

## Week 9 - Case Assignment - A database-driven websites

Test the Guitar Shop website.

### 1. Add a product.

My Guitar Shop

Links

[Home](#)  
[Admin](#)

Categories

[Guitars](#)  
[Basses](#)  
[Drums](#)

Product Manager - Add Product

Category: 

Guitars

Code: 

Celestial

Name: 

Celestial Resonance

List Price: 

900

Discount Percent: 

20.0

Description: 

1.Each fret is meticulously inlaid with mother-of-pearl, depicting constellations that guide your fingers to create music that's nothing short of magical.  
  
2.Finished with a high-gloss, starburst lacquer that shifts and shimmers under stage lights, this guitar is not just an instrument; it's a piece of art.

Submit

How to format the Description entry

- Use two returns to start a new paragraph.
- Use an asterisk to mark items in a bulleted list.
- Use one return between items in a bulleted list.
- Use standard HTML tags for bold and italics.

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## My Guitar Shop

Links

[Home](#)  
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Categories

[Guitars](#)  
[Basses](#)  
[Drums](#)

Product Manager - List Products

To view, edit, or delete a product, select the product.

To add a product, select the "Add Product" link.

Guitars

[Fender Stratocaster](#)  
[Gibson Les Paul](#)  
[Gibson SG](#)  
[Yamaha FG700S](#)  
[Washburn D10S](#)  
[Rodriguez Caballero 11](#)  
[Fender Telecaster](#)  
[Celestial Resonance](#)

Links

[Add Product](#)

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2. Delete a product.

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Product Manager - View Product

Celestial Resonance

Image:  
Celestial\_m.png

List Price: \$900

Discount: 20%

Your Price: \$720.00 (You save \$180.00)

Quantity:  Add to Cart

Description

1.Each fret is meticulously inlaid with mother-of-pearl, depicting constellations that guide your fingers to create music that's nothing short of magical.

2.Finished with a high-gloss, starburst lacquer that shifts and shimmers under stage lights, this guitar is not just an instrument; it's a piece of art.

Edit Product

Delete Product

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[Washburn D10S](#)

[Rodriguez Caballero 11](#)

[Fender Telecaster](#)

Links

[Add Product](#)

### 3. Review database.php file and product\_db.php file in the model directory.

```
1 <?php
2 class Database {
3     1 reference
4     private static $dsn = 'mysql:host=localhost;dbname=my_guitar_shop2';
5     1 reference
6     private static $username = 'mgs_user';
7     1 reference
8     private static $password = 'pa55word';
9     1 reference
10    private static $options = [PDO::ATTR_ERRMODE => PDO::ERRMODE_EXCEPTION];
11    3 references
12    private static $db;
13
14    4 references
15    private function __construct() {}
16
17    8 references | 0 overrides
18    public static function getDB () {
19        if (!isset(self::$db)) {
20            try {
21                self::$db = new PDO(self::$dsn,
22                                self::$username,
23                                self::$password,
24                                self::$options);
25            } catch (PDOException $e) {
26                self::displayError($e->getMessage());
27            }
28        }
29        return self::$db;
30    }
31
32    9 references | 0 overrides
33    public static function displayError($error_message) {
34        global $app_path;
35        include 'errors/db_error.php';
36        exit();
37    }
38 }
39 ?>
```

### 4. Modify the first SELECT statement in the product\_db.php file. Change the code “products” table to “product” table. Then test error handling.

```
1 <?php
2 class ProductDB {
3     2 references | 0 overrides
4     public static function getProductsByCategory($category_id) {
5         $db = Database::getDB();
6         $category = CategoryDB::getCategory($category_id);
7         $query = 'SELECT categoryID, productID, productCode, productName,
8                 description, listPrice, discountPercent
9                 FROM product;
10                WHERE categoryID = :category_id
11                ORDER BY productID';
12
13        try {
14            $statement = $db->prepare($query);
15            $statement->bindValue(':category_id', $category_id);
16            $statement->execute();
17
18            $rows = $statement->fetchAll();
19            $statement->closeCursor();
20
21            $products = [];
22            foreach ($rows as $row) {
23                $products[] = self::loadProduct($row, $category);
24            }
25        }
26    }
27 }
```

Display the error message.

localhost/ex\_starts/ch20\_ex1/admin/product/?action=list\_products&category\_id=1

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Database Error

A database error occurred.  
Error message: SQLSTATE[42S02]: Base table or view not found: 1146 Table 'my\_guitar\_shop2.product' doesn't exist

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5. Fix the SELECT statement back to correctly.

