CS 547

Week 3 Day 2
PHP & MySQL

Agenda

- MySQL
- Assignment 1

Review

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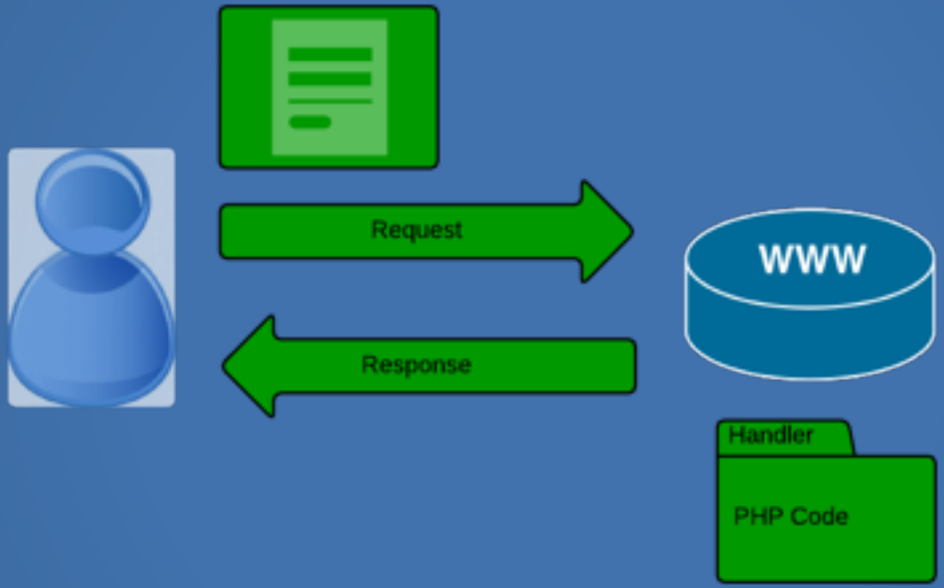
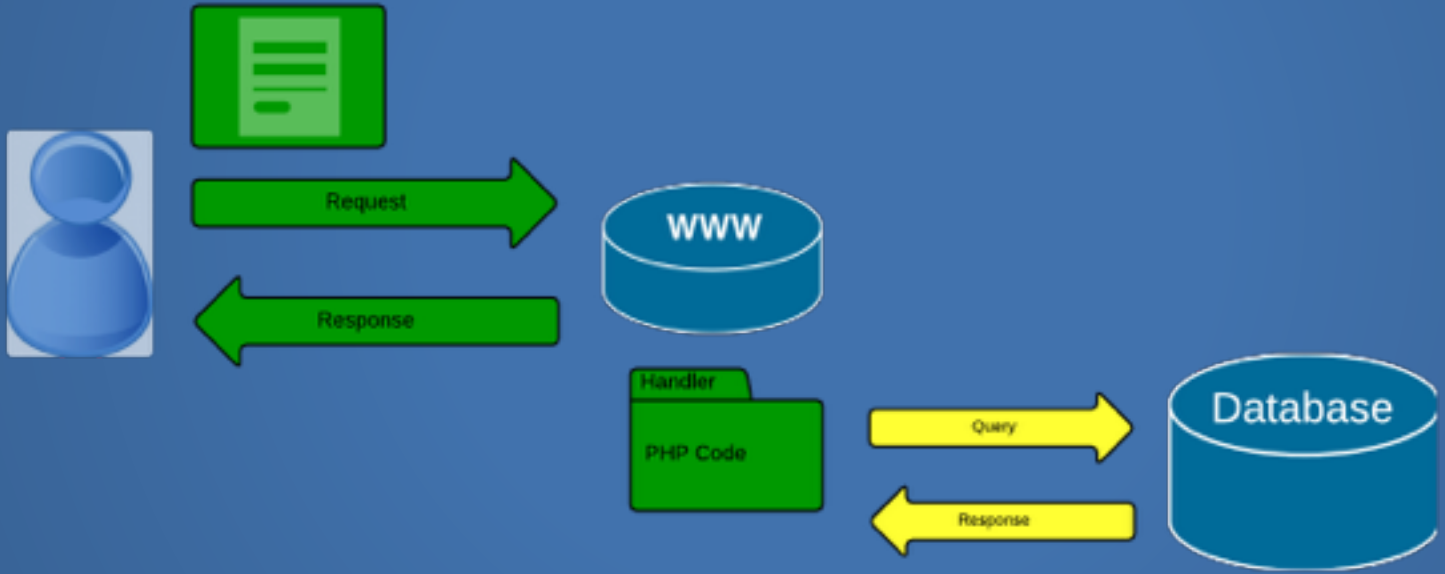
From previous lecture

