Du Pont Technology Grant Report:
Using MySQL and PHP to do Dynamic Web Page Development

Fall 2001 to Spring 2002

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Introduction

The purpose of this project was for me to learn to use Apache, MySQL and PHP applications on the RedHat LINUX platform so that we could improve the chemistry department web resources. In particular, MySQL is a powerful relational database that has a full set of functions implemented as a library in PHP. With MySQL (a free open source application similar to SQL), I have created databases of previous students in the chemistry department, some online quizzes, chemistry department speakers and photos. PHP is a scripting language which has been developed as a free open source competitor to Microsoft ASP. Using PHP we can write dynamic web pages that can be updated and used to generate new content in a very easy fashion. In addition, in many cases the amount of code required to create tables and other web objects is substantially shorter, since you can use C programming elements like if-statements, while/for-loops and a full set of mathematical functions. The final program is Apache, which is the open source web server software running on RedHat LINUX. Apache has a number of advantages over the Microsoft web serving products, not the least of which seems to be security. In our case, Apache is the tool which interprets the MySQL and PHP code and serves the web pages to the users. As with all web projects, this one is still a work in progress, but I have made substantial progress in the last 6 months on adding a lot of features to the departmental web site and exploring the MySQL and PHP languages.

Project Description

The projects that I have implemented will each be described in the following paragraphs. I have included the raw PHP source code in the appendix of this document for some of the web pages

I have created. This code illustrates some of the features of PHP and MySQL and may be used as templates for creating other dynamic web pages. Since these pages are a work in progress, there are multiple ways I have learned to implement various functions so that the reader will notice inefficiencies in some sections that has been removed in newer code. All of these web pages may be seen at the chemistry web site (http://chemistry.berea.edu/~jhb) where the PHP code is rendered into HTML by the Apache interpreter on the fly. The only complaint I would have about the Apache/PHP linkage is the fact that the PHP code is not compiled but instead is run in interpreted mode, and thus has the possibility of being rather slow if the amount of computation involved in generating the web page is large (i.e. if you were doing a lot of image/jpg manipulations on the fly). Still, in our case, the chemistry department server is never substantially loaded by any of these examples.

The first project I will describe is the chemistry student database. In the past, I had created two pages, one for previous students and the other for current students. Each of these html files was quite large (as they had to list all of the students within the file itself). In addition, when a student graduated, I had to move them from the `cstudents.php` file to the `students.php` file. As you might expect, this is not a very elegant solution to this problem. Also, since the pages were stored as html, there was no simple mechanism to allow students to update information on the pages. Using MySQL and PHP, it was actually quite easy to add a great degree of functionality to these pages for a small amount of work, see http://chemistry.berea.edu/department/students.php for the previous students and http://chemistry.berea.edu/department/cstudents.php for current students. First, I moved all of the student information into a MySQL database. Information recorded include student name, major, class year, email address, and current news. This was facilitated by creating the `add_student.php` web page which allows the user to add new names to the student database quickly. This web page is available to all users without any password so that students who may have graduated earlier may add themselves to the web site without needing to contact me directly. This does present a bit of a security hole in that someone might add a large number of

"fake" students, but I included a database field to record the date that each student was added/modified. I can easily sort/modify the database using this field as a sorting criterion and thus if someone were to pollute the database, I could fix it easily. The basic advantage of having students be able to add their names on their own outweighed the possible drawback from database pollution. Once a name has been added to the database, the `students.php` and `cstudents.php` web pages will selectively choose previous or current students respectively from the database and generate web pages appropriately. Once a student has been added to the database, they can use the web page at `edit_students.php` to create a unique password that will allow them to modify the presented information. This is not a perfect security, but on the whole it is pretty good. The way the site is constructed, I could imagine a malicious person creating passwords for another user and then modifying information about that user. Still, the modification date field in the database will allow me to repair such attacks pretty easily. Again, the value of having student controlled updates outweighed the slight security risks. In the future, if this security risk seems to be too great, I could change it so that any information entered would require my approval before activation. I would prefer to not have to implement this kind of big-brother approval process at this time. If you look at the actual code for the `students.php` web site, you will discover that PHP has been used to sort the students in the database by class year (they don't have to be entered into the database in this order) as well as using conditional statements to create hyperlinks to email and web pages. On the whole, the chemistry student pages at this point work quite well and are considered finished (for now).