File Edit Selection View Go Run Terminal Help ch20\_ex1

EXPLORER product\_db.php X footer.php

OPEN EDITORS

product\_db.php... X product\_db.php... footer.php view

CH20\_EX1

admin

category

order

product

index.php

cart

catalog

errors

images

model

category\_db.php

category.php

database.php

product\_db.php

product.php

nbproject

util

main.php

tags.php

view

home\_view.php

index.php

model > product\_db.php > PHP > ProductDB > getProductsByCategory()

1 <?php

2 class ProductDB {

3 public static function getProductsByCategory(\$category\_id) {

4 \$db = Database::getDB();

5 \$category = CategoryDB::getCategory(\$category\_id);

6 \$query = 'SELECT categoryID, productID, productCode, productName,

7 | description, listPrice, discountPercent

8 FROM products

9 WHERE categoryID = :category\_id

10 ORDER BY productID';

11

12 try {

13 \$statement = \$db->prepare(\$query);

14 \$statement->bindValue(':category\_id', \$category\_id);

15 \$statement->execute();

16

17 \$rows = \$statement->fetchAll();

18 \$statement->closeCursor();

19

20 \$products = [];

21 foreach (\$rows as \$row) {

22 \$products[] = self::loadProduct(\$row, \$category);

23 }

24 return \$products;

25 } catch (PDOException \$e) {

26 Database::displayError(\$e->getMessage());

27 }

28 }

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Product Manager - List Products

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[Washburn D10S](#)

[Rodriguez Caballero 11](#)

[Fender Telecaster](#)

[Celestial Resonance](#)

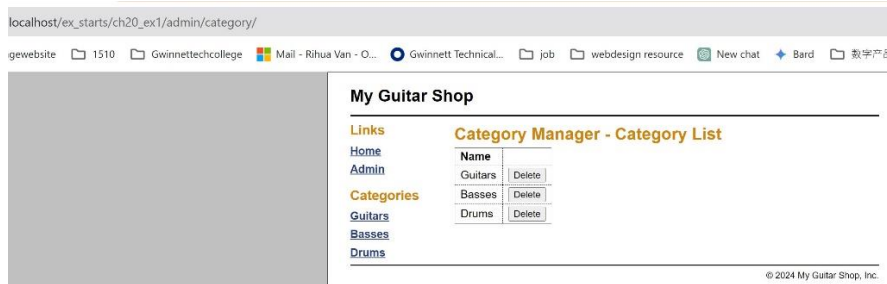
Links

[Add Product](#)

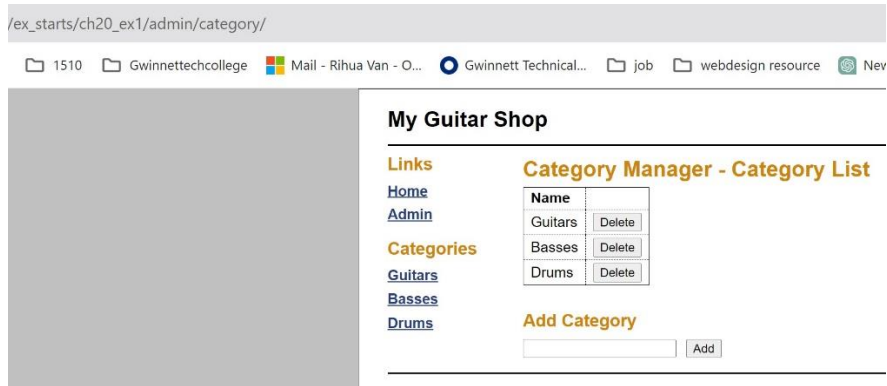
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## Add a Category Manager section.

