**FINAL EXAMINATION**

**Summer 2017**

**Course:** CEWP 459 PHP PROGRAMMING WITH MYSQL - LEVEL I

**Instructor:** Brendan Wood

**Time:** 3 Hours

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**Instructions**

1. Please use the supplied examination papers to indicate your answers, answer all questions clearly, and legibly, and in pen. For the short answer you may write in pencil.
2. For multiple choice, CIRCLE your choice. Make it very clear which choice you pick.
3. Write legibly please.
4. The exam supervisor will answer questions regarding possible exam errors, but cannot help with the questions themselves.
5. Good luck

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| --- | --- | --- | --- |
| **Section** | **Topic** | **Marks** | **Score** |
| **1** | Multiple choice, 10 questions | 10 | /10 |
| **2** | Short Answer Questions, 5 questions | 30 | /30 |
| **3** | Programming questions | 60 | /60 |

**SECTION 1, MULTIPLE CHOICE QUESTIONS** (10 points total)

1. $\_REQUEST contains (2 points)

$\_SESSION

$\_COOKIE

$\_SERVER

$\_POST

$\_GET

1. Will the following give you “3” as a result?

$a = 1;  
$b = 2;  
  
function Sum()  
{  
    $GLOBALS['b'] = $GLOBALS['a'] + $GLOBALS['b'];  
}   
  
Sum();  
echo $b;

Yes

No

1. In PDO we use which command(s) to bind a value to a parameter?

bindParam

bindValue

value

param

bind

1. The default method that a web page uses when being called from a web browser manually (eg: www.mypage.com)?

POST

GET

Nothing

1. To define a constant, we use the following statement depending where it’s declared:

Within a class: const, outside of a class: define

Within a class: define, outside of a class: const

Within a class: final, outside of a class: define

Within a class: define, outside of a class: define

**SECTION 2, SHORT ANSWER QUESTIONS** (30 points total)

1. What is wrong with the following code:

class SomeClass

{

protected $\_someMember;

public function \_\_construct()

{

$this->\_someMember = 1;

}

public static function getSomethingStatic()

{

return $this->\_someMember \* 5;

}

}

The member of the class should be declare as private to avoid an overwrite of its value. And it’s not recommended to put an underscore in front of a protected variable, but in front of a private one.

1. Name 3 differences between sessions and cookies.

1. cookies can live within different client but session lives within different web server. 2. A session\_start() must be called outside the html code, otherwise no session will be created. But cookies are declared and initialise inside the html /php block . 3. A session contains an entity called Session ID which is a cookie.

1. What is the difference between single and double quotes in an echo statement?

Single quote displays its content as is. But double quotes process its content and display the value of variable or object . Example var $a = “Home” ;

echo ‘Welcome $a’; will display Welcome $a

but

echo “Welcome $a ”; will display Welcome Home

1. If I want to read a keyed array such as array(1=>”red”, 2=>”blue”), and print the key and the value, what would the main foreach statement look like?

Foreach($keyedarray as $key=>$value){

Echo “Key = $key , Value = $value”;

}

1. Name two ways to add values to the end of an array.

1. Array\_push($myarray, $value);

2. $myarray[]= $value;

1. What are the names of the 3 magic methods in a PHP class?

\_\_constructor() ; self() ;toString();

1. What is the difference between fetch and fetchall in PDO? How would you extract the data from both?

Fetch() retrieve one line of resultset at a time in an array; fetchAll() retirves all the lines of the resultSet in an Array.

With Fetch

$stmt = $db->query(“select \* from mytable”);

while(($row = $stmt->fetch())){

Echo $row[‘field1’].’ ’. $row[‘field2’];

}

With FetchAll

$rows = $stmt->fetchAll();

Foreach($rows as $row){

Echo $row[‘field1’].’ ’. $row[‘field2’];

}

1. How do we access static members of a class?

Classname::staticmemberName;

1. If I were to use preg\_match\_all(“/([a-z])([a-z])/”, “abc”, $matches); What would be contained in:

$matches[0];

$matches[1];

$matches[2];

$matches[0] would contain abc ; $matches[1] would contain a ; $matches[2] would contain b.

1. Why is important to use bind parameters in your PDO statements as opposed to just contructing it using string concatenation?

Its is important to avoid sql injection. So no one can append something else inside the query.

**SECTION 2, PROGRAMMING QUESTIONS** (60 points total)

1. **FORMS (30)**

Create self-posting form that has the following qualities:

* 1. The numbers (input 1, input 3) should retain their values.
  2. Contains 3 inputs with submit button;
     1. Input 1: First number
     2. Dropdown 2: + - / \* (plus, minus, divide, asterisk)

To create a multiple value select we can use the following code:

<select multiple name="selected\_function[]">

<option value="add">+</option>

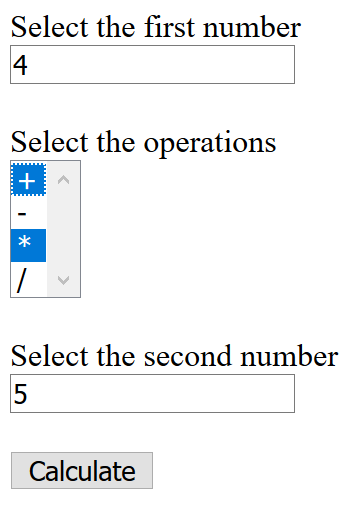
<option value="subtract">-</option>

<option value="multiply">\*</option>

<option value="divide">/</option>

</select>

* + 1. Input 3: Second number



If we select 4 and 5, and we multiple-select (+ and \*), we get the following response.

**Add selected: 4 + 5 = 9**

**Multiply selected: 4 \* 5 = 20**

**If any of the inputs are not numbers, display an error “Error: All values must be numeric”.**

**If division, and second number = 0, display “Error: Cannot divide by 0”.**

1. **Object Oriented Programming (30)**

Create classes based on the following proposed structure. Make sure to include all getters and setters.

Also make sure to use the proper abstract class structure.

Base class: Shape

Child Class 1: Triangle (Right angle triangle).

Child Class 2: Square

Attributes:

Common to all shapes:

Color, Name, ID

Square:

Height, Width

Triangle:

Height, Base, Side

Functions:

GetArea Gets the area

Triangle, multiply height and base then divide by 2.

Square, multiply the width times the height.

GetPerimeter Gets the perimeter.

Triangle: base+height+side

Square : (height + width) \* 2

getColor Gets the shape color.

toString Displays all the shape information.

*Shape type: {Circle/Square}*

*Name is : {name}*

*Color is {color}*

*The area is {area} and the perimeter is {per}.*

Create test driver code that will create a new square and triangle, and show it’s “toString” for both.

1. **PDO (30)**

Given a table such as :

**Table Name**: Sale

**ID**: int (Auto-Increment, Primary Key)

**ItemName**: varchar(35)

**CAD Price**: decimal(10,2)

Data:

1 Radio $78.01

2 TV $499.97

3 4K TV $1399.99

4 Computer $2000.00

Provide your SQL create table statements that creates the above table, and your insert statements that creates the 4 rows above in your submission alongside your code.

STEP 1:

Using a parameter, display 1 row to the screen that shows the record with ID # 3.

(One of the first lines of your program should be $targetRecord = 3;)

STEP 2:

Display a horizontal line, eg: <hr>

STEP 3:

Display a table with the above data, with a TOTAL line at the end with the total price.

Display the total number of records under that.

*Format all prices in money format (write a procedure to do this don’t use money\_format).*