

CCT395, Week 7

SQL with PHP

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The Project

- **Groups of up to 3 students**
 - The same requirements regardless of group size
- **6-12 entities**
 - Roughly the same complexity as Madame Z's database
 - A simple PHP front-end
- **Proposal due on November 3**
 - A list of group members
 - A functional specification (be clear what is out of scope)
 - An ER diagram
 - Who is going to do what and when

Facebook runs on MySQL

facebook

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MySQL at Facebook is on Facebook

Sign up for Facebook to connect with MySQL at Facebook.



Devoted to making MySQL better. Written by people who work at Facebook.

Information

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MySQL at Facebook



Wall

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Notes

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Links

MySQL at Facebook + Others

Just MySQL at Facebook

Just Others



MySQL at Facebook I just registered for PgWest 2010. I look forward to learning more about current work on PostgreSQL.



PgWest 2010 | The PostgreSQL Conference
www.postgresqlconference.org

Thursday at 12:18pm · Comment · Like

Paul Saab, Bill Blum, Chetan Tanna and 51 others like this.

View all 7 comments



MySQL at Facebook I think they both have awesome technology and continue to improve.
Yesterday at 9:24am · 2 people · Flag



Ricky Elrod Indeed they do, I was just pulling your leg. Have fun at the conference :)
Yesterday at 9:26am · Flag