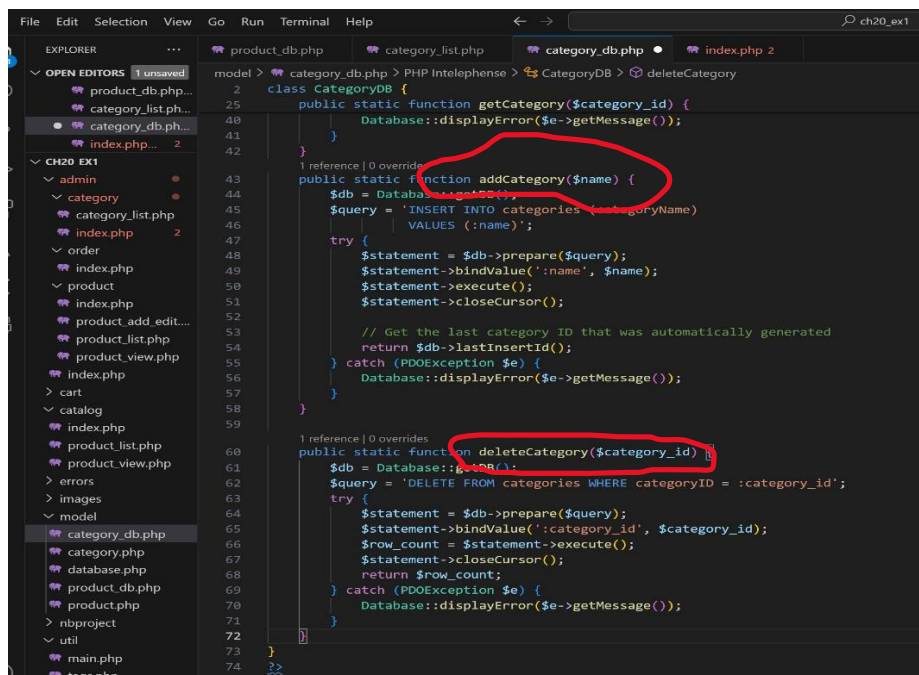
### 7.Create a Category List.



