

Code Explanation

Index.php

```
<?php
    // Controller for professors/students options
    if(isset($_POST['students'])){
        header("Location: student.php");
    }

    if(isset($_POST['professors'])){
        header("Location: professor.php");
    }
?>
```

In this case, two if statements to check if the user clicks on the “Professor” button or “Student” button, it will make the HTTP Request (which is POST) to send the data to the database, to retrieve and redirect to the specific page

- ⇒ First if statement (“student”), is to check if the 'students' option is set in the POST data. It will submit to database and retrieve the data for student page. Same thing with “professor” if statement

mysql_connector.php:

```
<?php
// Connect to MySQL database
$conn = mysqli_connect("127.0.0.1", "root", "", "university");
if (!$conn) {
    die("Unable to connect" . mysqli_connect_error());
}
?>
```

- ⇒ This first line `$conn = mysqli_connect("127.0.0.1", "root", "", "university")`. The above line is used to connect to the database. If something's error, the code will print out the error message below

Student.php:

- ⇒ This file we have 2 scenarios:
- ⇒ The first if statement is to check ("course_id") from line 50 to line 95. The picture below shows the first scenario. We store the course_id the user input in the variable `$course_id` in line 51. Next, from lines 54 to 57, we execute the MySQL queries and store them in the variable `$query` by combining two tables which are Enrollment and Section. In line 59, we execute the query and store it in the `$result` variable. From line 63 to line 95, we create an if statement to check if the `$result` variable has the data that matches with data in the database, it will execute the table and the while loop inside display the row. Otherwise, it will send an error message

```

48 <div class="table-container">
49 <?php
50 if(isset($_POST['course_id'])){
51     $course_id = $_POST['course_id'];
52
53     // Query the course sections given course_id
54     $query = "SELECT Section.id, Section.classroom, Section.meeting_days, Section.start_time, Section.end_time, COUNT(Enrollment.campus_id) as student_count
55             FROM Section LEFT JOIN Enrollment ON Section.id = Enrollment.section_id AND Section.course_id = Enrollment.course_id
56             WHERE Section.course_id = $course_id
57             GROUP BY Section.id";
58
59     // Execute the query
60     $result = mysqli_query($conn, $query);
61
62     // If there is one or more records
63     if(mysqli_num_rows($result) > 0){
64         // Display the results as a table
65         // Table headers
66         echo "<br><h2 style='font-size: 20px;'>Sections for course $course_id</h2><br>";
67         echo "<table>
68             <tr>
69                 <th>Section ID</th>
70                 <th>Meeting Days</th>
71                 <th>Start Time</th>
72                 <th>End Time</th>
73                 <th>Classroom</th>
74                 <th>Number of Students</th>
75             </tr>";
76         // Table data
77         while($row = mysqli_fetch_assoc($result)){
78             echo "<tr>
79                 <td>" . $row['id'] . "</td>
80                 <td>" . $row['meeting_days'] . "</td>
81                 <td>" . $row['start_time'] . "</td>
82                 <td>" . $row['end_time'] . "</td>
83                 <td>" . $row['classroom'] . "</td>
84                 <td>" . $row['student_count'] . "</td>
85             </tr>";
86         }
87         echo "</table>";
88     } else {
89         echo "
90         <div style='padding: 20px;'>
91             <h2 style='font-size: 20px;'>This course has no sections</h2>
92         </div>
93         ";
94     }
95 }
96 ?>

```

(First statement)

⇒ Second if statement is from line 99 to 135, the same as the above statement, first, we store the user campus_id input in the variable \$campus_id, and then we execute the mysql queries combine two tables which are Enrollment and Course, and then we store in the variable \$query. After that, we execute the query and store it in the \$result variable. Then, we check if the result variable stores the data that matches with data in the database, it will display the table and the while loop inside display the row.

