PHP + MySQL + Web
The Goal

- Web Interface that can access the database
To update the database from the Web Interface.
Output Screen

<table>
<thead>
<tr>
<th>SSN</th>
<th>FName</th>
<th>LName</th>
<th>Section</th>
<th>HW1</th>
<th>HW2a</th>
<th>HW2b</th>
<th>Midterm</th>
<th>HW3</th>
<th>FExam</th>
</tr>
</thead>
<tbody>
<tr>
<td>9176</td>
<td>Epp</td>
<td>Eric</td>
<td>415</td>
<td>99.00</td>
<td>79.00</td>
<td>31.00</td>
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<td>119.00</td>
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PHP + MySQL

- How to Connect DBASE MySQL server from UGRAD machine

```php
$dbhost = 'dbase.cs.jhu.edu:3306';
$dbuser = 'your_mysql_id';
$dbpass = 'your_mysql_password';
$conn = mysql_connect($dbhost, $dbuser, $dbpass);
if (!$conn) {
    die ('Error connecting to mysql');
}
```
HTML Sample code

<html>
<body>
<form action="update.php" method="post">
Enter Password: <input type="text" name="password"><br>
Enter SSN: <input type="text" name="ssn"><br>
Enter New Grade: <input type="text" name="newgrade"><br>
<input type="submit">
</form>
</body>
</html>
PHP Sample code

- Reading data from the text box.

```php
<?php
include 'conf.php';
include 'open.php';
$password = $_POST['password'];
$ssn = $_POST['ssn'];
$newgrade = $_POST['newgrade'];
```
To use stored procedure in MySQL with PHP

```php
if ($mysqli->multi_query("CALL UpdateMidterm
    (".$password."",".$ssn."",".$newgrade."));")
) {
    do {
        if ($result = $mysqli->store_result()) {
            .
            .
        }
    }
} else {
    // Error handling
}
```
• Check list

All your source codes should be located in the ~/public_html folder

• If there isn’t create one as follows.

  >mkdir public_html

  >chmod 705 public_html

• You have to change the permission of a file if you want to access it via web-browser. (IMPORTANT STEP)  

  >chmod 704 demo1.php
SQL Stored Procedures
What are Stored Procedures?

- A Stored Procedure is a pre-written SQL statement that is saved in the database.
- The Stored Procedure can then be executed many times without having to rewriting the SQL statement.
- Stored Procedures can take external variables and return results either in scalar variables or in selected rows.
Stored Procedure Example

- CREATE a stored procedure:

  delimiter //
  
  DROP PROCEDURE IF EXISTS strLen //
  
  CREATE PROCEDURE strLen(IN myStr VARCHAR(20), OUT charCount INT)
  BEGIN
    
    SET charCount = LENGTH(myStr);
  
  END;
  //
Stored Procedure Example

- Stored procedures are created by specifying a function name i.e. strLen()

- Variables can be passed to it using the IN keyword and returned using the OUT keyword. The type must be specified.

- BEGIN and END keywords are used to specify the body of the procedure.
Stored Procedure Example

- Using a stored procedure:

```sql
delimiter ;
call strLen(`testString`);
```

+--------------+
| charCount    |
+--------------+
|        10    |
+--------------+

Stored Procedure Example

- Returning error messages in a stored procedure:

```sql
delimiter //

DROP PROCEDURE IF EXISTS findFromSSN //

CREATE PROCEDURE findFromSSN(IN ssnin INT)
BEGIN
  IF EXISTS ( SELECT SSN FROM People WHERE SSN=ssnin ) THEN
    SELECT * FROM People WHERE SSN = ssnin;
  ELSE
    SELECT `Sorry; This SSN was not found` AS `Error Message`;
  END IF;
END;
//
```
SQL Views
What are SQL Views?

- A SQL View can be thought of as a virtual table or a stored query.
- It does not physically exist in the database but it can be accessed like a table.
- Unlike a real table, Views can’t store data.
- Views can be used to reduce repeated queries.
SQL View Example

- CREATE a SQL View:

  ```sql
  delimiter //
  CREATE OR REPLACE VIEW myScores AS
  SELECT HW1, HW2a, HW2b, Midterm, HW3, FExam
  FROM rawscores
  WHERE FName = `Tian`;
  //
  ```
SQL View Example

- Using a SQL View:

    delimiter ;

    Select * from myScores;

    +-----------------------------+----------------+-----------------+-----------+--------+----------+
    | HW1 | HW2a | HW2b | Midterm | HW3 | Fexam |
    +-----------------------------+----------------+-----------------+-----------+--------+----------+
    |  88 |  75  |  80  |   85    |  91 |  89    |
    +-----------------------------+----------------+-----------------+-----------+--------+----------+


Questions???