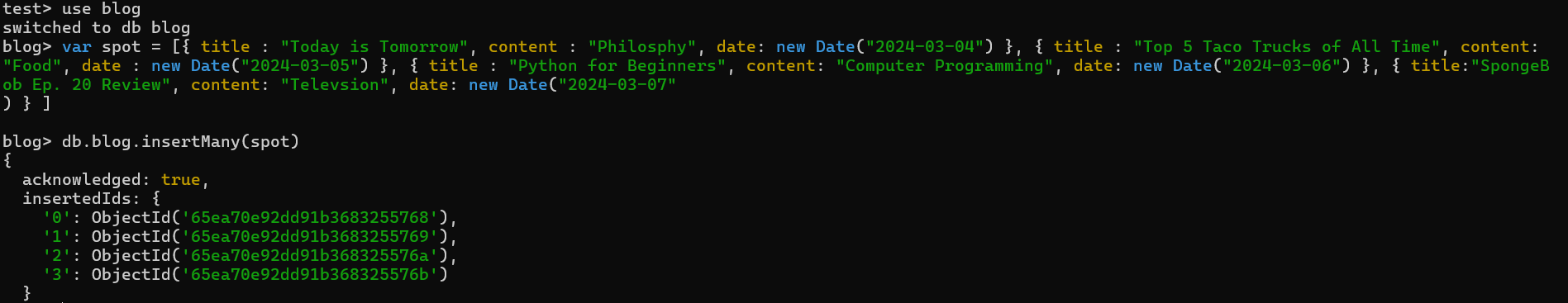
content : "Television",

date : new Date("2024-03-07")

}

]

db.blog.insertMany(spot);



a. Display the blog collection. How you can return only the one document

db.blog.find();

A screen shot of a computer program

Description automatically generated

// return 1

db.blog.find().limit(1);

A screen shot of a computer code

Description automatically generated

b. Make an update of the document using the title

db.blog.updateMany({}, {$set : {title: "Default Title"}});

A screen shot of a computer code

Description automatically generated

c. Delete the document

db.blog.deleteMany({})

A black screen with white text

Description automatically generated

3.Create a form that can insert data (fname,lname,job) for a person using PHP.

fname(20char), lname(20char), job(20char).

When a record is inserted then a message ("success") will be displayed.

Print also the information that you have inserted.

database : namesdb, table:namestb (created with PHP,MYSQL).

**CODE:**

<!--HW5 Q3 : namesdb -->

<!DOCTYPE html>

<html lang="en">

<head>

<title>Insert Person</title>

</head>

<body>

<h1>Fill Out Form</h1>

<form action="jobInsert.php" method="post">

<p>First Name: <input type="text" id="fname" name="fname" size="15" maxlength="20" autocomplete="off"></p>

<p>Last Name: <input type="text" id="lname" name="lname" size="20" maxlength="60" autocomplete="off"></p>

<p>Job: <input type="text" id="job" name="job" size="15" maxlength="60" autocomplete="off"></p>

<p><input type="submit" name="Submit" value="Register"></p>

</form>

<?php

$errors = []; // Initialize an empty array to store errors

// Create the databse connection

$dbc = @mysqli\_connect("localhost", 'root', '') OR die('Could not connect MYSQL: '. mysqli\_connect\_error());

$query = "CREATE DATABASE IF NOT EXISTS namesdb";

if (!mysqli\_query($dbc, $query))

echo "Error creating database: " . mysqli\_error($dbc);

$query = "USE namesdb";

if (!mysqli\_query($dbc, $query))

echo "Error creating database: " . mysqli\_error($dbc);

$query = "CREATE TABLE IF NOT EXISTS namestb(

id INT AUTO\_INCREMENT,

fname VARCHAR(20) NOT NULL,

lname VARCHAR(20) NOT NULL,

job VARCHAR(20) NOT NULL,

PRIMARY KEY (id)

)";

if (!mysqli\_query($dbc, $query))

echo "Error creating database: " . mysqli\_error($dbc);

// If form is submitted

if ($\_SERVER["REQUEST\_METHOD"] == "POST") {

// Check if empty of each part of form

if (empty($\_POST['fname'])) {

$errors[] = "First name is required";

}

if (empty($\_POST['lname'])) {

$errors[] = "Last name is required";

}

if (empty($\_POST['job'])) {

$errors[] = "Job is required";

}

// If there are no errors, proceed with insertion

if (empty($errors)){

$stmt = mysqli\_prepare($dbc, "INSERT INTO namestb (fname, lname, job) VALUES (?, ?, ?)");

// Bind parameters

mysqli\_stmt\_bind\_param($stmt, "sss", $fname, $lname, $job);

// Set parameters and execute

$fname = $\_POST['fname'];

$lname = $\_POST['lname'];

$job = $\_POST['job'];

if (mysqli\_stmt\_execute($stmt)) {

echo "<br>SUCCESS<br><br>";

echo 'Last Executed Statement:</br></br>

<table border="0" cellpadding="10">

<thead>

<tr>

<th>First Name</th>

<th>Last Name</th>

<th>Job</th>

</tr>

</thead>

<tbody>';

echo "<tr><td>$fname</td><td>$lname</td><td>$job</td></tr></tbody></table>";

} else {

echo "Error: " . mysqli\_error($dbc);

}

// Close statement

mysqli\_stmt\_close($stmt);

}

}

// Display errors from NULL values

if (!empty($errors)) {

echo "<h3>Error List:</h3>";

echo "<ul>";

foreach ($errors as $error) {

echo "<li>$error</li>";

}

echo "</ul>";

}

// Close connection

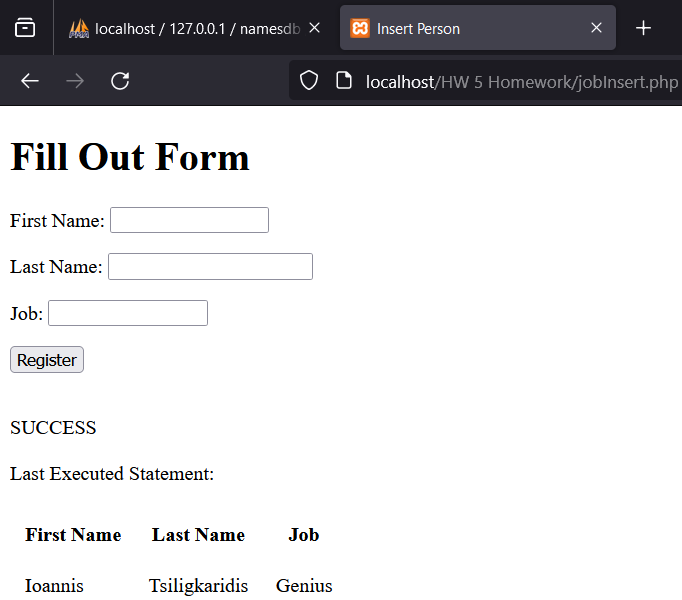
mysqli\_close($dbc);

?>

</body>

</html>

**OUTPUT:**

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