Week 8 on Building Applications in PHP

In this assignment we will create a three page web application to play rock, paper, scissors

STEP 1: Edit the part of the login.php. The login.php must have present a field for the person's name (name="who") and their password (name="pass"). Your form should have a button labeled "Log In" that submits the form data using method="POST" (i.e. these should not be GET parameters).

```php
if ( isset($_POST['who']) && isset($_POST['pass'])
```

STEP 2: You are to use a "salted hash" for the password. The "plaintext" of the password is not to be present in your application source code except in comments. For this assignment, we will be using the following values for the salt and stored hash:

$salt = 'XyZzy12*_';

$stored_hash = '1a52e17fa899cf40fb04cfc42e6352f1';

```php
$salt = 'XyZzy12*_';
$stored_hash = '1a52e17fa899cf40fb04cfc42e6352f1';
```

STEP 3: If the incoming password, properly hashed matches the stored stored_hash value, the user's browser is redirected to the game.php page with the user's name as a GET parameter using:

header("Location: game.php?name=".urlencode($_POST['who']));

```php
    header("Location: game.php?name=".urlencode($_POST['who']));
        return;
    } else {
        $failure = "Incorrect password";
    }
```

STEP 4: In order to protect the game from being played without the user properly logging in, the **game.php** must first check the session to see if the user's name is set and if the user's name is not set in the session the game.php must stop immediately using the PHP die() function:

die("Name parameter missing");

```php
if ( ! isset($_GET['name']) || strlen($_GET['name']) < 1  ) {
    die('Name parameter missing');
}
```

STEP 5: The computation as to whether the user wins, loses, or ties is to be done in a function named check() that returns a string telling the user what happened:

// This function takes as its input the computer and human play

// and returns "Tie", "You Lose", "You Win" depending on play

// where "You" is the human being addressed by the computer

function check($computer, $human) {

...

return "Tie";

...

return "You Win";

...

return "You Lose";

...

}

```php
function check($computer, $human) {
    // For now this is a rock-savant checking function
    // TODO: Fix this
```

```php
    if ( $human == $computer ) {
        return "Tie";
    } else if ( $human == 1 AND $computer == 0 ){
        return "You Win";
    } else if ( $human == 2 AND $computer == 1 ){
        return "You Win";
    } else if ( $human == 0 AND $computer == 2 ){
        return "You Win";
    } else if ( $human == 2  and $computer == 0 ) {
        return "You Lose";
    } else if ( $human == 1  and $computer == 2) {
        return "You Lose";
    } else if ( $human == 0  and $computer == 1 ) {
        return "You Lose";
    }

    return false;
}
```

```
*make sure that you will uncomment the $computer = rand(0,2); to make it more
random*
```

STEP 6: The "Test" option requires that you write two nested for loops that tests all combinations of possible human and computer play combinations:

for($c=0;$c<3;$c++) {

for($h=0;$h<3;$h++) {

$r = check($c, $h);

print "Human=$names[$h] Computer=$names[$c] Result=$r\n";