### 8.Add a category form.

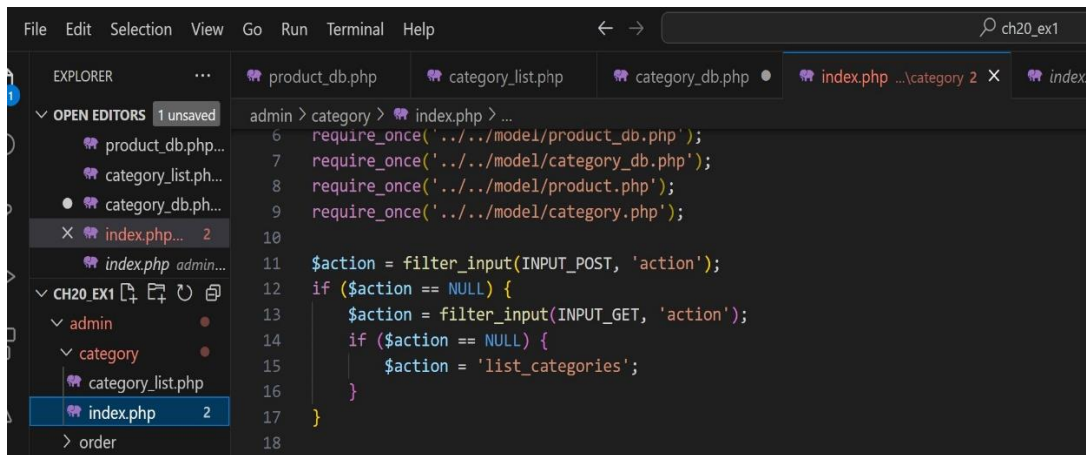


### 9.Modify category\_db.php file.(add and delete categories)





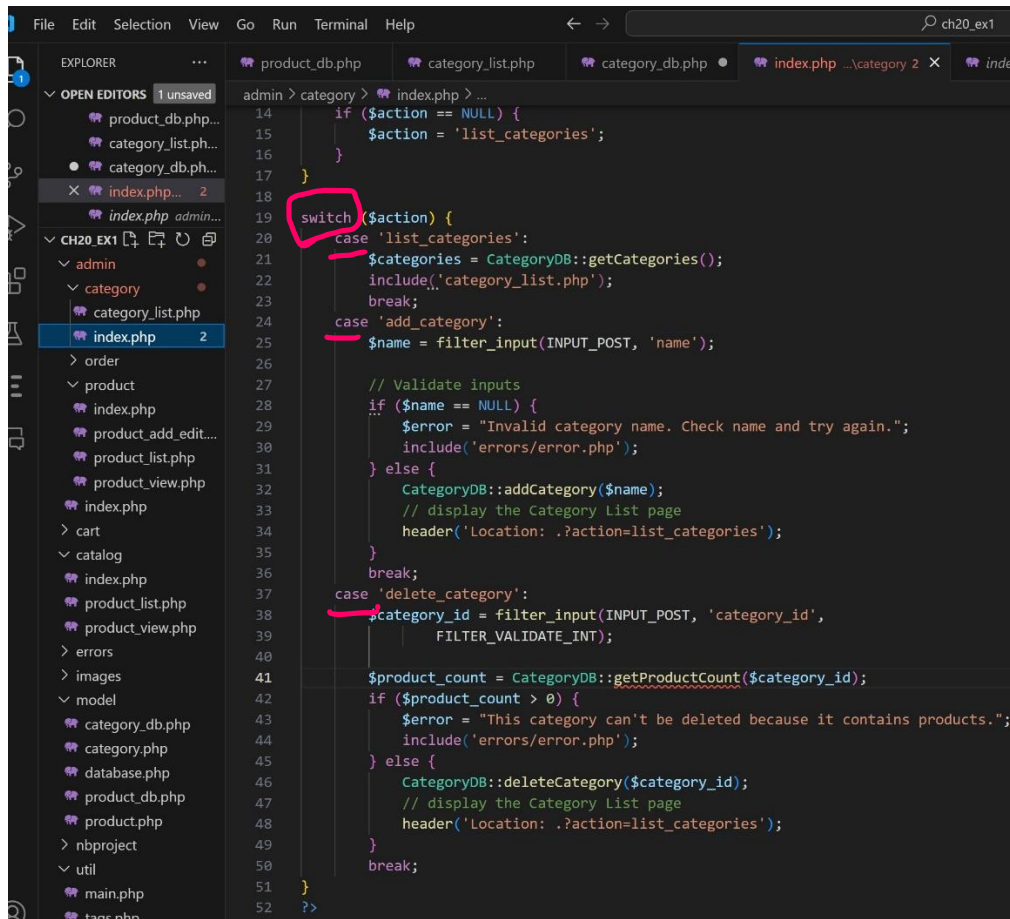
## 10. Update the index.php file in the admin/category.



```
File Edit Selection View Go Run Terminal Help
EXPLORER
product_db.php
category_list.php
category_db.php
index.php ...category 2
index.php admin...
CH20_EX1
admin
category
category_list.php
index.php 2
order

admin > category > index.php > ...
6 require_once('.../model/product_db.php');
7 require_once('.../model/category_db.php');
8 require_once('.../model/product.php');
9 require_once('.../model/category.php');
10
11 $action = filter_input(INPUT_POST, 'action');
12 if ($action == NULL) {
13     $action = filter_input(INPUT_GET, 'action');
14     if ($action == NULL) {
15         $action = 'list_categories';
16     }
17 }
18
```

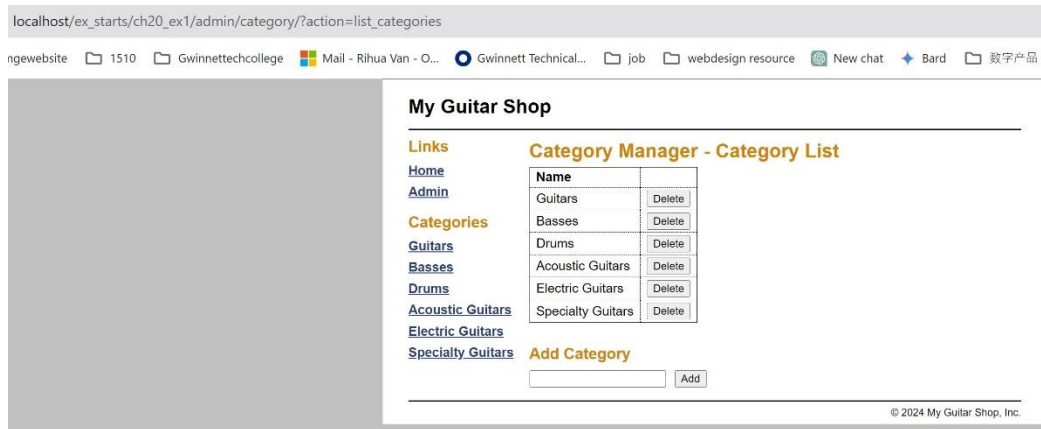
## 11. Code a switch statement.