The second project was to improve the web site and database for the chemistry department seminars, see http://chemistry.berea.edu/department/seminars.php. Again, as with the student web sites, this originally was a very large single file listing each speaker in HTML format. By moving this information into a MySQL database, it allows me to do a lot of dynamic page generation functions. The other advantage of using a database is that as we develop the online student portfolios in the chemistry department, the speaker database will be linked to the students database

in a way so that we can track what students attended what seminar (in meeting the 2 chemistry/science seminars per semester portfolio requirement). In the case of the speaker database, the only people who might need to update the information would be chemistry department faculty, so a password was added to all `add_speaker.php` and `edit_speaker.php` functions.

A third programming effort was the creation of a database of chemistry department digital photographs (see http://chemistry.berea.edu/chemistry.html#faces) that are displayed randomly on the main page. This again uses a simple MySQL / PHP interface to allow the random selection of a photo from the database and then extract the caption. Within the PHP code itself is the use of a random number generation based on the random number generators from Numerical Recipes. The idea of this random photo is to allow visitors to the web site to get a different picture from the department each time, without having a huge number of photos on that main page which would create a very slow loading page. My philosophy is that all web pages should load quickly, particularly ones that are the starting point of a visit to the site.

The fourth project is the creation of the on-line student laboratory portfolio. This is a work in progress that is about half finished (see http://chemistry.berea.edu/department/port.html). The ultimate goal is that each student will have an entry in the MySQL database. In this database will be stored the seminars attended by each student, the laboratories performed, the papers written, talks presented, etc. This database is to some degree linked to the seminars database as well, so we can go back and extract information about which speakers drew the greatest numbers of students. Also it will allow us to track which experiments are most popular for the optional choices to complete. It is hard to anticipate exactly how this information will be used, but it will put us in a stronger position to improve assessment of the new laboratory program in a few years.

The fifth project was the creation of my general chemistry quiz of the day site. Again, this is not a fully finished project, but essentially it is a database of general chemistry questions, indexed by topic (see http://chemistry.berea.edu/~jhb/genchem). Students can go to this page and will be

4

presented with a random question and then can choose one of 5 choices (placed in random order). Upon choosing an answer, the site tells the student if the response is correct or incorrect. The ultimate goal will be to connect this to a database of students and allow students to log in and have their responses logged. I also may use this to put up a question to be answered in class on the laptops rather than using paper quizzes each day. I have spoken with Matthew Saderholm recently about the capabilities of WebCT and he suggested that this new web software might be able to do this same process in a much easier fashion. Certainly if we have a highly polished software kit that does this application, it would be preferable but it still is a useful exercise to attempt to learn what the limitations are of PHP and MySQL programming.

The last element I have added to my web pages is the standardization of source/date/creator information. This information is presented by the PHP code automatically telling the viewer when the file was last updated as well as who is the creator and the path to the actual file being viewed. This is useful information for quickly checking web pages to determine when updates have been performed and by who.

Conclusion

Having explored a very small portion of the PHP and MySQL programming landscape, I come away with the distinct impression that dynamic page generation on the server machines has some distinct advantages over traditional web page design. The programming of such web pages is much less graphical and WYSIWYG than you might have from a more sophisticated web page design program (such as Dreamweaver perhaps) but the results seem to be very nice. It may be that there are quickly evolving new programs which allow you to program in PHP like languages that will have a nice interface and I will welcome learning about such approaches. In the end, the new web pages on the chemistry department web server seem quite useful and provide a starting point for further development.

Expenditures

The number of hours I spent on this project has been substantial off and on over the last 8 months. I spent 31 hours learning the basic language of PHP, MySQL and HTML needed to build these pages. I spent 19 hours actually doing the coding of the new web pages. I spent another 5 hours transferring data from the original web pages to the new MySQL databases. Now that I know more about the various elements I used, I can add new MySQL and PHP driven web pages using existing templates pretty quickly. Finally I used 1 hour preparing the reporting documentation. This totals 56 hours of work on this project. I anticipate continuing this work as I add new features for use with my classes and the unfinished on-line student portfolios.