Recall



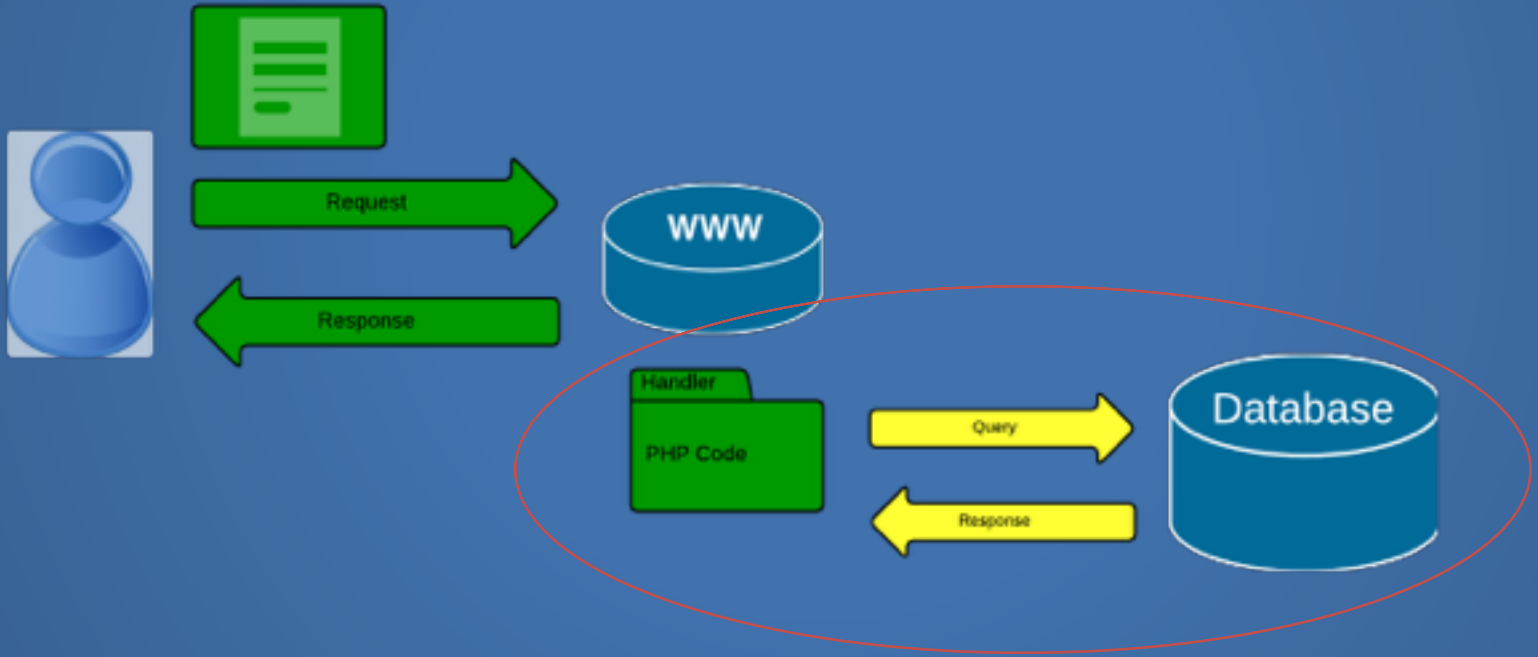
Dynamic Web Sites

- Introduce a new 'layer' to the picture



Dynamic Web Sites

- We will focus on the php – database part



PHP MySQL

Two correct ways for connecting to database

MySQLi – mysq

PDO – php Data Objects

PHP MySQL

One old – Deprecated way

mysql_* api

Which api to use?

