TODAY'S TOPICS

◎ **MySQLi**

  ⊙ **Functions**

  ⊙ **Working with MySQL data**

Accessing MySQL from PHP

▸ Library of functions for interacting with MySQL (with database attached)

▸ Steps

  ▸ Connect to database

  ▸ SELECT database

  ▸ Run queries

    ▸ SELECT, INSERT, DELETE, UPDATE

  ▸ Use the result set to work with form data

  ▸ Close connection

▸

mysqli()

- mysqli(servername,username,password);

```php
<?php
    $con = new mysqli("localhost","me","myPassword");
    if (!$con->connect_error)
      {
      die('Could not connect:'. $con->connect_error);
      }
    // ...
?>
```

Error message text

$con = new mysqli("localhost","me","myPassword") **or**
    die('Could not connect:' . $con->connect_error);

close()

```php
<?php

    $con = new mysqli("localhost","me","myPassword");
    if ($con->connect_error)
      {
      die('Could not connect: ' . $con->connect_error);
      }

    $con->close();

?>
```

Accessing MySQL from PHP

▸ Library of functions for interacting with MySQL (with database attached)

▸ Steps

  ▸ Connect to database

  ▸ SELECT database

  ▸ Run queries

    ▸ SELECT, INSERT, DELETE, UPDATE

  ▸ Use the result set to work with form data

  ▸ Close connection

mysqli_query()

Send query/command to a connection

Returns false if unsuccessful

If expecting result set, also returns false on error

E.g. CREATE DATABASE

```php
if ($con->query("CREATE DATABASE my_db") ===
TRUE)
  {
   echo "Database created";
  }
else
  {
  echo "Error creating database: " . $con->error;
  }
```

Select a database

$con->select_db("my_db");

E.g. CREATE TABLE

```
$con->select_db("my_db");
$sql = "CREATE TABLE Persons
        (
        FirstName varchar(15),
        LastName varchar(15),
        Age int
        )";
$con->query($sql);
```

Poor CREATE TABLE Missing Primary Key

Better CREATE TABLE Statement

```
$sql = "CREATE TABLE Persons (
    personID int NOT NULL AUTO_INCREMENT,
    PRIMARY KEY(personID),
    firstName varchar(15),
    lastName varchar(15),
    Age int
)";
```

INSERT records

- How do you insert a new record to the table?
  - Which PHP function to use?
  - Which MySQL statement to use?

$con->query("INSERT INTO Persons (firstName, LastName, Age) VALUES ('first', 'last', '40')");

$result=$con->query("INSERT INTO Persons (firstName, LastName, Age) VALUES ('first', 'last', '40')");

//error check

if(!$result) echo "ERROR".$con->error;

-

Use PHP $_POST variables to insert

```
<body>
        <form action="insert.php" method="post">
        Firstname: <input type="text" name="firstname" />
        Lastname: <input type="text" name="lastname" />
        Age: <input type="text" name="age" />
        <input type="submit" />
        </form>
</body>


<?php
....
$sql=$con->prepare("INSERT INTO Persons (FirstName, LastName,
    Age) VALUES (?, ?, ?)");
$sql->bind_param("ssd",  $_POST["firstname"], $_POST["lastname"],
    $_POST["age"])";
$sql->execute();
```

▶

Read row(s) of data from the tables

▸ How do you retrieve a record from the table?

  ▸ Which PHP function to use?

  ▸ Which MySQL statement to use?

$result = **$con->query**("SELECT * FROM Persons");

// add error check

   if (!$result) echo **$con->error;**

Grab column data from a row

```php
$result = $con->query("SELECT * FROM Persons");
// add error check
if (!$result) echo $con->error;
```

To get a record/row:

```php
$row = $result->fetch_assoc();
```

To get a column in that row:

```php
$row['FirstName']
```

Try: code to print all first and last names

```
$result = $con->query("SELECT * FROM Persons");
// add error check
if (!$result) echo mysql_error( ); else {
```

```
while($row = $result->fetch_assoc())
 {
 echo $row['FirstName'] . " " . $row['LastName'];
 echo "<br />";
 }
```

```
}
```

Putting it all together…

```php
<?php
$con = new mysqli("localhost","root","rootPwd") or die($con->connect_error);
if ($result = $con->query("CREATE DATABASE IF NOT EXISTS my_db")) or die($con->error);
$con->select_db("my_db") or die($con->error);
$sql = "CREATE TABLE Persons
                (
                personID int NOT NULL AUTO_INCREMENT,
                PRIMARY KEY(personID),
                FirstName varchar(15),
                LastName varchar(15),
                Age int
                )";
$con->query($sql);
$sql="INSERT INTO Persons (FirstName, LastName, Age) VALUES (?, ?, ?)";
$sql->bind_param("sss", $_POST[firstname], $_POST[lastname], $_POST[age])";
$sql->execute();
```

▶

Putting it all together... cont'd

Firstname	Lastname
Tom	Thom

```php
$result = $db->query("SELECT * FROM Persons");

echo "<table border='1'>
<tr>
<th>Firstname</th>
<th>Lastname</th>
</tr>";

while($row = $result->fetch_assoc())
  {echo"here";
  echo "<tr>";
  echo "<td>".$row['FirstName']."</td>";
  echo "<td>".$row['LastName']."</td>";
  echo "</tr>";
  }
echo "</table>";
```