Appendix

Each of the files below illustrate the PHP code used to generate the HTML web pages for the end user of the chemistry department web site.

add_speaker.php

```
<html>
<body text="#990101" background="sandston.gif">

<center>
<font size=+4><a href="../chemistry.php">Berea College Chemistry</a></font><br>
<font size=+3>Edit Speaker Information</font>
</center>
<br>
Currently, there is a password on this site.  If you wish to modify any informaiton here,
you need to contact Jay Baltisberger.
<br>
<hr>

<?php
include( "stud_db.inc" );
sdb_connect();

if ($submit == "click to submit changes") {
  if ($password == "red25boy") {
    if ($spk_name && $spk_date && $spk_title && $spk_school) {
      $query = "insert into speakers set ".
               "spk_name=\"" . $spk_name .
               "\", spk_date=\"" . $spk_date .
               "\", spk_title=\"" . $spk_title .
               "\", spk_rank=\"" . $spk_rank .
               "\", spk_school=\"" . $spk_school .
               "\", spk_web=\"" . $spk_web .
               "\", spk_sch_web=\"" . $spk_sch_web .
               "\", web_entry=1, spk_email=\"" . $spk_eamil . "\"";
      $result = mysql_query ($query);

      if (!$result) {
        echo $query;
        echo "<br>" . mysql_errno() . ": " . mysql_error() . "<br>";
      } else {
        echo "<center>Successfully added the following data:<br>";
        echo "<table border=1>";
        echo "<tr> <td><b>Item</b></td> <td><b>New Value</b></td> </tr>";
        echo "<tr> <td>Speaker Name</td> <td>" . $spk_name . "</td> </tr>";
        echo "<tr> <td>Seminar Date</td> <td>" . $spk_date . "</td> </tr>";
        echo "<tr> <td>Seminar Title</td> <td>" . $spk_title . "</td> </tr>";
        echo "<tr> <td>Speaker Rank</td> <td>" . $spk_rank . "</td> </tr>";
        echo "<tr> <td>Speaker School</td> <td>" . $spk_school . "</td> </tr>";
        echo "<tr> <td>Speaker Email</td> <td>" . $spk_email . "</td> </tr>";
        echo "<tr> <td>Personal Web site</td> <td>" . $spk_web . "</td> </tr>";
        echo "<tr> <td>School Web site</td> <td>" . $spk_sch_web . "</td> </tr>";
        echo "</table></center>";
      }
    } else {
      echo "<center><br>Insufficient data to add a new name.";
```