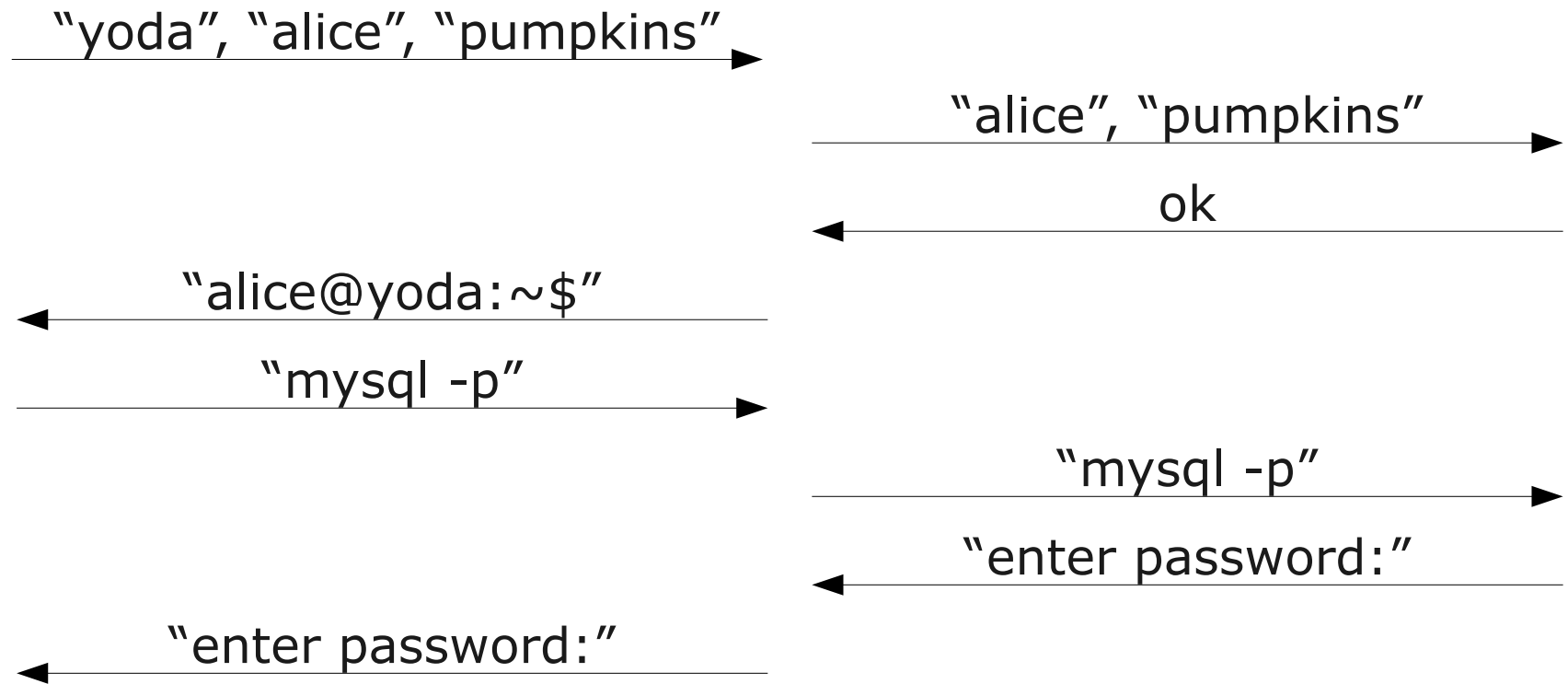


MySQL at Facebook Kristian Nielsen had a very interesting presentation on making replication better in MariaDB. Perhaps one day he will share that (hint, hint).

October 11 at 8:21am · Comment · Like

Kian Sin Teo, Donald G. Lane Jr., Roja Rani Penmetsa and 38 others like this.

Telnet (1969)



FTP (1971)



`"yoda", "alice", "pumpkins"`

`"alice", "pumpkins"`

`ok`

`"ftp>"`

`"get /path/to/monkeys.txt"`

`"get /path/to/monkeys.txt"`

`monkeys.txt`

the file is saved locally

Anonymous FTP



"yoda", "/path/to/monkeys.txt" →

→ "get /path/to/monkeys.txt" →

← **monkeys.txt** ←

the file is saved locally

ftp://yoda/path/to/monkeys.txt

HTTP (1991)



"yoda", "/path/to/monkeys.html" →

→ "GET /path/to/monkeys.html"

← **monkeys.html**

← **monkeys.htm** is displayed

http://yoda/path/to/monkeys.html

HTML

```
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>
      CCT395H5F: Databases (Special Topics
      in CCIT)
    </title>
  </head>
  <body>
    <h1>
      CCT395H5F, University of Toronto,
      Mississauga
    </h1>
    ...
```


CGI



"yoda", "/path/to/monkeys.cgi" →

"GET /path/to/monkeys.cgi" →

html output of monkeys.cgi ←

← html output is displayed

monkeys.cgi contains **code**, but **returns** HTML

PHP = HTML + Code

HTML

```
<body>  
  17 monkeys are happy.  
</body>
```

17 monkeys are happy.

PHP

```
<body>  
  <?php echo 17; ?>  
  monkeys are happy.  
</body>
```

```
<body>  
  17  
  monkeys are happy.  
</body>
```

17 monkeys are happy.

Variables

```
<body>  
  <?php  
    $count=17;  
    echo $count;  
  ?>  
  monkeys are happy.  
</body>
```

17 monkeys are happy.