}

}

```php
<?php
if ( $human == -1 ) {
    print "Please select a strategy and press Play.\n";
```

```
} else if ( $human == 3 ) {
    for($c=0;$c<3;$c++) {
        for($h=0;$h<3;$h++) {
            $r = check($c, $h);
            print "Human=$names[$h] Computer=$names[$c] Result=$r\n";
        }
    }
} else {
    print "Human=$names[$human] Computer =$names[$computer] Result=$result\n";
}
?>
```
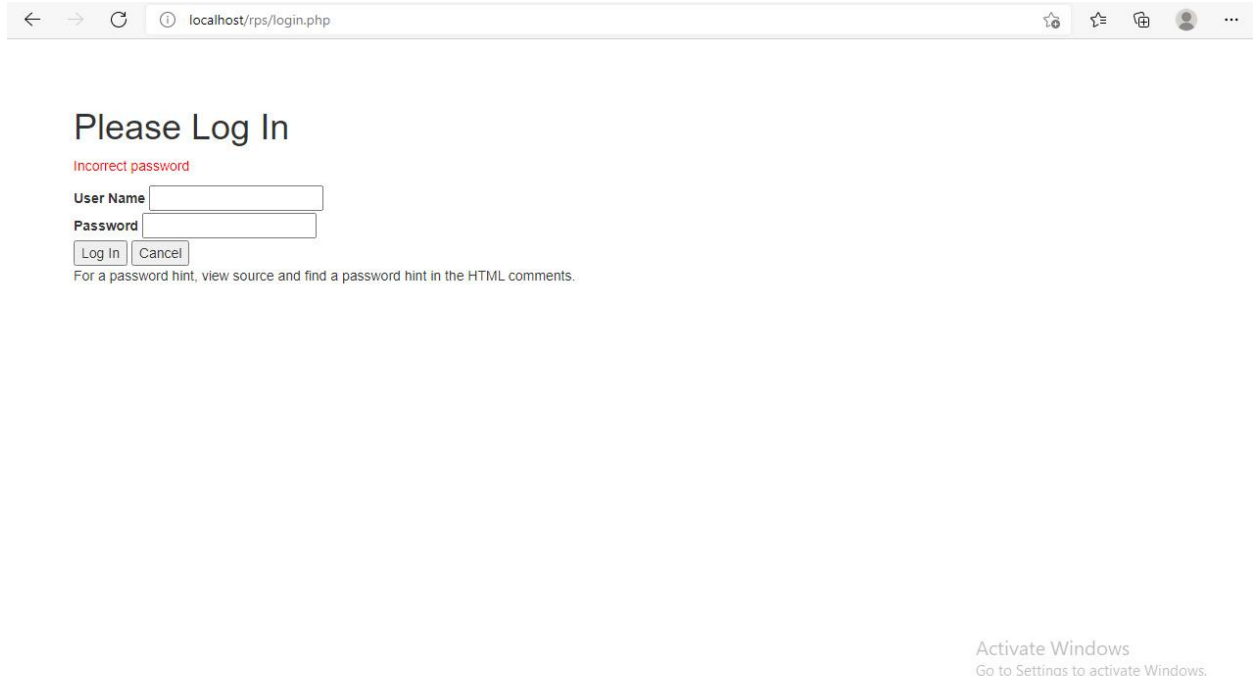
What to Pass?

On the autograded part of the assignment, you need NGROK to pass the link to the autograder and submit with the index.php (refer to Week 6 on how to do the NGROK)

On the Peer graded part of the assignment, you need to submit these:

1. A screen shot (with URL) of your login.php rejecting an incorrect password

← → C ⓘ localhost/rps/login.php   ⭐ ⅀ ⊕ ⦿ ...

Please Log In
Incorrect password
User Name [   ]
Password [   ]
[Log In] [Cancel]
For a password hint, view source and find a password hint in the HTML comments.

Activate Windows
Go to Settings to activate Windows.

2. A screen shot (with URL) of your game.php correctly showing the 'Name parameter missing' error

← → C ⓘ localhost/rps/game.php

Name parameter missing

3. A screen shot (with URL) of your game.php doing a normal play with the computer making a choice other than Rock

← → C ⓘ localhost/rps/game.php?name=amber

Rock Paper Scissors

Welcome: amber

[Select ▾] [Play] [Logout]

Human=Scissors Computer =Paper Result=You Win

4. A screen shot (with URL) of your game.php doing a correct test run

Rock Paper Scissors

Welcome: amber

[Select ▾] [Play] [Logout]

```
Human=Rock Computer=Rock Result=Tie
Human=Paper Computer=Rock Result=You Win
Human=Scissors Computer=Rock Result=You Lose
Human=Rock Computer=Paper Result=You Lose
Human=Paper Computer=Paper Result=Tie
Human=Scissors Computer=Paper Result=You Win
Human=Rock Computer=Scissors Result=You Win
Human=Paper Computer=Scissors Result=You Lose
Human=Scissors Computer=Scissors Result=Tie
```

Activate Windows
Go to Settings to activate Windows.

5. Source code of login.php
6. Source code of game.php

Voila!