7

```
      echo "<br>You must enter all fields in the table except for the email, web URLs and
rank which are optional.<br>";
      if (!$spk_name) echo "You left off the speaker's name.<br>";
      if (!$spk_date) echo "You left off the speaker's date.<br>";
      if (!$spk_school) echo "You left off the speaker's school/employer.<br>";
      echo "<a href=\"add_speaker.php\">Follow this link to restart this page.</a><br>";
      echo "</center>";
    }
  } else {
    echo "<br><center><font size=+1>Password invalid.</font></center><br>";
  }
} else {
  echo "<center>";
  echo "<form method=\"post\" action=\"add_speaker.php\">";

  echo "<table border=1>";
  echo "<tr> <td><b>Item</b></td> <td><b>New Value</b></td> </tr>";

  echo "<tr> <td>Name</td> <td> <input type=\"text\" size=40 name=\"spk_name\"></input>
</td> </tr>";
  echo "<tr> <td>Seminar Title</td> <td> <textarea type=\"text\" rows=3 cols=40
name=\"spk_title\"></textarea> </td> </tr>";
  echo "<tr> <td>Speaker Rank</td> <td> <input type=\"text\" size=30
name=\"spk_rank\"></input> </td> </tr>";
  echo "<tr> <td>Speaker School</td> <td> <input type=\"text\" size=40
name=\"spk_school\"></input> </td> </tr>";
  echo "<tr> <td>Speaker Email</td> <td> <input type=\"text\" size=30
name=\"spk_email\"></input> </td> </tr>";
  echo "<tr> <td>Date</td> <td> <input type=\"text\" size=40 name=\"spk_date\"></input>
</td> </tr>";
  echo "<tr> <td>Personal Web site</td> <td> <input type=\"text\" size=40
name=\"spk_web\"></input> </td> </tr>";
  echo "<tr> <td>School Web site</td> <td> <input type=\"text\" size=40
name=\"spk_sch_web\"></input> </td> </tr>";
  echo "<tr> <td>Password</td> <td> <input type=\"password\" size=40
name=\"password\"></input> </td> </tr>";

  echo "</table><br> <input type=\"submit\" name=\"submit\" value=\"click to submit
changes\"></input> </form></center>";
}

?>

<hr>
<center>
<a href="http://chemistry.berea.edu/~jhb/department/seminars.php">
Go Back to seminars page
</a>
<br>
<a href="http://chemistry.berea.edu/~jhb/chemistry.php">
Go Back to Chemistry Department Home Page
</a>
</center>

</body>
</html>




                              add_student.php


<html>
<body text="#990101" background="sandston.gif">
```

```
<center>
<font size=+4><a href="../chemistry.php">Berea College Chemistry</a></font><br>
<font size=+3>Add Student Information</font>
</center>
<br>
Currently, there is no password on this site.  If students abuse the privlege of editing
their own files, a password may be added in the future.  Until then, please only modify
your own file and only put appropriate information on the web site.  Thank you.
<br>
<hr>

<?php

include( "stud_db.inc" );
sdb_connect();

if ($submit == "click to add new student") {
  if ($last_name && $first_name && $class_new && $major_new) {
    $query = "insert into students set ".
             "first_name=\"" . $first_name .
             "\", last_name=\"" . $last_name .
             "\", class_year=" . $class_new .
             ", major=\"" . $major_new .
             "\", email=\"" . $email_new .
             "\", web_site=\"" . $web_site .
             "\", web_entry=1, current_news=\"" . $news_new . "\"";
    $result = mysql_query ($query);

    if (!$result) {
      echo $query;
      echo "<br>" . mysql_errno() . ": " . mysql_error() . "<br>";
    } else {
      echo "<center>Successfully added the following data:<br>";
      echo "<table border=1>";
      echo "<tr> <td><b>Item</b></td> <td><b>New Value</b></td> </tr>";
      echo "<tr> <td>First Name</td> <td>" . $first_name . "</td> </tr>";
      echo "<tr> <td>Last Name</td> <td>" . $last_name . "</td> </tr>";
      echo "<tr> <td>Class</td> <td>" . $class_new . "</td> </tr>";
      echo "<tr> <td>Major</td> <td>" . $major_new . "</td> </tr>";
      echo "<tr> <td>E-mail address</td> <td>" . $email_new . "</td> </tr>";
      echo "<tr> <td>Web site</td> <td>" . $web_site . "</td> </tr>";
      echo "<tr> <td>Current news</td> <td>" . $news_new . "</td> </tr>";
      echo "</table></center>";
    }
  } else {
    echo "<center><br>Insufficient data to add a new name.";
    echo "<br>You must enter all fields in the table except for the email, web URL and
current news which are optional.<br>";
    if (!$last_name) echo "You left off the last name.<br>";
    if (!$first_name) echo "You left off the first name.<br>";
    if (!$class_new) echo "You left off the class year.<br>";
    if (!$major_new) echo "You left off the major.<br>";
    echo "<a href=\"add_student.php\">Follow this link to restart this page.</a><br>";
    echo "</center>";
  }
} else {
  echo "<center>";
  echo "<form method=\"post\" action=\"add_student.php\">";

  echo "<table border=1>";
  echo "<tr> <td><b>Item</b></td> <td><b>New Value</b></td> </tr>";
  echo "<tr> <td>First Name</td> <td> <input type=\"text\" size=40
name=\"first_name\"></input></td> </tr>";
  echo "<tr> <td>Last Name</td> <td> <input type=\"text\" size=40
name=\"last_name\"></input></td> </tr>";
```

```php
  echo "<tr> <td>Class</td> <td> <input type=\"integer\" size=6
name=\"class_new\"></input> </td> </tr>";
  echo "<tr> <td>Major</td> <td> <input type=\"text\" size=15 name=\"major_new\"></input>
</td> </tr>";
  echo "<tr> <td>E-mail address</td> <td> <input type=\"text\" size=40
name=\"email_new\"></input> </td> </tr>";
  echo "<tr> <td>Web site</td> <td> <input type=\"text\" size=40
name=\"web_site\"></input> </td> </tr>";
  echo "<tr> <td>Current news</td> <td> <textarea type=\"text\" rows=10 cols=40
name=\"news_new\"></textarea> </td> </tr>";

  echo "</table><br> <input type=\"submit\" name=\"submit\" value=\"click to add new
student\"></input> </form></center>";
}

?>

<hr>
<center>
<a href="http://chemistry.berea.edu/~jhb/department/students.php">
Go Back to previous students page
</a>
<br>
<a href="http://chemistry.berea.edu/~jhb/department/cstudents.php">
Go Back to current students page
</a>
<br>
<a href="http://chemistry.berea.edu/~jhb/chemistry.php">
Go Back to Chemistry Department Home Page
</a>
</center>

</body>
</html>
```