Concatenation

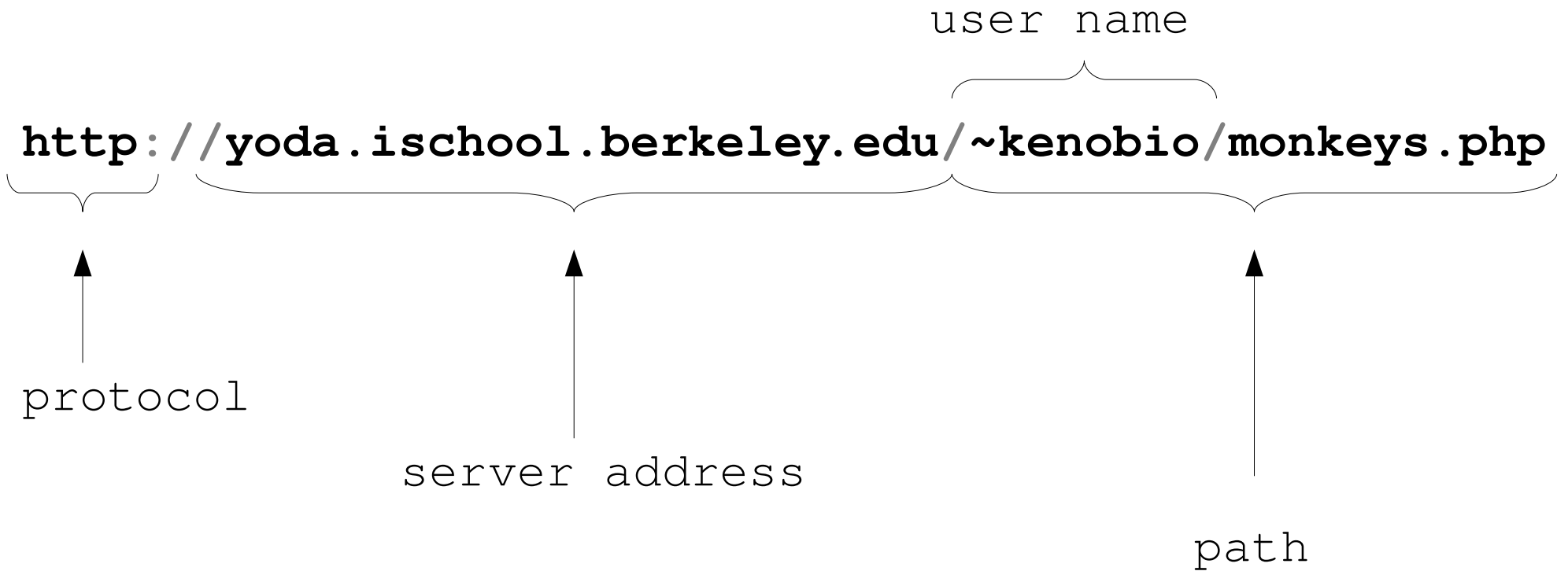
```
<body>  
  <?php  
    $mood="happy";  
    $count=17;  
    echo $count . " monkeys are "  
        . $mood;  
  ?>  
</body>
```

17 monkeys are happy.

Concatenation

```
<?php
    $mood="happy";
    $count=17;
    echo $count . " monkeys are "
        . $mood;
?>
```

A Demo



Always the Same?

Parameters

- additional data from the user

Database

- information that we store

Database

```
<?php
    $connection = mysql_connect ("localhost",
                                "kenobio",
                                "th3f0rc3");
mysql_select_db ("kenobio", $connection);
$query =
    "select count (*) from monkeys where mood='H' ";
$result = mysql_query ($query);
$row = mysql_fetch_array ($result);
echo $row['count (*)'];
echo " monkeys are happy.";
?>
```

Iterating

```
<?php
    $connection = mysql_connect ("localhost",
                                "kenobio",
                                "th3f0rc3");
mysql_select_db ("kenobio", $connection);
$query =
    "select * from monkeys where mood='H' ";
$result = mysql_query ($query);
while ($row = mysql_fetch_array ($result)) {
    echo $row['monkey_id'] . "<br/>";
}
?>
```

Counting

```
<?php
    $connection = mysql_connect ("localhost",
                                "kenobio",
                                "th3f0rc3");
mysql_select_db ("kenobio", $connection);
$query =
    "select * from monkeys where mood='H' ";
$result = mysql_query ($query);
$count = 0;
while ($row = mysql_fetch_array ($result)) {
    echo $row['monkey_id'] . "<br/>";
    $count = $count + 1;
}
echo "Count: " . $count . " monkeys are happy.";
?>
```

Conditionals

```
<?php
    $connection = mysql_connect ("localhost",
                                "kenobio",
                                "th3f0rc3");

    if (!$connection) {
        die('Could not connect to the database: '
            . mysql_error());
    }
    mysql_select_db ("kenobio", $connection);
    $query =
        "select * from monkeys where mood='H' ";
    $result = mysql_query ($query);
    $count = 0;
    . . .
```