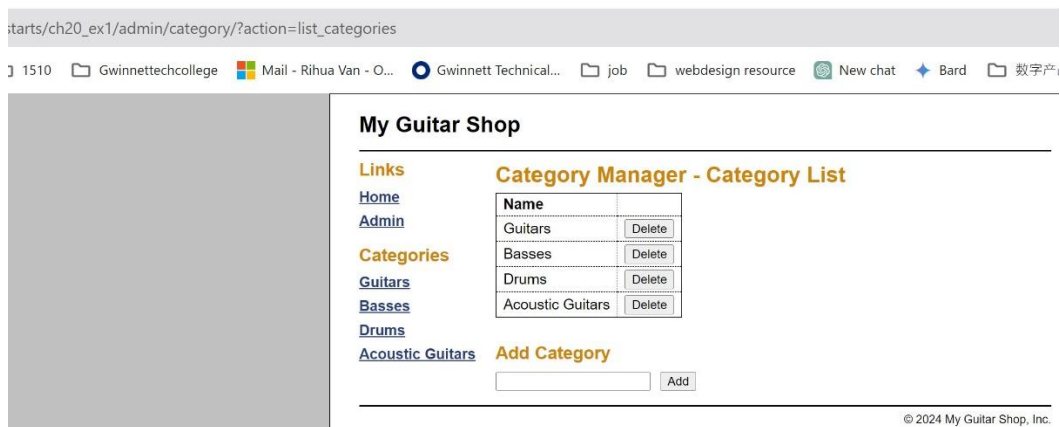
```
File Edit Selection View Go Run Terminal Help
EXPLORER
product_db.php
category_list.php
category_db.php
index.php ...category 2
index.php admin...
CH20_EX1
admin
category
category_list.php
index.php 2
order
product
index.php
product_add_edit...
product_list.php
product_view.php
index.php
cart
catalog
index.php
product_list.php
product_view.php
errors
images
model
category_db.php
category.php
database.php
product_db.php
product.php
nbproject
util
main.php
tags.php

admin > category > index.php > ...
14 if ($action == NULL) {
15     $action = 'list_categories';
16 }
17 }
18
19 switch ($action) {
20     case 'list_categories':
21         $categories = CategoryDB::getCategories();
22         include('category_list.php');
23         break;
24     case 'add_category':
25         $name = filter_input(INPUT_POST, 'name');
26
27         // Validate inputs
28         if ($name == NULL) {
29             $error = "Invalid category name. Check name and try again.";
30             include('errors/error.php');
31         } else {
32             CategoryDB::addCategory($name);
33             // display the Category List page
34             header('Location: ../action=list_categories');
35         }
36         break;
37     case 'delete_category':
38         $category_id = filter_input(INPUT_POST, 'category_id',
39             FILTER_VALIDATE_INT);
40
41         $product_count = CategoryDB::getProductCount($category_id);
42         if ($product_count > 0) {
43             $error = "This category can't be deleted because it contains products.";
44             include('errors/error.php');
45         } else {
46             CategoryDB::deleteCategory($category_id);
47             // display the Category List page
48             header('Location: ../action=list_categories');
49         }
50         break;
51 }
52 ?>
```

## 12. Test application by adding categories.

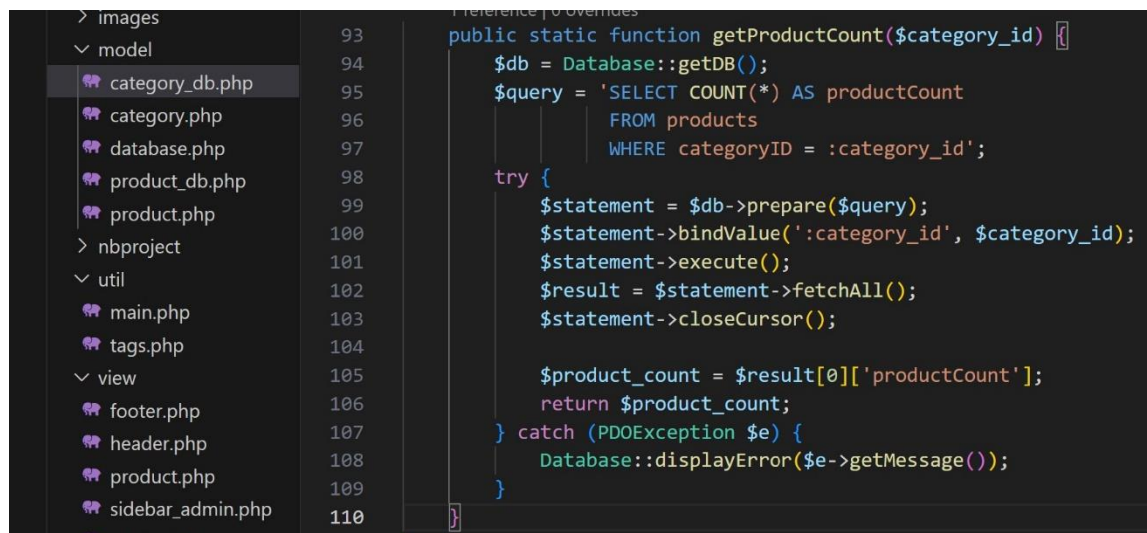


## 13. Test the application by deleting the categories.



Use application code to protect referential integrity.

## 15. Add getProductCount function to the category\_db.php file.



**16. Modify the delete category cation so it doesn't delete a category if the category contains one or more products.**

ch20\_ex1/admin/category/index.php

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### Error

This category can't be deleted because it contains products.

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