MySQLi

Simpler syntax

Richer API

PDO

Faster

Supports other Databases

Object Oriented

MySQLi example

```
<?php

$DBServer = 'localhost'; // e.g 'localhost' or '192.168.1.100'
$DBUser   = 'root';
$DBPass   = '';
$DBName   = 'test547';


$
```

MySQLi example

```
$conn = new mysqli($DBServer, $DBUser, $DBPass, $DBName);

// check connection
if ($conn->connect_error) {
trigger_error('Database connection failed: '  . $conn->connect_error, E_USER_ERROR);
}
else {
echo ("Connection Success.");
```

MySQLi example

```
               echo ("Connection Success.");

$sql='SELECT * FROM mytable ';  // $sql='SELECT * FROM mytable WHERE condition';

                         $rs=$conn->query($sql);
            /*                      if($rs === false) {
    trigger_error('Wrong SQL: ' . $sql . ' Error: ' . $conn->error, E_USER_ERROR);
                                } else {
                             $rows_returned = $rs->num_rows;
                         echo ("Found " + $rows_returned + " rows.");
                                   $rs->data_seek(0);
```

MySQLi example

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MySQLi example

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                                         } else {
                                                 $rows_returned = $rs->num_rows;
```

MySQLi examples

- **Iterate over recordset**

- **Using MYSQLI_ASSOC an associated array is returned, MYSQLI_NUM an enumerated one and MYSQLI_BOTH both of them.**

- **WARNING: fetch_all is available only with MySQL Native Driver.**

More sql commands

Record count

```
$rows_returned = $rs->num_rows;
```

Move inside recordset

```
$rs->data_seek(10);
```

Free memory

Optional:

```
$rs->free();
```

SQL Insert Command

```
$v1="'" . $conn->real_escape_string('col1_value') . "'";

$sql="INSERT INTO mytable (name_varchar, age_number) VALUES ($v1,10)";

if($conn->query($sql) === false) {
trigger_error('Wrong SQL: ' . $sql . ' Error: ' . $conn->error, E_USER_ERROR);
} else {
$last_inserted_id = $conn->insert_id;
$affected_rows = $conn->affected_rows;
}
```

SQL UpDate

```
$v1="'" . $conn->real_escape_string('col1_value') . "'";

$sql="UPDATE mytable SET name_varchar=$v1, age_number=21 WHERE id>10";

if($conn->query($sql) === false) {
trigger_error('Wrong SQL: ' . $sql . ' Error: ' . $conn->error, E_USER_ERROR);
} else {
$affected_rows = $conn->affected_rows;
}
```

SQL Delete

```
$sql="DELETE FROM mytable WHERE id>10";

