**Assuming you have a database structure like this:**

|  |
| --- |
| categories\_table:  - id  - name  subcategories\_table:  - id  - category\_id  - name |

Here's how you can fetch and display categories with their subcategories in CodeIgniter 3:

1. Create a model to handle database interactions. Let's name it **Category\_model.php**.

|  |
| --- |
| <?php  class Category\_model extends CI\_Model {  public function \_\_construct() {  parent::\_\_construct();  }  **public function get\_categories\_with\_subcategories**() {  $categories = $this->db->get('categories\_table')->result\_array();  foreach ($categories as &$category) {  $category['subcategories'] = $this->db->get\_where('subcategories\_table', array('category\_id' => $category['id']))->result\_array();  }  return $categories;  }  }  ?> |

Create a controller to handle the request and pass data to the view. Let's name it **Category.php**.

|  |
| --- |
| <?php  defined('BASEPATH') OR exit('No direct script access allowed');  class Category extends CI\_Controller {  public function \_\_construct() {  parent::\_\_construct();  $this->load->model('category\_model');  }  public function **index**() {  $data['categories'] = $this->category\_model->**get\_categories\_with\_subcategories**();  $this->load->view('category\_view', $data);  }  }  ?> |

1. Create a view to display the categories and their subcategories. Let's name it **category\_view.php**.

|  |
| --- |
| <!DOCTYPE html>  <html>  <head>  <title>Categories</title>  </head>  <body>  <h1>Categories</h1>  <ul>  <?php foreach ($**categories as $category**): ?>  <li><?php echo $category['name']; ?>  <ul>  <?php foreach **($category['subcategories'] as $subcategory**): ?>  <li><?php echo $subcategory['name']; ?></li>  <?php endforeach; ?>  </ul>  </li>  <?php endforeach; ?>  </ul>  </body>  </html> |

Method 2

|  |
| --- |
| **Model (Category\_model.php)**: |

|  |
| --- |
| <?php  class Category\_model extends CI\_Model {  public function \_\_construct() {  parent::\_\_construct();  }  // Get all categories with their associated products  public function **get\_categories\_with\_products**() {  $categories = $this->db->get(**'category'**)->result\_array();  foreach ($categories as &$category) {  $category[**'products'**] = $this->db->get\_where('products', array('product\_category' => $category['c\_id']))->result\_array();  }  return $categories;  }  }  ?> |

**Controller (Category.php)**:

|  |
| --- |
| <?php  defined('BASEPATH') OR exit('No direct script access allowed');  class Category extends CI\_Controller {  public function \_\_construct() {  parent::\_\_construct();  $this->load->model('category\_model');  }  public function **index**() {  $data['categories'] = $this->category\_model->**get\_categories\_with\_products();**  $this->load->view('category\_view', $data);  }  }  ?> |

|  |
| --- |
| <!DOCTYPE html>  <html>  <head>  <title>Categories and Products</title>  </head>  <body>  <h1>Categories and Products</h1>  <ul>  **<?php foreach ($categories as $category): ?>**  <li><?php echo $category[**'c\_name'**]; ?>  <ul>  **<?php foreach ($category['products'] as $product): ?>**  <li><?php echo $product[**'product\_name'**]; ?></li>  <?php endforeach; ?>  </ul>  </li>  <?php endforeach; ?>  </ul>  </body>  </html> |

Method 3

**Model (Category\_model.php)**:

|  |
| --- |
| <?php  class Category\_model extends CI\_Model {  public function \_\_construct() {  parent::\_\_construct();  }  // Get all categories with their subcategories and associated products  public function **get\_categories\_with\_subcategories\_and\_products**() {  $categories = $this->db->get('category')->result\_array();  foreach ($categories as &$category) {  $category['subcategories'] = $this->get\_subcategories($category['c\_id']);  foreach ($category['subcategories'] as &$subcategory) {  $subcategory['products'] = $this->get\_products($subcategory['c\_id']);  }  }  return $categories;  }  // Get subcategories for a given category id  private function **get\_subcategories($category\_id**) {  return $this->db->get\_where('category', array('parent\_id' => $category\_id))->result\_array();  }  // Get products for a given category id  private function **get\_products($category\_id)** {  return $this->db->get\_where('products', array('product\_category' => $category\_id))->result\_array();  }  }  ?> |

**Controller (Category.php)**:

|  |
| --- |
| <?php  defined('BASEPATH') OR exit('No direct script access allowed');  class Category extends CI\_Controller {  public function \_\_construct() {  parent::\_\_construct();  $this->load->model('category\_model');  }  public function **index**() {  $data['categories'] = $this->category\_model->get\_categories\_with\_subcategories\_and\_products();  $this->load->view('category\_view', $data);  }  }  ?> |

**View (category\_view.php)**:

|  |
| --- |
| <!DOCTYPE html>  <html>  <head>  <title>Categories, Subcategories, and Products</title>  </head>  <body>  <h1>Categories, Subcategories, and Products</h1>  <ul>  <?php foreach ($categories as $category): ?>  <li><?php echo $category['c\_name']; ?>  <?php if (!empty($category['subcategories'])): ?>  <ul>  <?php foreach ($category['subcategories'] as $subcategory): ?>  <li><?php echo $subcategory['c\_name']; ?>  <?php if (!empty($subcategory['products'])): ?>  <ul>  <?php foreach ($subcategory['products'] as $product): ?>  <li><?php echo $product['product\_name']; ?></li>  <?php endforeach; ?>  </ul>  <?php endif; ?>  </li>  <?php endforeach; ?>  </ul>  <?php endif; ?>  </li>  <?php endforeach; ?>  </ul>  </body>  </html> |