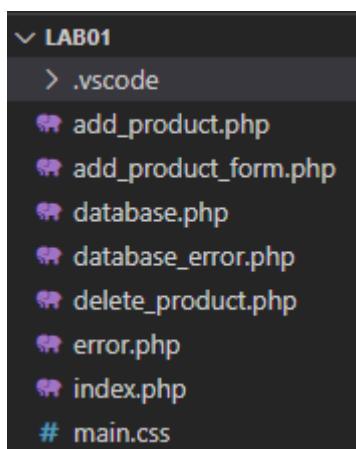
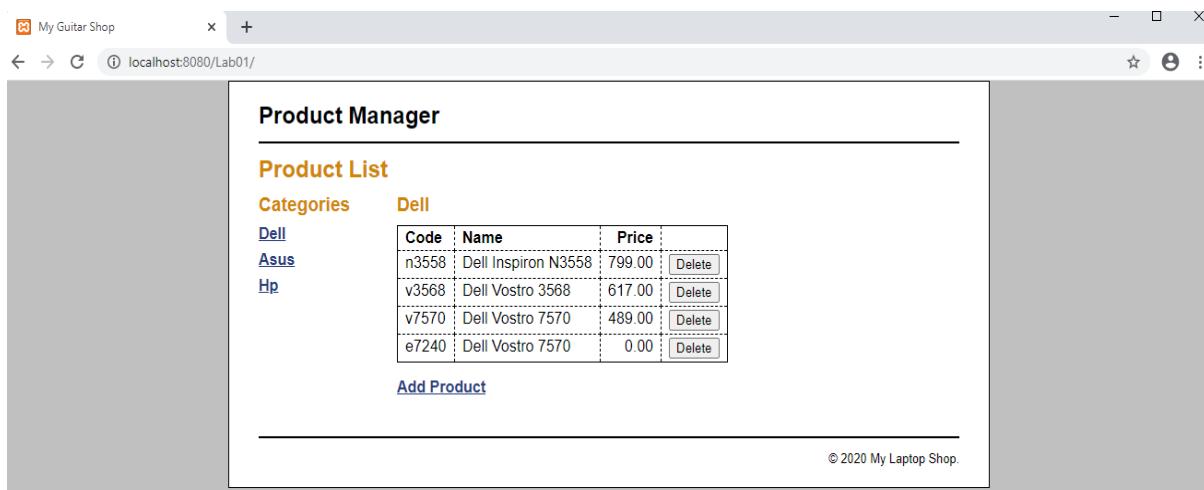


Lab1.3. Tạo ứng dụng web “**Product Manager**” có tương tác với cơ sở dữ liệu. Làm quen với các bước tạo ứng dụng web.

+ Cấu trúc website ứng dụng:

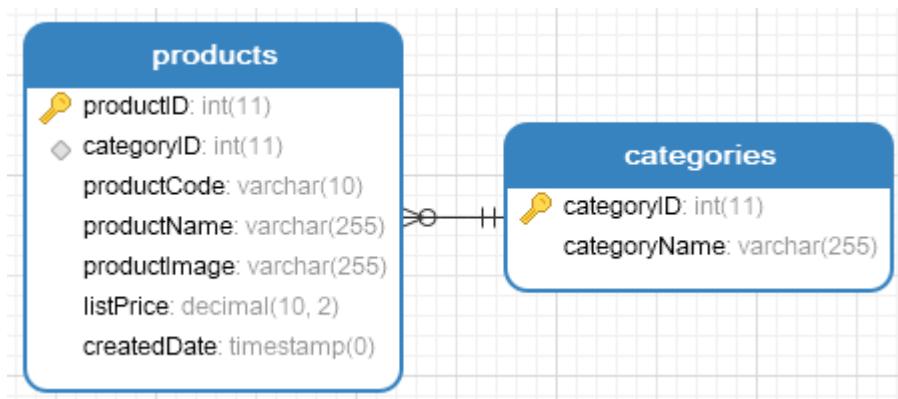


+ Giao diện ứng dụng



Gợi ý:

B1. Thực hiện tạo cơ sở dữ liệu ứng dụng tên **Lab01** với các bảng csdl như hình:



Mã sql tao csdl trong MySQL:

```
CREATE DATABASE IF NOT EXISTS Lab01 CHARACTER SET 'utf8'
COLLATE 'utf8_unicode_ci';
```

```
CREATE TABLE `categories` (
`categoryID` int(11) NOT NULL primary key AUTO_INCREMENT,
`categoryName` varchar(255) COLLATE utf8_unicode_ci NOT NULL
);
```

```
CREATE TABLE `products` (
`productID` int(11) NOT NULL primary key AUTO_INCREMENT,
`categoryID` int(11) NOT NULL,
`productCode` varchar(10) COLLATE utf8_unicode_ci NOT NULL,
`productName` varchar(255) COLLATE utf8_unicode_ci NOT NULL,
`listPrice` decimal(10,2) NOT NULL,
constraint fk_pro_cat foreign key(categoryId) references Categories(categoryId)
);
```

```
INSERT INTO `categories` (`categoryName`) VALUES
('Dell'),
('Asus'),
('Hp');
```

```
INSERT INTO `products` (`categoryID`, `productCode`, `productName`, `listPrice`)
VALUES(1, 'n3558', 'Dell Inspiron N3558', '799.00'),
(1, 'v3568', 'Dell Vostro 3568', '617.00'),
(1, 'v7570', 'Dell Vostro 7570', '489.00'),
(1, 'e7240', 'Dell Vostro 7570', '0.00');
```

B2. Tạo file **database.php** kết nối giữa ứng dụng web với csdl **Lab01** trong MySql.

```
<?php
$dsn = 'mysql:host=localhost;dbname=Lab01';
$username = 'root';
$password = '123456';
try {
$db = new PDO($dsn, $username, $password);
```

```
} catch (PDOException $e) {  
    $error_message = $e->getMessage();  
    include('database_error.php');  
    exit();  
}  
?>
```

B3. Tạo file **database_error.php** xử lý thông báo lỗi khi xảy ra lỗi kết nối không thành công !

```
<!DOCTYPE html>  
<html>  
    <!-- the head section -->  
    <head>  
        <title>My Laptop Shop</title>  
        <link rel="stylesheet" type="text/css" href="main.css" />  
    </head>  
    <!-- the body section -->  
    <body>  
        <header><h1>My Laptop Shop</h1></header>  
        <main>  
            <h1>Database Error</h1>  
            <p>There was an error connecting to the database.</p>  
            <p>Error message: <?php echo $error_message; ?></p>  
            <p>&nbsp;</p>  
        </main>  
        <footer>  
            <p>&copy; <?php echo date("Y"); ?> My Laptop Shop.</p>  
        </footer>  
    </body>  
</html>
```

B4. Tạo file **error.php** xử lý thông báo lỗi khi ứng dụng web có lỗi xảy ra.

```
<!DOCTYPE html>
<html>
<!-- the head section --&gt;
&lt;head&gt;
    &lt;title&gt;My Laptop Shop&lt;/title&gt;
    &lt;link rel="stylesheet" type="text/css" href="main.css" /&gt;
&lt;/head&gt;
<!-- the body section --&gt;
&lt;body&gt;
    &lt;header&gt;&lt;h1&gt;My Laptop Shop&lt;/h1&gt;&lt;/header&gt;
    &lt;main&gt;
        &lt;h2 class="top"&gt;Error&lt;/h2&gt;
        &lt;p&gt;&lt;?php echo $error; ?&gt;&lt;/p&gt;
    &lt;/main&gt;
    &lt;footer&gt;
        &lt;p&gt;&amp;copy; &lt;?php echo date("Y"); ?&gt; My Laptop Shop.&lt;/p&gt;
    &lt;/footer&gt;
&lt;/body&gt;
&lt;/html&gt;</pre>
```