admin.php

```php
<html>
<body text="#990101" background="../sandston.gif">

<center>
<font size=+4><a href="../chemistry.php">Berea College Chemistry</a></font><br>
<font size=+3>Add General Chemistry Quiz Questions</font>
</center>
<hr>

<?php

include( "quiz_db.inc" );
quiz_connect();

if ($submit == "click to add question") {
  if ($password=="red25boy" && $question && $answer && $wrong1 && $wrong2 && $wrong3 &&
$wrong4 && $chapter) {
    $query = "insert into gchemqs set ".
             "question=\"" . $question .
             "\", answer=\"" . $answer .
             "\", wrong1=\"" . $wrong1 .
             "\", wrong2=\"" . $wrong2 .
             "\", wrong3=\"" . $wrong3 .
```

```php
            "\", wrong4=\"" . $wrong4 .
            "\", chapter=\"" . $chapter .
            "\", date=\"" . date("Y-m-j") . "\"";
      $result = mysql_query ($query);

      if (!$result) {
        echo $query;
        echo "<br>" . mysql_errno() . ": " . mysql_error() . "<br>";
      } else {
        echo "<center>Successfully added the following data:<br>";
        echo "<table border=1>";
        echo "<tr> <td><b>Item</b></td> <td><b>New Value</b></td> </tr>";
        echo "<tr> <td>Question</td> <td>" . $question . "</td> </tr>";
        echo "<tr> <td>Answer</td> <td>" . $answer . "</td> </tr>";
        echo "<tr> <td>Wrong Answer 1</td> <td>" . $wrong1 . "</td> </tr>";
        echo "<tr> <td>Wrong Answer 2</td> <td>" . $wrong2 . "</td> </tr>";
        echo "<tr> <td>Wrong Answer 3</td> <td>" . $wrong3 . "</td> </tr>";
        echo "<tr> <td>Wrong Answer 4</td> <td>" . $wrong4 . "</td> </tr>";
        echo "<tr> <td>Chapter</td> <td>" . $chapter . "</td> </tr>";
        echo "</table></center>";
      }
    } else {
      echo "<center><br>Insufficient data to add a new question.";
      echo "<a href=\"admin.php\">Follow this link to restart this page.</a><br>";
      echo "</center>";
    }
} else {
  echo "<center>";
  echo "<form method=\"post\" action=\"admin.php\">";

  echo "<table border=1>";
  echo "<tr> <td><b>Item</b></td> <td><b>New Value</b></td> </tr>";
  echo "<tr> <td>Question</td> <td> <textarea type=\"text\" rows=10 cols=40
name=\"question\"></textarea> </td> </tr>";
  echo "<tr> <td>Correct answer</td> <td> <textarea type=\"text\" rows=3 cols=40
name=\"answer\"></textarea> </td> </tr>";
  echo "<tr> <td>Wrong answer 1</td> <td> <textarea type=\"text\" rows=3 cols=40
name=\"wrong1\"></textarea> </td> </tr>";
  echo "<tr> <td>Wrong answer 2</td> <td> <textarea type=\"text\" rows=3 cols=40
name=\"wrong2\"></textarea> </td> </tr>";
  echo "<tr> <td>Wrong answer 3</td> <td> <textarea type=\"text\" rows=3 cols=40
name=\"wrong3\"></textarea> </td> </tr>";
  echo "<tr> <td>Wrong answer 4</td> <td> <textarea type=\"text\" rows=3 cols=40
name=\"wrong4\"></textarea> </td> </tr>";
  echo "<tr> <td>Chapter</td> <td> <input type=\"text\" size=20 name=\"chapter\"></input>
</td> </tr>";
  echo "<tr> <td>Password</td> <td> <input type=\"password\" size=40
name=\"password\"></input> </td> </tr>";

  echo "</table><br> <input type=\"submit\" name=\"submit\" value=\"click to add
question\"></input> </form></center>";
}

?>


<hr>
<center>
<a href="http://chemistry.berea.edu/~jhb/balt.php">
Go back to Jay Baltisberger home page
</a>
<br>
<a href="http://chemistry.berea.edu/~jhb/chemistry.php">
Go back to Chemistry Department home page
</a>
</center>
```

```
</body>
</html>
```

