MySQL and PHP Update

Intro PHP

Down load sample code from Nexus

CRUD

There are really on four primary operations we can perform with a database.

C – create new records

R – read existing records

U – update existing records

D – delete existing records

https://en.wikipedia.org/wiki/Create,_read,_update_and_delete

BREAD

Sometimes, in Web development CRUD interfaces are referred to as BREAD interfaces.

B – Browse records (read)

R – Read records (read)

E – Edit records (update)

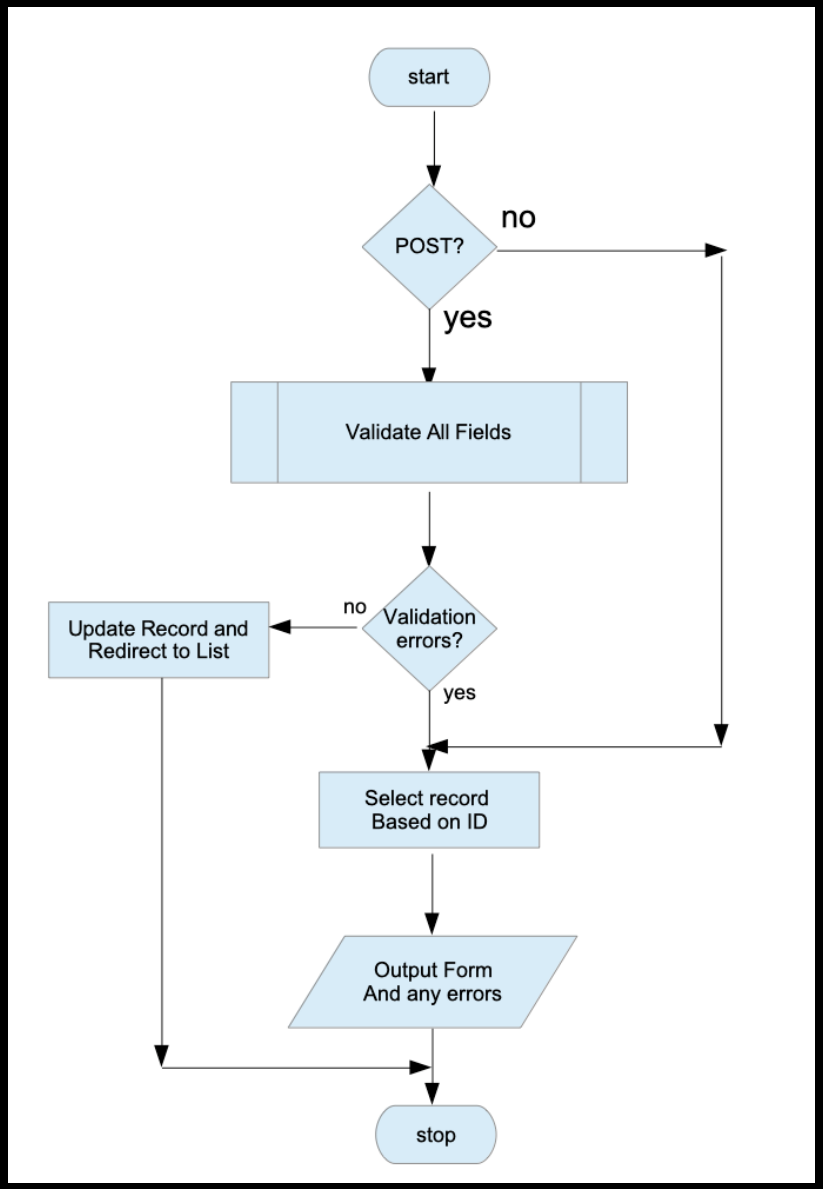
A – Add records (create)

D – delete records (delete)

https://paul-m-jones.com/post/2008/08/20/bread-not-crud/

Update process

This is a simplified flowchart illustrating the procedure for updating a an existing record



Start with a list view

Because we are working with existing records that need to be edited, we generally start with a list view so we can find them.

Select Employee To Edit

Search

First Name	Last Name	Email	Phone	Department	Updated	Edit
Jill	King	jking@borland.com	212-555-4432	Support	2021-09-17 09:03:52	edit
Margaret	Thomson	mthomson@borland.com	234-456-6548	Sales	2021-08-16 09:03:52	edit
Henry	Bissoon	hbissoon@borland.com	204-323-1145	IT	2021-06-22 09:03:52	edit
Dave	Jones	djones@borland.com	212-555-3456	Sales	2021-01-12 09:03:52	edit

01_list.php

The detail view is a form

Instead of clicking through to a detail view, we click through to a form populated by the record's editable fields.