Otherwise, it'll send an error message

```
98 <?php
99 if(isset($_POST['campus_id'])){
100     $campus_id = $_POST['campus_id'];
101
102     // Query the courses and grades for a given student
103     $query = "SELECT Course.title, Enrollment.grade
104             FROM Enrollment INNER JOIN Course ON Enrollment.course_id = Course.id
105             WHERE Enrollment.campus_id = '$campus_id'";
106
107     // Execute the query
108     $result = mysqli_query($conn, $query);
109
110     // If there is one or more records
111     if(mysqli_num_rows($result) > 0){
112         // Display the results as a table
113         // Table headers
114         echo "<br><h2 style='font-size: 20px;'>Courses for student</h2><br>";
115         echo "<table>
116             <tr>
117                 <th>Title</th>
118                 <th>Grade</th>
119             </tr>";
120         // Table data
121         while($row = mysqli_fetch_assoc($result)){
122             echo "<tr>
123                 <td>" . $row['title'] . "</td>
124                 <td>" . $row['grade'] . "</td>
125             </tr>";
126         }
127         echo "</table>";
128     }
129     else {
130         echo "
131         <div style='padding: 20px;'>
132             <h2 style='font-size: 20px;'>No courses/sections found for this student</h2>
133         </div>";
134     }
135 }
136 ?>
```

(Second Statement)

Professor.php:

- ⇒ Same as the “Student.php” file, we have two scenarios in this file:
- ⇒ The first if statement is to check (“ssn”) from line 54 to line 92. The picture below shows the first scenario. We store the ssn the user input in the variable \$ssn line 55. Next, from lines 56 to 60, we execute the MySQL queries and store them in the variable \$query by combining two tables which are Course and Section. In line 62, we execute the query and store it

in the \$result variable. From line 64 to line 91, we create an if statement to check if the \$result variable has the data that matches with data in the database by greater than 0, it will execute the table and the while loop inside display the row. Otherwise, it will send an error message

```
52 <?php
53 // Query the professor's information given ssn
54 if (isset($_POST['ssn'])) {
55     $ssn = $_POST['ssn'];
56     $query = "SELECT Course.title, Section.classroom, Section.meeting_days, Section.start_time, Section.end_time
57             FROM Professor
58             JOIN Section ON Professor.id = Section.professor_id
59             JOIN Course ON Section.course_id = Course.id
60             WHERE Professor.ssn = '$ssn'";
61
62     $result = mysqli_query($conn, $query);
63
64     if (mysqli_num_rows($result) > 0) {
65         // Display classes taught by professor
66         echo "<br><h2 style='font-size: 20px;'>
67             Professor's classes
68         </h2><br>";
69         echo "<table class='footer-table'>
70             <tr>
71                 <th>Course Title</th>
72                 <th>Meeting Days</th>
73                 <th>Time</th>
74                 <th>Classroom</th>
75             </tr>";
76         // Table data
77         while($row = mysqli_fetch_assoc($result)){
78             echo "<tr>
79                 <td>" . $row['title'] . "</td>
80                 <td>" . $row['meeting_days'] . "</td>
81                 <td>" . $row['start_time'] . " - " . $row['end_time'] . "</td>
82                 <td>" . $row['classroom'] . "</td>
83             </tr>";
84         }
85         echo "</table>";
86     } else {
87         echo "<div style='padding: 20px;'>
88             <h2 style='font-size: 20px;'>This professor does not teach any courses or there is no professors with that SSN.</h2>
89         </div>";
90     }
91 }
92 ?>
```

(First statement)

⇒ Second if statement is from line 96 to 129, the same as the above statement, first, we store the user course_id and section_id input in two variables \$course_id and \$section_id, and then we execute the mysql queries, and then we store in the variable \$query. After that, we execute the query and store it in the \$result variable. Then, we check if the result variable stores the data that matches with data in the database, it will

display the table and the while loop inside display the row. Otherwise, it'll send an error message

```
94 <?php
95 // Query the number of students and their grades for a given course section
96 if (isset($_POST['course_id']) && isset($_POST['section_id'])) {
97     $course_id = $_POST['course_id'];
98     $section_id = $_POST['section_id'];
99
100     $query = "SELECT grade, COUNT(*) AS count
101             FROM Enrollment
102             WHERE course_id = $course_id AND section_id = $section_id
103             GROUP BY grade";
104
105     $result = mysqli_query($conn, $query);
106
107 if (mysqli_num_rows($result) > 0) {
108     echo "<table>";
109     <tr>
110         <th>Grade</th>
111         <th>Student Count</th>
112     </tr>";
113     // Display number of students and their grades
114     while ($row = mysqli_fetch_assoc($result)) {
115         echo "<tr>";
116         <td>" . $row['grade'] . "</td>
117         <td>" . $row['count'] . "</td>
118     </tr>";
119     }
120     echo "</table>";
121 } else {
122     echo "
123     <div style='padding: 20px;'>
124     <h2 style='font-size: 20px;'>This course section has no students or there is no courses/sections with those IDs.</h2>
125     </div>
126     ";
127 }
128 }
129 >>
```

(Second Statement)