

PHP/MySQL development

a Twitter-like application

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Outline

The project

PHP

PHP and MySQL

Work to do

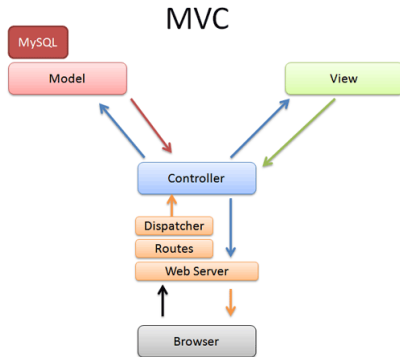
Twitter application

- ▶ Users : can post, follow a user, ...
- ▶ Post : message from a user
- ▶ Notification system
- ▶ Hashtag : to mark a given topic (ex: #DevelopersBeLike)

Frame

- ▶ 6 practical works (12h)
- ▶ Work in pairs
- ▶ Code to give back at the end (the database schema in `db/` + the `model/` files)

Project structure



PHP : Data

► Declare a variable

```
$a = 23; // $a is an int  
$b = 2.3; // $b is a float  
$c = true; // $c is a boolean  
$d = array("a", 1, "b"); // $d is an array
```

PHP: Data

► Deal with arrays

```
$a = array("a", "b", 1);  
echo $a[0]; // prints "a"  
$a[0] = "A";  
echo $a[0]; // ?  
$a[] = 2; // $a == ?
```

► Associative arrays

```
$fruit = array("name" => "strawberry", "color" => "red");  
echo $fruit["name"]; // ?  
echo $fruit["color"]; // ?  
$fruit["color"] = "black";
```

PHP : Data

- ▶ Create and use a stdClass object

```
$fruit = (object) array("name" => "strawberry", "color" =>
    "red");
echo $fruit->name; // ?
echo $fruit->color; // ?
```

PHP : Controls

► If stanzas

```
if($a == 1) {  
    echo "yooohoo :D";  
}  
else {  
    echo "oh :(";  
}
```

PHP : Controls

► While loops

```
$i = 0;
while($i <= 10) {
    echo $i;
    $i++;
}
```

► For loops

```
for($i = 0; $i <= 10; $i++) {
    echo $i;
}
```

► Foreach loops

```
$arr = array(0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10);
foreach($arr as $i) {
    echo $i;
}
```

PHP : Functions

- ▶ Create a function

```
function inverse($nb) {  
    return 1/$nb;  
}
```

- ▶ Use a function

```
echo inverse(3); // ?
```

PHP : Error handling with exceptions

► Throw an exception

```
function inverse($nb) {  
    if($nb == 0) { throw new Exception('Division by  
        zero.');
```


 return 1/\$nb;
}
echo inverse(0);
echo "I can has display ?"; // ?

PHP : Error handling with exceptions

► Throw an exception

```
function inverse($nb) {  
    if($nb == 0) { throw new Exception('Division by  
        zero.');
```



```
    return 1/$nb;  
}  
echo inverse(0);  
echo "I can has display ?"; // ?
```

► Catch an exception

```
try {  
    echo inverse(0);  
}  
catch(Exception $e) {  
    echo $e->getMessage();  
}  
echo "I can has display ?"; // ?
```

PHP and MySQL : PDO

PHP Data Object

► Connection

```
$db = new PDO('mysql:host=SERVER_ADDR;dbname=DB_DBNAME',  
             DB_USER, DB_PASS);
```

► Queries

```
$sql = 'SELECT name, color, calories FROM fruit ORDER BY  
       name';  
foreach ($db->query($sql) as $row) {  
    print $row['name'] . "\t";  
    print $row['color'] . "\t";  
    print $row['calories'] . "\n";  
}
```

PHP and MySQL : PDO

PHP Data Object

- ▶ Prepare query (with variables)

```
$sql = 'SELECT name, colour, calories FROM fruit WHERE
        calories < :calories AND colour = :colour';
$sth = $dbh->prepare($sql);
$sth->execute(array(':calories' => 150, ':colour' =>
        'red'));
foreach($sth->fetchAll() as $row) {
    print $row['name'] . "\t";
    print $row['color'] . "\t";
    print $row['calories'] . "\n";
}
```

PHP and MySQL : PDO

► Error handling (with Exceptions)

```
try {  
    $sql = 'SELECT name, color, calories FROM fruit ORDER  
           BY name';  
    foreach ($db->query($sql) as $row){  
        print $row['name'] . "\t";  
        print $row['color'] . "\t";  
        print $row['calories'] . "\n";  
    }  
} catch (\PDOException $e) {  
    print $e->getMessage();  
}
```

DateTime objects

- ▶ Containing time and date information
- ▶ Creating DateTime object from SQL Datetime field :

```
$sql = 'SELECT txt, date_report FROM report';  
$sth = $db->query($sql);  
foreach($sth->fetchAll() as $row) {  
    $d = new \DateTime($row["date_report"]);  
}
```


- ▶ Saving DateTime object to database :

```
// $d is a datetime object  
$sql = "INSERT INTO report('txt', 'date') VALUES(:txt,  
    :date)";  
$sth = $dbh->prepare($sql);  
$sth->execute(array(  
    ':txt' => $txt,  
    ':date' => $d->format("Y-m-d H:i:s")  
))  
);
```




Resources

- ▶ OpenClassrooms
<https://openclassrooms.com/courses/concevez-votre-site-web-avec-php-et-mysql>
- ▶ TutsPlus
<https://code.tutsplus.com/courses/php-fundamentals>
- ▶ The PHP manual
<https://php.net/docs.php>

Code

 This repository

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57 commits











1 branch

0 releases

1 contributor

Branch: master [New pull request](#) [Create new file](#) [Upload files](#) [Find file](#) [Clone or download](#)

 Maxime Martineau Merge branch 'master' of github.com:prafiny/db-project Latest commit e7817d1 14 hours ago

| | | |
|--|-------------------------------|--------------|
|  config | db, autoload and conf + fixes | a day ago |
|  controller | unfollow and follow | 16 hours ago |
|  instructions | instructions 1 + gitignore | 14 hours ago |
|  lib | fixes | 21 hours ago |
|  model | test and model fixes | 16 hours ago |
|  tests | test and model fixes | 16 hours ago |
|  view | unfollow and follow | 16 hours ago |
|  www | unfollow and follow | 16 hours ago |
|  .gitignore | instructions 1 + gitignore | 14 hours ago |
|  README.md | Update readme | 15 hours ago |

Code

1. Application can be run in browser (see instructions)
2. Unit tests can be run to check the functions (see instructions)
3. Instructions (in the folder `instructions/`)
4. DB schemas in `sql/schemas.sql` and entries in `sql/entries.sql`
5. The goal is to fill out the models (files in folder `model_student/`)
 - 5.1 Read `0setup.pdf` for environment installation
 - 5.2 Read `1user.pdf` for first work