Note that some fields are missing:

- id
- created_at
- updated_at

In fact, id is present as a hidden field, not editable by the user.

created_at and updated_at are managed programmatically, and the user is not required to adjust them

02_edit.php

The list view again...

Behind the scenes, the list view is almost identical to our previous list view used for browsing records.

```
<tr>
 <td><?=e($row['first_name'])?></td>
 <td><?=e($row['last_name'])?></td>
 <td><?=e($row['email'])?></td>
 <td><?=e($row['phone'])?></td>
 <td><?=e($row['department'])?></td>
 <td><?=e($row['updated_at'])?></td>
 <td><a href="02_edit.php?id=<?=e($row['id'])?>">edit</a></td>
</tr>
```

Note that the only difference is that the action link opens a page that contains a form. Other than that, there are no changes.

Note also that the primary key is passed in the query string. You must always pass something that the database enforces as unique, or you may end up editing the wrong record.

01_list.php

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Note also that the primary key is passed in the query string. You must always pass something that the database enforces as unique, or you may end up editing the wrong record.

01_list.php

The edit view again...

Behind the scenes, the edit view is almost identical to our view for creating new records.

```
<form method="post">

<input type="hidden" name="id" value="<?=e($_REQUEST['id'] ?? $emp['id'])?>" >

<input type="text" name="first_name"
                        value="<?=e($_POST['first_name'] ?? $emp['first_name'])?>">
```

The primary difference between the create and edit forms is that the edit form contains the primary key as a hidden field, and the value of each post is initially populated with data from the database record.

Note in the sticky value, we attempt to output the $_POST value for the field if it exist, otherwise we output the value from the database ($emp).

02_edit.php

$_REQUEST vs $_GET or $_POST

The hidden field for the record id is coming from $_REQUEST rather than from $_GET or $_POST

```
<form method="post">

<input type="hidden" name="id" value="<?=e($_REQUEST['id'] ?? $emp['id'])?>" >

<input type="text" name="first_name"
                        value="<?=e($_POST['first_name'] ?? $emp['first_name'])?>">
```

This is because the edit form absolutely requires the ID field to be present to load the form. Initially the ID value can be found in the GET request from the list view. But upon submission, if there are errors, the page will load with a POST request.

The easiest way to capture a value that might be in $_GET or $_POST, with the same name, is in $_REQUEST, which contains values from both SuperGlobals.

02_edit.php

The edit form... continued

Handling the edit form is almost identical to handling the submission from the insert form, with two differences...

```php
// The user we want to see
if(empty($_REQUEST['id'])) die('Please enter an employee id');

if(intval($_REQUEST['id']) != $_REQUEST['id']) die('Employeed id must be an integer');
```

First, we must always be sure that an ID has been passed to the form. Second, there are two queries that must be performed. On the initial GET request, we must retrieve the record from the database to display in the form. On the subsequent POST request we must execute an update query

```php
$query = "SELECT *
          FROM employees
          WHERE
          id = :id";
```

```php
$query = "UPDATE employees
          SET
          first_name = :first_name,
          last_name = :last_name,
          email = :email,
          phone = :phone,
          department = :department
          WHERE
          id = :id";
```

02_edit.php

The Update workflow

Updating records is such a common administrative task it has an established workflow.

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First Name	Last Name	Email	Phone	Department	Updated	Edit
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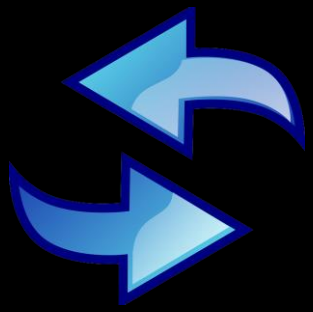

Edit Record

First Name
Margaret

Last Name
Thomson

Email Address
mthomson@borland.com

Phone Number
234-456-6548
Any valid format

Department
Sales

Submit

1. Start at the list view
2. Click the “edit” link
3. Fill in the form and submit
4. Redirect back to list view
5. Repeat as necessary

02_edit.php

Next:
PHP and MySQL Deletes