Conditionals

```
mysql_select_db("kenobio", $connection);
$query = "select * from monkeys";
$result = mysql_query($query);
$count = 0;
while($row = mysql_fetch_array($result)) {
    if ($row['mood']=="H") {
        echo $row['monkey_id'] . "<br/>";
        $count = $count + 1;
    }
}
echo "Count: " . $count . " monkeys are happy.";
```

Conditionals

```
mysql_select_db("kenobio", $connection);
$query = "select * from monkeys";
$result = mysql_query($query);
$count = 0;
while($row = mysql_fetch_array($result)) {
    echo $row['name'] . ": "
        . $row['mood'] . "<br/>";
    if ($row['mood']=="H") {
        $count = $count + 1;
    }
}
echo "Count: " . $count . " monkeys are happy.";
```

Conditionals

```
mysql_select_db("kenobio", $connection);
$query = "select * from monkeys";
$result = mysql_query($query);
$count = 0;
while($row = mysql_fetch_array($result)) {
    $mood = $row['mood'];
    if ($mood=="H") {
        echo " :) ";
        $count = $count + 1;
    } else {
        echo " :( ";
    }
    echo $row['name'] . "<br/>";
}
echo "Count: " . $count . " monkeys are happy.";
```


Parameters

- additional data from the user

Database

- information that we store

GET Parameters

Monkeys with mood

```
"<?php
    echo $_GET["mood"];
?>" :
```

Monkeys with mood

```
"H" :
```

Monkeys with mood "H":

GET Parameters

`http://.../.../monkeys_3.php?mood=H`

GET Parameters

```
$desired_mood = $_GET["mood"];
echo "Monkeys with mood '" . $desired_mood
    . "':<br/>";
$query = "select * from monkeys";
$result = mysql_query($query);
$count = 0;
while($row = mysql_fetch_array($result)) {
    if ($row['mood']==$desired_mood) {
        $count = $count + 1;
        echo $row['name'] . "<br/>";
    }
}
echo "Count: " . $count;
```

Dynamic SQL

```
$desired_mood = $_GET["mood"];
echo "Monkeys with mood '" . $desired_mood
    . "' :<br/>";
$query = "select * from monkeys where mood='"
    . $desired_mood . "'";
$result = mysql_query($query);
$count = 0;
while($row = mysql_fetch_array($result)) {
    $count = $count + 1;
    echo $row['name'] . "<br/>";
}
echo "Count: " . $count;
```

Don't do this!

Dynamic SQL

```
$desired_mood = $_GET["mood"];
if ($desired_mood!="H" and $desired_mood!="S") {
    die ("Illegal mood");
}
echo "Monkeys with mood '" . $desired_mood
    . "':<br/>";
$query = "select * from monkeys where mood='"
    . $desired_mood . "'";
$result = mysql_query($query);
$count = 0;
while($row = mysql_fetch_array($result)) {
    $count = $count + 1;
    echo $row['name'] . "<br/>";
}
echo "Count: " . $count;
```

HTML Forms

```
<form action="monkeys_5.php" method="get">  
  Please select mood:  
  <input type="text" name="mood" />  
  <input type="submit" />  
</form>
```

HTML Forms

```
<form action="monkeys_5.php" method="get">
  Please select mood:<br/>
  <input type="radio" name="mood" value="H"/>
  happy<br/>
  <input type="radio" name="mood" value="S"/>
  sad<br/>
  <input type="submit" />
</form>
```


POST Parameters

monkey_form_3.html:

```
<form action="monkeys_6.php" method="post">
  Please select mood:<br/>
  <input type="radio" name="mood" value="H"/>
  happy<br/>
  <input type="radio" name="mood" value="S"/>
  sad<br/>
  <input type="submit" />
</form>
```

monkeys_6.php:

```
$desired_mood = $_POST["mood"];
```

Questions?