

PHP Login Script with Session Tutorial – Step by Step Guide!



Previously, we learned how to create, read, update and delete database records on our PHP OOP
PHP OOP
CRUD tutorial https://www.codeofaninja.com/2014/06/php-object-oriented-crud-

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OK

Contents [hide]

- 1 Overview
- 2 File structure
- 3 Prepare the database
 - 3.1 Create a database
 - 3.2 Run SQL for users table
 - 3.3 Run SQL for users accounts
 - 3.4 Create database connection file
 - 3.5 Prepare user object
 - 3.6 Output
- 4 Prepare basic settings
 - 4.1 Create config file
 - 4.2 Create login checker file
 - 4.3 Create .htaccess file
 - 4.4 Output
- 5 Create the template files
 - 5.1 Create navigation bar
 - 5.2 Show logout button
 - 5.3 Show login and register buttons
 - 5.4 Create page header
 - 5.5 Create page footer

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- 6.3 Login form output
- 6.4 Add alert message
- 6.5 Alert message output
- 6.6 If user submitted the form
- 6.7 Check if email exists
- 6.8 Add emailExists() method
- 6.9 Validate login credentials
- 6.10 Customer's index page
- 6.11 Logout file
- 6.12 Output
- 7 Create registration form
 - 7.1 Create register page
 - 7.2 Create Utils class
 - 7.3 Registration form HTML
 - 7.4 If registration form was submitted
 - 7.5 Create new user
 - 7.6 User object create() method
 - 7.7 Add showError() method
 - 7.8 Output
- 8 Admin section
 - 8.1 Create admin index page
 - 8.2 Create navigation bar
 - 0 2 Croato pago boador

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- 9 Show registered users
 - 9.1 Create "read users" file
 - 9.2 Add readAll() method in user object
 - 9.3 Create "read users" template file
 - 9.4 Add countAll() method in user object
 - 9.5 Paginate list of users
 - 9.6 Output
- 10 How to validate email address?
 - 10.1 Change account status
 - 10.2 Add access code field
 - 10.3 Add getToken() method
 - 10.4 Change create() method
 - 10.5 Add access_code property
 - 10.6 11.6 Send verification email
 - 10.7 Add sendEmailViaPhpMail() method
 - 10.8 Output
 - 10.9 Create verification file
 - 10.10 Add accessCodeExists() method
 - 10.11 Add updateStatusByAccessCode() method
 - 10.12 Output
- 11 PHP forgot password
 - 11.1 Add forgot password link
 - 11.2 Login pago now output

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- 11.7 Output
- 12 PHP reset password form
 - 12.1 Create "reset password" page
 - 12.2 Check access code
 - 12.3 Add "reset password" form
 - 12.4 Add post code
 - 12.5 Add updatePassword() method
 - 12.6 Output
- 13 How To Run The Source Code?
- 14 Download LEVEL 1 Source Code
- 15 Download PHP Login Module
- 16 What's Next?
- 17 Related Tutorials
- 18 Notes
 - 18.1 Found An Issue?
 - 18.2 Subscribe to CodeOfaNinja
 - 18.3 Thank You!
 - 18.4 Share our tutorial

Overview

Login? Logout? Sign Up or Register? We see this functionality in almost every website we use

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If you want to become a web programmer, this is one of the most basic skills that you need to learn. If you haven't, today is a great day for you. We have some good news.

In this tutorial, we will learn how to build a simple PHP login script. This will help you create the web app of your dreams. Just like https://www.codeofaninja.com/about-us.

We will cover how to create a login form, registration form, customer section, admin section, list of registered users, logout and more. You will learn useful web programming techniques as well.

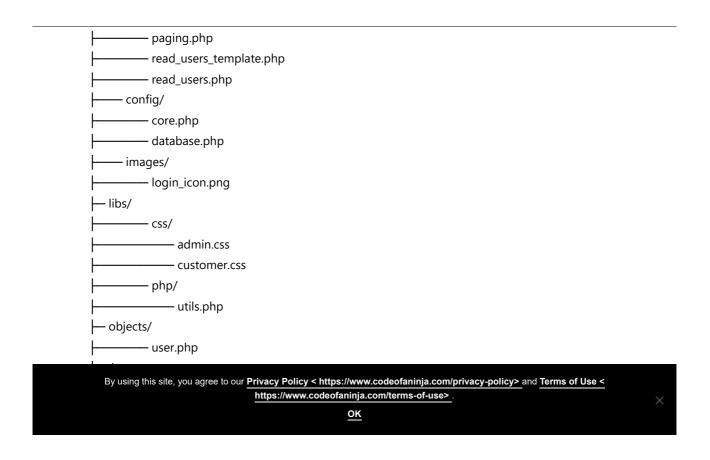
File structure

At the end of this tutorial, we will have the following folders and files. You will learn the purpose of each of these files and folders as we go along the tutorial.

