

PHP Queries and HTML Forms

Lecture 23

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1 Retrieving Data from the Database

2 Inserting into a Database

3 Updating the Database

Outline

- 1 Retrieving Data from the Database
- 2 Inserting into a Database
- 3 Updating the Database

Retrieving Data from the Database

- We will use the `company` database for our examples.
- Suppose we want to retrieve all the information available about an employee and display it.
- In the HTML form, we need a text box in which to enter the employee's Social Security Number (the primary key).
- The PHP program (action file) will query the database to retrieve the information and then “echo” HTML code that will produce the display.

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Inserting into a Database

- Suppose that we want to add an employee to the database.
- We must get from the user the employee's
 - First and last names.
 - Social Security number.
 - Sex.
 - Birthday.
 - Salary.
 - Department.
 - Data about any dependents.
 - Data about any projects.
- Then insert these data into the `employees` table, the `dependents` table, and the `works_on` table.

The HTML Form

- In the HTML form, we need
 - Text boxes for the first name, last name, Social Security number, birthday, and salary.
 - A radio button for the sex.
 - A select element for the department.
 - And so on.
- We could also use three select elements for the birthday: one for the month, one for the day, and one for the year.

The HTML Form

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The HTML Form

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- We should also get the projects that the employee works on, and present them, but they are specific to a department and we do not know yet which is his department.
- Later on, JQuery will allow us to do that: when the user selects a department, the list of projects will be immediately updated.

Inserting into the Database

Insert into the Database

```
$fname = $_POST['fname'];  
$lname = $_POST['lname'];  
$ssn   = $_POST['ssn'];  
$sex   = $_POST['sex'];  
$bdate = $_POST['bdate'];  
$salary = $_POST['salary'];  
$dept  = $_POST['dept'];  
$query = "SELECT * FROM employees WHERE ssn='$ssn'";  
$result = mysqli->query($query);
```

- We must get the form information and find out whether the employee is already in the database.

Inserting into the Database

Insert into the Database

```
if ($result->num_rows > 0)
    echo "$fname $lname is already in the database";
else
{
    $query = "INSERT INTO employees"
        . " VALUES ('$fname', '$lname', '$ssn', '$sex', "
        . " '$bdate', $salary, $dept)";
    $mysqli->query($query);
    echo "$fname $lname has been added to the database";
}
```

- If he is not already in the database, then add him and then report success.

Creating a Select List of Departments

Create a Select List of Departments

```
<select name="dept">
<?php
    $query = "SELECT dname, dept FROM departments";
    $result = $mysqli->query($query);
    for ($i = 0; $i < $result->num_rows; $i++)
    {
        $row = $result->fetch_array()
        $dname = $row['dname'];
        $dept = $row['dept'];
        echo "<option value=' $dept' >$dname</option>";
    }
?>
</select><br/>
```

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Updating the Database

- We want to update the data for an employee.
- We must
 - Request the SSN from the user (using the form).
 - Select the employee's data from the `employees` table.
 - Display the current employee's information in (editable) text boxes, preselected radio button, preselected checkboxes, and preselected select elements.
 - After clicking Submit, delete the old record and insert the new record.
 - Report success or failure.

Updating the Database

- When updating the database, it is unnecessarily complicated to try to update only the fields that were changed.
- Instead, we should “update” all fields with whatever values are in the edited form by deleting the old record and inserting the new record.

Updating the Database

- In this example, we choose to use two PHP files.
- The first file will present the employee's data and allow the user to edit it.
- The second file will update the database.