B5. Tạo file **main.css** định dạng css cho ứng dụng web.

```
/* the styles for the html elements */
html {
    background-color: rgb(192, 192, 192);
}
body {
    margin-top: 0;
    font-family: Arial, Helvetica, sans-serif;
    width: 760px;
    margin: 0 auto;
    background-color: white;
    border: 1px solid black;
    padding: .5em 2em;
}
```

```
header {  
    margin: 0;  
    border-bottom: 2px solid black;  
}  
  
header h1 {  
    margin: 0;  
    padding: .5em 0;  
    color: black;  
}  
  
main {  
    margin: 0;  
}  
  
aside {  
    float: left;  
    width: 150px;  
}  
  
nav ul {  
    list-style-type: none;  
    margin-left: 0;  
    padding-left: 0;  
}  
  
nav ul li {  
    padding-bottom: 0.5em;  
}  
  
section {  
    float: left;  
    width: 500px;  
    padding-bottom: 1.5em;  
}  
  
footer {  
    clear: both;  
    margin-top: 1em;  
    border-top: 2px solid black;  
}
```

```
footer p {  
    text-align: right;  
    font-size: 80%;  
    margin: 1em 0;  
}  
  
h1 {  
    font-size: 150%;  
    margin: 0;  
    padding: .5em 0 .25em;  
}  
  
h2 {  
    font-size: 120%;  
    margin: 0;  
    padding: .25em 0 .5em;  
}  
  
h1, h2 {  
    color: rgb(208, 133, 4);  
}  
  
ul {  
    margin: 0 0 1em 0;  
    padding: 0 0 0 2.5em;  
}  
  
li {  
    margin: 0;  
    padding: 0;  
}  
  
a {  
    color: rgb(41, 64, 124);  
    font-weight: bold;  
}  
  
a:hover {  
    color: rgb(208, 133, 4);  
}
```

```
table {  
    border: 1px solid black;  
    border-collapse: collapse;  
}  
  
td, th {  
    border: 1px dashed black;  
    padding: .2em .5em .2em .5em;  
    vertical-align: top;  
    text-align: left;  
}  
  
form {  
    margin: 0;  
}  
  
br {  
    clear: left;  
}  
  
/* the styles for classes */  
  
.right {  
    text-align: right;  
}  
  
.last_paragraph {  
    margin-bottom: 2em;  
}  
  
*****  
* Additional styles for the Product Manager application  
*****  
  
#add_product_form {  
    margin: .5em 0 1em;  
}
```

```
#add_product_form label {
    width: 6em;
    padding-right: 1em;
    padding-bottom: .5em;
    float: left;
}

#add_product_form input {
    float: left;
}

#add_product_form input[type="text"] {
    width: 15em;
}
```

B6. Tạo file **index.php** điều hướng đến các chức năng của ứng dụng web.

```
<?php

require_once('database.php');

// Get category ID

if (!isset($category_id)) {

    $category_id = filter_input(INPUT_GET, 'category_id',
        FILTER_VALIDATE_INT);

    if ($category_id == NULL || $category_id == FALSE) {

        $category_id = 1;

    }
}

// Get name for selected category

$queryCategory = 'SELECT * FROM categories
    WHERE categoryID = :category_id';

$statement1 = $db->prepare($queryCategory);

$statement1->bindValue(':category_id', $category_id);

$statement1->execute();

$category = $statement1->fetch();

$category_name = $category['categoryName'];

$statement1->closeCursor();
```

```
// Get all categories
$query = 'SELECT * FROM categories
          ORDER BY categoryID';

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

$statement->execute();

$categories = $statement->fetchAll();

$statement->closeCursor();

// Get products for selected category
$queryProducts = 'SELECT * FROM products
                  WHERE categoryID = :category_id
                  ORDER BY productID';

$statement3 = $db->prepare($queryProducts);

$statement3->bindValue(':category_id', $category_id);

$statement3->execute();

$products = $statement3->fetchAll();

$statement3->closeCursor();

?>

<!DOCTYPE html>

<html>

<!-- the head section -->

<head>

    <title>My Laptop Shop</title>
    <link rel="stylesheet" type="text/css" href="main.css" />

</head>

<!-- the body section -->

<body>

<header><h1>Product Manager</h1></header>

<main>

    <h1>Product List</h1>

    <aside>

        <!-- display a list of categories -->
        <h2>Categories</h2>

        <nav>
```

```
<ul>
<?php foreach ($categories as $category) : ?>
<li><a href=".?category_id=<?php echo $category['categoryID']; ?>">
    <?php echo $category['categoryName']; ?>
</a>
</li>
<?php endforeach; ?>
</ul>
</nav>
</aside>
<section>
    <!-- display a table of products -->
    <h2><?php echo $category_name; ?></h2>
    <table>
        <tr>
            <th>Code</th>
            <th>Name</th>
            <th class="right">Price</th>
            <th>&nbsp;</th>
        </tr>
        <?php foreach ($products as $product) : ?>
        <tr>
            <td><?php echo $product['productCode']; ?></td>
            <td><?php echo $product['productName']; ?></td>
            <td class="right"><?php echo $product['listPrice']; ?></td>
            <td><form action="delete_product.php" method="post">
                <input type="hidden" name="product_id"
                    value="<?php echo $product['productID']; ?>">
                <input type="hidden" name="category_id"
                    value="<?php echo $product['categoryID']; ?>">
                <input type="submit" value="Delete">
            </form></td>
        </tr>
```

```

    <?php endforeach; ?>
</table>
<p><a href="add_product_form.php">Add Product</a></p>
</section>
</main>
<footer>
    <p>&copy; <?php echo date("Y"); ?> My Laptop Shop.</p>
</footer>
</body>
</html>