— admin/ ———— index.php ———— layout_foot.php

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— layout_head.php

— login_checker.php

- login.php

logout.php

mavigation.php

— register.php

Prepare the database

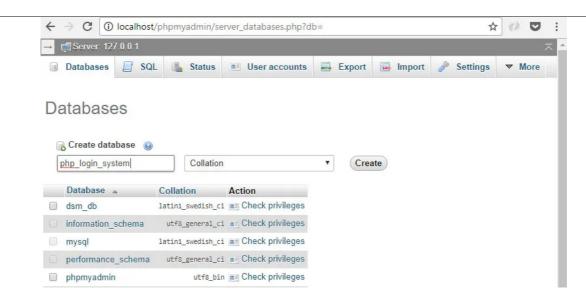
Create a database

Open a new browser tab and go to PhpMyadmin. The address is http://localhost/phpmyadmin .

Create a database. Database name is: php_login_system

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< https://i0.wp.com/www.codeofaninja.com/wp-content/uploads/2013/03/create-loginscript-database.jpg?ssl=1>

Run SQL for users table



```
CREATE TABLE `users` (
   `id` int(11) NOT NULL AUTO_INCREMENT,
   `firstname` varchar(32) NOT NULL,
   `lastname` varchar(32) NOT NULL,
   `email` varchar(64) NOT NULL,
   `contact_number` varchar(64) NOT NULL,
   `address` text NOT NULL,
   `password` varchar(512) NOT NULL,
   `access_level` varchar(16) NOT NULL,
   `access_code` text NOT NULL,
   `status` int(11) NOT NULL COMMENT '0=pending,1=confirmed',
   `created` datetime NOT NULL,
   `modified` timestamp NOT NULL DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIPRIMARY KEY (id)
) ENGINE=InnoDB DEFAULT CHARSET=utf8 COMMENT='admin and customer users';
```

Run SQL for users accounts

Go to PhpMyAdmin's SQL tab again. Insert new records to users table by running the following SQL statement.



```
INSERT INTO `users` (`id`, `firstname`, `lastname`, `email`, `contact_number`,
(1, 'Mike', 'Dalisay', 'mike@example.com', '0999999999', 'Blk. 24 A, Lot 6, Ph
(2, 'Lauro', 'Abogne', 'lauro@eacomm.com', '088888888', 'Pasig City', '$2y$10$i
(4, 'Darwin', 'Dalisay', 'darwin@example.com', '9331868359', 'Blk 24 A Lot 6 F
(7, 'Marisol Jane', 'Dalisay', 'mariz@gmail.com', '09998765432', 'Blk. 24 A, L
(9, 'Marykris', 'De Leon', 'marykrisdarell.deleon@gmail.com', '09194444444', '
(10, 'Merlin', 'Duckerberg', 'merlin@gmail.com', '09991112333', 'Project 2, Qu
(14, 'Charlon', 'Ignacio', 'charlon@gmail.com', '09876543345', 'Tandang Sora,
(15, 'Kobe Bro', 'Bryant', 'kobe@gmail.com', '09898787674', 'Los Angeles, Cali
(20, 'Tim', 'Duncan', 'tim@example.com', '99999999', 'San Antonio, Texas, USA',
(21, 'Tony', 'Parker', 'tony@example.com', '8888888', 'Blk 24 A Lot 6 Ph 3\r\r
```

Create database connection file

This class is used for connecting to a database.

I assume you are using XAMPP. Go to the root directory. In my case, it is the "C:\xampp\htdocs" directory.

We will create our project's folder. Create "php-login-script-level-1" folder. Open that folder.



```
<?php
// used to get mysql database connection
class Database{
    // specify your own database credentials
    private $host = "localhost";
    private $db name = "php login system";
    private $username = "root";
   private $password = "";
    public $conn;
   // get the database connection
    public function getConnection(){
        $this->conn = null;
        try{
            $this->conn = new PDO("mysql:host=" . $this->host . ";dbname=" .
        }catch(PDOException $exception){
            echo "Connection error: " . $exception->getMessage();
        return $this->conn;
```

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This class is used for "user" object operations such as creating a user, deleting a user and more.

We will add several methods in this class as we go along this tutorial.