if($conn->query($sql) === false) {
trigger_error('Wrong SQL: ' . $sql . ' Error: ' . $conn->error, E_USER_ERROR);
} else {
$affected_rows = $conn->affected_rows;
}
```

SQL Pattern

The commands we just covered follow a common pattern: CRUD

C == Create a record

R == Read one or more records

U == UpDate one or more records

D == Delete a records

This CRUD pattern is at the heart of modern dynamic websites.

File Layout

To facilitate your web development it is recommended that you organize your files in some particular way. There are two choices

- Hierarchically
- One Big Mess

PHP External Files

PHP has four ways for incorporating external files

- include();
- include_once();
- require();
- require_once();

Include VS Require

When successful, both give same behavior; however, they have different behavior on error.

Function	Successful	Fails
include();	***Same***	***warning - continue***
include_once();	Same	warning - continue
require();	***Same***	***Error printed - halt***
require_once()	Same	Error printed - halt

Paths Matter

There are two types of paths

- Absolute – Start at the top of the file system C:\xamp\htdoc\
- Relative – Start at the file localtion in the file system

include('../ex2/file_proc.php');

File extension also matter

Remember that files with a *.html extension are sent to the browser without any (if any checking).

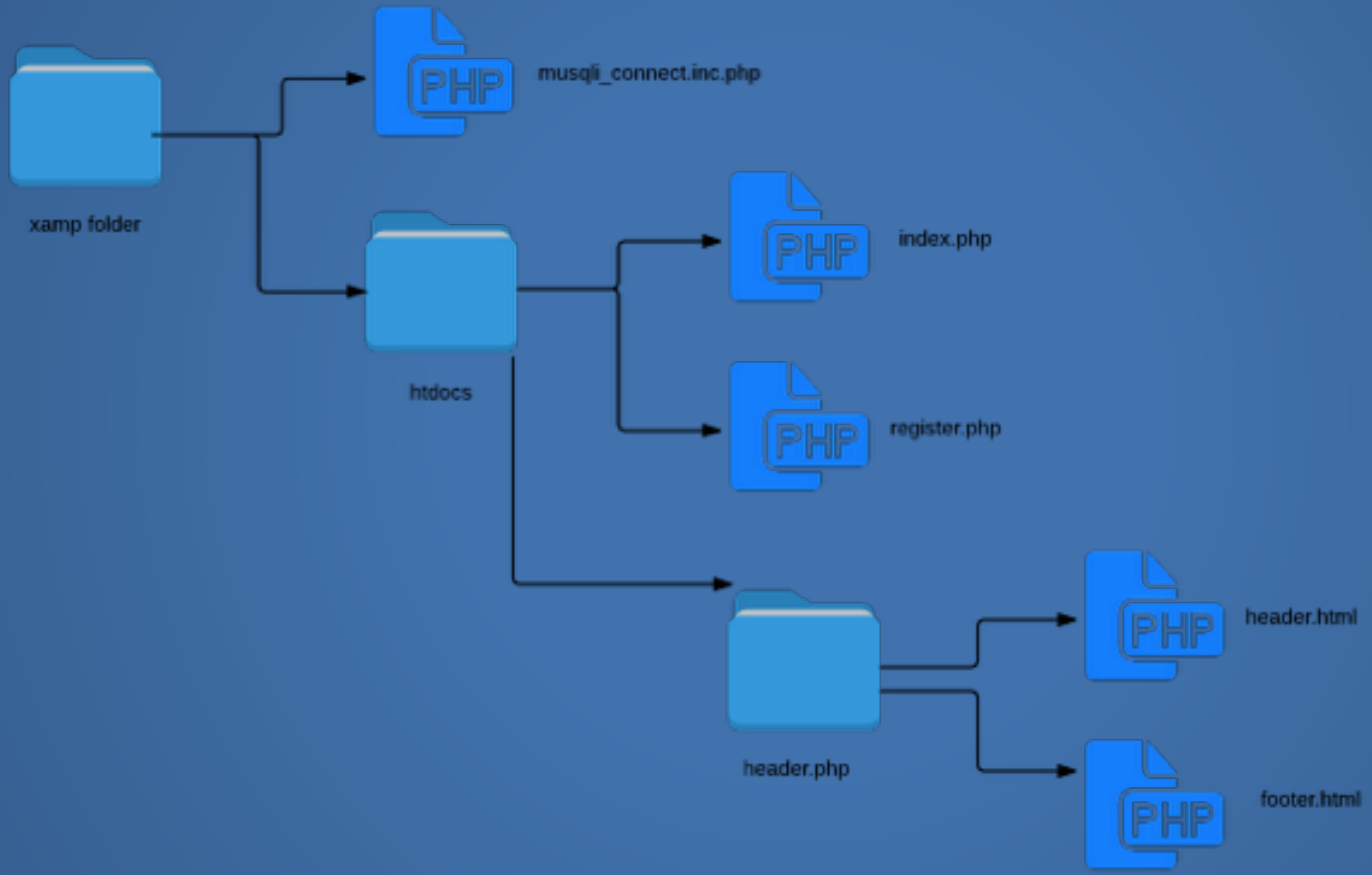
Files with a *.php are preprocessed by PHP before being sent to the browser.

It is recommended that you use

*.inc.php for files that include sensitive information

*.inc.html for files that do not include sensitive information

Website Layout



First Assignment

The first assignment is posted on BlackBoard we will go over it now

Due April 6th 2015 at 5:30 pm PST