<div align="center">

quiz.php

</div>

```
<html>
<body text="#990101" background="sandston.gif">

<center>
<font size=+4><a href="../chemistry.php">Berea College Chemistry</a></font><br>
<font size=+3>General Chemistry Quiz</font>
</center>
<hr>

<?php

if ( $submit == "Click to submit answer" ) {
  echo "<center><font size=+2>";
  if ( $answer == md5(1+$argv[0]) ) {
    echo "You are correct!";
  } else {
    echo "You are incorrect, try again!";
  }
  echo "<br><br></font><font size=+1>";
  echo "<a href=\"quiz.php\">Another question?</a>";
  echo "</font></center>";
} else {
  include( "quiz_db.inc" );
  quiz_connect();

  $query2 = "SELECT * FROM gchemqs";
  if ( $argv[0] == "today" ) $query2 = $query2 . " WHERE date=\"" . date("Y-m-j") . "\"";
  if ( strpos($argv[0],"ch") ) {
    $chapter = explode("&" , $argv[0]);
    $query2 = $query2 . " WHERE chapter=\"" . $chapter[0] . "\"";
  }
  $result = mysql_query ($query2);

  $top = mysql_num_rows($result);
  if ( !$top ) {
    echo "<center><font size=+1>";
    if ( $argv[0] == "today" ) echo "There is no problem posted for today.";
    if ( $chapter[0] ) echo "There is no problem posted from chapter " . $chapter[0];
    echo "</font></center>";
    exit;
  }

  list($usec,$sec) = explode(" ", microtime());
  $seed = (float)$sec + (float)$usec * 100000;
  mt_srand( $seed );

  $top = $top - 1;
  if ($top > 0) {
    $randval = mt_rand(0,$top);
  } else {
    $randval = 0;
  }
  mysql_data_seek($result,$randval);
  $row = mysql_fetch_object($result);
```

```php
    $question = $row->question;
    $wrong[1] = $row->answer;
    $wrong[2] = $row->wrong1;
    $wrong[3] = $row->wrong2;
    $wrong[4] = $row->wrong3;
    $wrong[5] = $row->wrong4;
    $chapter = $row->chapter;
    $randval = $row->question_id;

    mysql_free_result ($result);

    echo "<center><font size=+1>Question from Chapter " . $chapter . "</font><br>";
    echo $question . "<br>";

    echo "<form method=\"post\" action=\"quiz.php?$randval\">";

    $start = mt_rand(1,5);
    $space = mt_rand(1,4);

    for ($i=1; $i<6; $i++) {
      $wr = $wrong[$start];
      echo "<input type=\"radio\" name=\"answer\" value=\"" . md5($start+$randval) . "\">"
. $wr . "<br>";
      $start = $space + $start;
      if ($start > 5) $start = $start - 5;
    }
    echo "<input type=\"radio\" name=\"answer\" value=\"" . md5(6+$randval) . "\"
checked>None of the above<br>";
    echo "<br>";
    echo "</input>";

    echo "Username: <input type=\"text\" size=20 name=\"username\"></input><br>";
    echo "Password: <input type=\"password\" size=30 name=\"password\"></input>";
    echo "<br><br>";
    echo "<input type=\"submit\" name=\"submit\" value=\"Click to submit answer\">";
    echo "</input></form></center>";
}

echo "<center><hr>This home page maintained by:<br>";
echo $data = join( ", ", file ( "../maint.dat" ) );
echo "<br>This file was last modified on ".date("l, F dS,
Y",filectime($PATH_TRANSLATED));
echo "<p>URL: http://chemistry.berea.edu".$PHP_SELF;

?>

<hr>
<a href="http://chemistry.berea.edu/~jhb/chemistry.php">
Go Back to Chemistry Department Home Page
</a>
</center>
</body>
</html>
```

```
                                students.php


<html>
<body text="#990101" background="sandston.gif">

<center>
<font size=+4><a href="../chemistry.php">Berea College Chemistry</a></font><br>
<font size=+3>Previous Berea College Chemistry Department Students</font>
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</center>
<hr>

<?php

include( "stud_db.inc" );
sdb_connect();

$today = getdate();
$year = $today['year'];