For now, we will just put the PHP class structure and necessary object properties.

Create an "objects" folder. Create "user.php" file. Place the following code.

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```
<?php
// 'user' object
class User{
    // database connection and table name
    private $conn;
    private $table name = "users";
    // object properties
    public $id;
    public $firstname;
    public $lastname;
    public $email;
    public $contact number;
    public $address:
    public $password;
    public $access level;
    public $access code;
    public $status;
    public $created;
    public $modified;
    // constructor
    public function construct($db){
         $this->conn = $dh:
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```

Congratulations! We just made the setup for our login script's database. We do not have an output on a webpage yet. Continue the tutorial below to achieve more output.

Prepare basic settings

Create config file

Using a config file is great for your app. It is a central place where you can set common variables such as your app's home URL, pagination settings, and more.

Open the "config" folder. Create "core.php" file. Place the following code.

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```
<?php
// show error reporting
error reporting(E ALL);
// start php session
session start();
// set your default time-zone
date default timezone set('Asia/Manila');
// home page url
$home url="http://localhost/php-login-script-level-1/ < http://localhost/php-l</pre>
// page given in URL parameter, default page is one
$page = isset($ GET['page']) ? $ GET['page'] : 1;
// set number of records per page
$records per page = 5;
// calculate for the query LIMIT clause
$from record num = ($records_per_page * $page) - $records_per_page;
?>
```

```
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```

If a user is not logged in and he tries to access a page where a login is required, that user will be redirected to login page.

Also, if a logged in user tries to access a login page, he will be redirected to the dashboard because he is already logged in.

Back to root directory, create "login_checker.php" file. Place the following code.

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```
<?php
// login checker for 'customer' access level
// if access level was not 'Admin', redirect him to login page
if(isset($ SESSION['access level']) && $ SESSION['access level']=="Admin"){
    header("Location: {$home url}admin/index.php?action=logged in as admin");
// if $require login was set and value is 'true'
else if(isset($require login) && $require login==true){
    // if user not yet logged in, redirect to login page
    if(!isset($ SESSION['access level'])){
        header("Location: {$home url}login.php?action=please login");
// if it was the 'login' or 'register' or 'sign up' page but the customer was
else if(isset($page title) && ($page title=="Login" || $page title=="Sign Up")
    // if user not yet logged in, redirect to login page
    if(isset($ SESSION['access level']) && $ SESSION['access level']=="Custome"
        header("Location: {$home url}index.php?action=already logged in");
6156{
```

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Create .htaccess file

The .htaccess file use very useful to make URLs pretty and easy to remember.

For example, page page on this URL "http://localhost/login.php " can be accessed using this URL "http://localhost/login ".

Create ".htaccess" file. Place the following code.

```
#Fix Rewrite
Options -Multiviews

# Mod Rewrite
Options +FollowSymLinks
RewriteEngine On
RewriteBase /php-login-script-level-1/

RewriteCond %{REQUEST_FILENAME} !-f
RewriteCond %{REQUEST_FILENAME} !-d

# used for php pages such as "yoursite.com/login.php" will become "yoursite.com/login.php" will beco
```

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To make .htaccess file work, make sure mod_rewrite Apache module was enabled in your server.

Learn more https://www.codeofaninja.com/2013/04/mod-rewrite-url.html and https://stackoverflow.com/a/3131259/827530.

Output

Congratulations! We just made the basic set up of our login script. We do not have an output on a webpage yet. Continue the tutorial below to achieve more output.

Create the template files

Template files are very useful because it saves us a lot of time. How? When you use template files, you won't have to repeat the common codes on each web page you are working on.

The examples of those common codes are the HTML tags on the 'head' and 'foot' of the web page. We will learn more about this concept as we go along this tutorial.

Create navigation bar

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```
<!-- navbar -->
<div class="navbar navbar-default navbar-static-top" role="navigation">
   <div class="container-fluid">
       <div class="navbar-header">
           <!-- to enable navigation dropdown when viewed in mobile device --
           <button type="button" class="navbar-toggle" data-toggle="collapse"</pre>
           <span class="sr-only">Toggle navigation</span>
           <span class="icon-bar"></span>
           <span class="icon-bar"></span>
           <span class="icon-bar"></span>
           </button>
           <!-- Change "Your Site" to your site name -->
           <a class="navbar-brand" href="<?php echo $home url; ?>">Your Site
       </div>
       <div class="navbar-collapse collapse">
           <!-- link to the "Cart" page, highlight if current page is car
               <?php echo $page title=="Index" ? "class='active'" : ""; ?</li>
                   <a href="<?php echo $home url; ?>">Home</a>
```