```

B7. Tạo file **add_product.php** xử lý nghiệp vụ thêm sản phẩm.

```

<?php
// Get the product data
$category_id = filter_input(INPUT_POST, 'category_id', FILTER_VALIDATE_INT);
$code = filter_input(INPUT_POST, 'code');
$name = filter_input(INPUT_POST, 'name');
$price = filter_input(INPUT_POST, 'price', FILTER_VALIDATE_FLOAT);
// Validate inputs
if ($category_id == null || $category_id == false ||
    $code == null || $name == null || $price == null || $price == false) {
    $error = "Invalid product data. Check all fields and try again.";
    include('error.php');
} else {
    require_once('database.php');
    // Add the product to the database
    $query = 'INSERT INTO products
        (categoryID, productCode, productName, listPrice)
        VALUES
        (:category_id, :code, :name, :price)';
    $statement = $db->prepare($query);
    $statement->bindValue(':category_id', $category_id);
    $statement->bindValue(':code', $code);
    $statement->bindValue(':name', $name);
    $statement->bindValue(':price', $price);
}

```

```

    $statement->execute();

    $statement->closeCursor();

    // Display the Product List page

    include('index.php');

}

?>

```

B8. Tạo file **add_product_form.php** để tạo form thêm thông tin sản phẩm

```

<?php

require('database.php');

$query = 'SELECT *

        FROM categories

        ORDER BY categoryID';

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

$statement->execute();

$categories = $statement->fetchAll();

$statement->closeCursor();

?>

<!DOCTYPE html>

<html>

<!-- the head section -->

<head>

    <title>My Laptop Shop</title>

    <link rel="stylesheet" type="text/css" href="main.css">

</head>

<!-- the body section -->

<body>

    <header><h1>Product Manager</h1></header>

    <main>

        <h1>Add Product</h1>

        <form action="add_product.php" method="post"

              id="add_product_form">

            <label>Category:</label>

            <select name="category_id">

```

```

<?php foreach ($categories as $category) : ?>
    <option value="<?php echo $category['categoryID']; ?>">
        <?php echo $category['categoryName']; ?>
    </option>
<?php endforeach; ?>
</select><br>
<label>Code:</label>
<input type="text" name="code"><br>
<label>Name:</label>
<input type="text" name="name"><br>
<label>List Price:</label>
<input type="text" name="price"><br>
<label>&nbsp;</label>
<input type="submit" value="Add Product"><br>
</form>
<p><a href="index.php">View Product List</a></p>
</main>
<footer>
    <p>&copy; <?php echo date("Y"); ?> My Laptop Shop, Inc.</p>
</footer>
</body>
</html>

```

B9. Tao file **delete_product.php** để xóa sản phẩm

```

<?php
require_once('database.php');

// Get IDs
$product_id = filter_input(INPUT_POST, 'product_id', FILTER_VALIDATE_INT);
$category_id = filter_input(INPUT_POST, 'category_id', FILTER_VALIDATE_INT);

// Delete the product from the database
if ($product_id != false && $category_id != false) {
    $query = 'DELETE FROM products
              WHERE productID = :product_id';
    $statement = $db->prepare($query);
    $statement->bindValue(':product_id', $product_id);
}

```

```
$success = $statement->execute();  
  
$statement->closeCursor();  
  
}  
  
// Display the Product List page  
  
include('index.php');
```

=> **Chú ý:** sau khi thực hành xong bài tập này, các em hãy nghiên cứu các câu lệnh để thao tác kết nối và thao tác thêm dữ liệu vào cơ sở dữ liệu. Dựa vào bài tập mẫu này, hãy tạo một cơ sở dữ liệu tên **Info** có bảng **Students(id,name)**. Hãy viết ứng dụng web thao tác thêm và hiển thị thông tin sinh viên của bảng Students.