$month = $today['month'];

if ($month < 6) $year = $year - 1;

$last = 1989;
$older = $last + 1;
echo "<center><font size=+2>Classes of ";
$count = 0;
for ($i = $year; $i >= $older; $i--) {
  echo "<a href=\"#$i\">[$i]</a> ";
  $count = $count + 1;
  if ($count==5 || $count==10 || $count==15 || $count==20) {
    echo "<br>";
  }
}
echo "<a href=\"#Older\">[Before $older]</a>";
echo "<br><a href=\"cstudents.php\">Current Students</a></font></center>";

for ($i = $year; $i>= $last; $i--)
{
  if ($i == $last) {
    $query = "SELECT first_name, last_name, major, email, current_news, class_year,
student_id, web_site FROM students WHERE class_year<=\"$i\" ORDER BY class_year desc";
    echo "<hr><center><a NAME=\"Older\"></a><font size=+2>Classes before
$older</font></center>";
  } else {
    $query = "SELECT first_name, last_name, major, email, current_news, class_year,
student_id, web_site FROM students WHERE class_year=\"$i\" ORDER BY last_name";
    echo "<hr><center><a NAME=\"$i\"></a><font size=+2>Class of $i</font></center>";
  }
  $result = mysql_query ($query);
  print("<ul>");
  while ( $row = mysql_fetch_row ($result) )
  {
// put bulleted list item with First and Last name
    echo "<li>";
    if ( $row[7] ) {
      printf( "<a href=\"%s\">", htmlspecialchars($row[7]) );
    }
    printf("%s %s",
      htmlspecialchars($row[0]),
      htmlspecialchars($row[1]) );
    if ( $row[7] ) {
      echo "</a>";
    }
    $major = htmlspecialchars($row[2]);
// if not graduated in last 12 years, we put all in one list iwth class year after the
name
    if ($i == $last) {
      printf(" (class of %s)",
        htmlspecialchars($row[5]) );
    }
// if major is not chemistry then we list major
    if ($major <> "chemistry") printf(" (%s)", htmlspecialchars($row[2]) );
// we put the email address next
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14

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      if ( $row[3] ) {
        printf(" <font size=-1>email:<a href=\"mailto:%s\">%s</a></font>",
          htmlspecialchars($row[3]),
          htmlspecialchars($row[3]) );
      }
// if there is current news, we put it here
      if ( $row[4] ) {
        printf(" - <font size=-1>%s</font>",
          htmlspecialchars($row[4]) );
      }
// link to page to edit information on this web site
      echo "&nbsp&nbsp<font size=-1><a
href=\"edit_student.php?".htmlspecialchars($row[6])."\">modify this info</a></font>";
      echo "</li>";
  }
  print("</ul>");
  mysql_free_result ($result);
}

?>

<hr>
<center><a href="add_student.php">Add a student not listed here</a></center>
<hr>
Any students who may have been left off this list
or who would like to link to a home page or email address, feel free to
email Dr. Baltisberger at <a
href="mailto:jay_baltisberger@berea.edu">jay_baltisberger@berea.edu</a>
and your address and other information will be added to this home page.

<hr WIDTH="100%">
This home page maintained by:<br>
<?
  echo $data = join( ", ", file ( "../maint.dat" ) );
  echo "<br>This file was last modified on ".date("l, F dS,
Y",filectime($PATH_TRANSLATED));
  echo "<p>URL: http://chemistry.berea.edu".$PHP_SELF;
?>
<hr>
<a href="http://chemistry.berea.edu/~jhb/chemistry.php">
Go Back to Chemistry Department Home Page
</a>

</body>
</html>




                                seminars.php



<html>
<body text="#990101" background="sandston.gif">

<center><font size=+4><a href="http://chemistry.berea.edu/chemistry.php">Berea
College Chemistry</a></font>
<p><font size=+3>Berea College Chemistry Department Seminars</font>
<p>
<hr WIDTH="100%"><font size=+1><a href="http://www.nms.eku.edu/che/acs-ls/ls-
home.htm">[Lexington
ACS Section] </a><a href="http://www.chem.uky.edu/welcome.html">[University
of Kentucky Chemistry Department]</a></font>
<p><font size=+1><a href="http://WWW.NMS.EKU.EDU/che/">[Eastern Kentucky
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University]</a></font></center>

<?php

include( "stud_db.inc" );
sdb_connect();

$today = getdate();
$month = $today['month'];
$mday = $today['mday'];
$year = $today['year'];
$now = date("Y-m-j");
$query = "SELECT spk_name, spk_school, spk_title FROM speakers WHERE spk_date > \"$now\"
ORDER BY spk_date";
$result = mysql_query ($query);
$row = mysql_fetch_row ($result);

if ( $row) {
  echo "<hr><center>Today is $month $mday, $year<br><br><font size=+2>Our next speaker
will be ";
  printf( "%s from %s speaking on %s.",
    htmlspecialchars($row[0]),
    htmlspecialchars($row[1]),
    htmlspecialchars($row[2]) );
    echo "</center>";
}
mysql_free_result ($result);

for ($i = 2004; $i > 1993; $i--)
{
  $year = array( $i, $i-1 );
  $hd = array(
      "<hr><font size=+2>Spring $year[0]</font>",
      "<hr><font size=+2>Fall $year[1]</font>" );
  $date_start = array(
      "$year[0]-1-1",
      "$year[1]-7-1");
  $date_end = array(
      "$year[0]-7-1",
      "$year[1]-12-31");

  for ($j = 0; $j < 2; $j++)
  {
    $ds = $date_start[$j];
    $de = $date_end[$j];
    $query = "SELECT spk_name, spk_date, spk_title, spk_rank, spk_school, spk_web,
spk_sch_web, spk_email, spk_id FROM speakers WHERE spk_date > \"$ds\" AND spk_date <
\"$de\" ORDER BY spk_date";
    $result = mysql_query ($query);

    $row = mysql_fetch_row ($result);
    if ( $row ) {
      print($hd[$j]);
      print("<ul><font size=+0>");
      while ( $row )
      {
        printf("<li>\n<a NAME=\"%s\"></a>", implode( "", explode( " ",
htmlspecialchars($row[0]) ) ) );
        if ( $row[5] ) # Print as hyperlink if one is available to personal web site
        {
          printf("<a href=\"http://%s\">%s</a>",
            htmlspecialchars($row[5]),
            htmlspecialchars($row[0]) );
        } else { # otherwise just print the name
          printf("%s",
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        htmlspecialchars($row[0]) );
      }
      if ( $row[7] ) {
        printf("<font size=-1> (email:<a href=\"mailto:%s\">%s</a>)</font>",
          htmlspecialchars($row[7]),
          htmlspecialchars($row[7]) );
      }
      printf(", %s, ", htmlspecialchars($row[3]) ); # Print speaker rank/title
      if ( $row[6] ) {
        printf(" <a href=\"http://%s\">%s</a>, ",
          htmlspecialchars($row[6]),
          htmlspecialchars($row[4]) );
      } else {
        printf(" %s, ",
          htmlspecialchars($row[4]) );
      }
      printf("\"%s\", ", htmlspecialchars($row[2]) );
      $dt = explode( "-", $row[1] );
      print( date("F j, Y", mktime( 0, 0, 0, $dt[1], $dt[2], $dt[0] ) ) );
      printf("&nbsp&nbsp<font size=-1><a href=\"edit_speaker.php?%s\">modify
info</a></font>", htmlspecialchars($row[8]) );
      print ("</li>\n");
      $row = mysql_fetch_row ($result);
    }
  }
  mysql_free_result ($result);
  print("</font></ul>\n");
  }
}

?>


<hr>
<center>
<a href="add_speaker.php">Add a new speaker</a>
</center>
<hr>Anyone interested in finding out more about these speakers or Berea
College in general might contact Dr. Baltisberger via email at <a
href="mailto:jhb@physics.berea.edu">jhb@physics.berea.edu</a>

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