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```
</div>
</div>
<!-- /navbar -->
```

Show logout button

If the user was logged-in, the system will show them a logout button in the navigation bar.

Replace "// login and logout options will be here " of the previous section with the following code.

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```
// check if users / customer was logged in
// if user was logged in, show "Edit Profile", "Orders" and "Logout" options
if(isset($ SESSION['logged in']) && $ SESSION['logged in']==true && $ SESSION[
?>
>
      <a href="#" class="dropdown-toggle" data-toggle="dropdown" role="butto
         <span class="glyphicon glyphicon-user" aria-hidden="true"></span>
           <?php echo $ SESSION['firstname']; ?>
           <span class="caret"></span>
      </a>
      class="dropdown-menu" role="menu">
         <a href="<?php echo $home url; ?>logout.php">Logout</a>
      <?php
// show login and register options here
```

Show login and register buttons

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Replace "// show login and register options here " of the previous section with the following code.

```
// if user was not logged in, show the "login" and "register" options
else{
?>
<?php echo $page title=="Login" ? "class='active'" : ""; ?>>
       <a href="<?php echo $home url; ?>login">
          <span class="glyphicon glyphicon-log-in"></span> Log In
       </a>
   <?php echo $page title=="Register" ? "class='active'" : ""; ?>>
       <a href="<?php echo $home url; ?>register">
          <span class="glyphicon glyphicon-check"></span> Register
       </a>
   <?php
```

Create page header

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What we will do is to put them in this one file. It can be used by different PHP files using PHP include_once < https://php.net/manual/en/function.include-once.php statement.

Create "layout head.php" file. Place the following code.

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```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <!-- set the page title, for seo purposes too -->
    <title><?php echo isset($page title) ? strip tags($page title) : "Store Fr</pre>
    <!-- Bootstrap CSS -->
    <link href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.</pre>
    <!-- admin custom CSS -->
    <link href="<?php echo $home url . "libs/css/customer.css" ?>" rel="styles"
</head>
<body>
    <!-- include the navigation bar -->
    <?php include once 'navigation.php'; ?>
    <!-- container -->
    <div class="container">
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```

Create page footer

The same concept with the page header file above, we do not want to copy and paste the same HTML footer code for different PHP files.

Create "layout_foot.php" file. Place the following code.



```
</div>
<!-- /container -->

<!-- jQuery library -->
<script src="https://code.jquery.com/jquery-3.2.1.min.js < https://code.jquery

<!-- Bootstrap JavaScript -->
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.

<!-- end HTML page -->
</body>
</html>
```

Customer section custom CSS

We will customize the web page for the customer using this CSS file. You can add your own CSS here as well.

Create "libs" folder. Create "css" folder. Create "customer.css" file. Place the following code.



```
.margin-bottom-1em{ margin-bottom:1em; }
.width-30-percent{ width:30%; }
.margin-1em-zero{ margin:1em 0; }
.width-30-percent{ width:30%; }
.width-70-percent{ width:70%; }
.margin-top-40{ margin-top:40px; }
.text-align-center{ text-align:center; }
div#blueimp-gallery div.modal{ overflow: visible; }
.photo-thumb{
    width: 214px;
    height: 214px;
    float:left:
    border: thin solid #d1d1d1:
    margin: 0 1em 1em 0;
.form-signin{
    max-width: 330px;
    padding: 15px;
    margin: 0 auto;
.form-signin .form-control{
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```

```
-moz-box-sizing: border-box;
   box-sizing: border-box;
.form-signin .form-control:focus{ z-index: 2; }
.form-signin input[type="text"]{
   margin-bottom: -1px;
   border-bottom-left-radius: 0;
   border-bottom-right-radius: 0;
.form-signin input[type="password"]{
   margin-bottom: 10px;
   border-top-left-radius: 0;
   border-top-right-radius: 0;
.account-wall{
   margin-top: 40px;
   padding: 40px 0px 20px 0px;
   background-color: #ffffff;
   box-shadow: 0 2px 10px 0 rgba(0, 0, 0, 0.16);
```

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```
.profile-img{
    width: 96px;
    height: 96px;
    margin: 0 auto 10px;
    display: block;
    -moz-border-radius: 50%;
    -webkit-border-radius: 50%;
    border-radius: 50%;
.select-img{
    border-radius: 50%;
    display: block;
    height: 75px;
    margin: 0 30px 10px;
    width: 75px;
    -moz-border-radius: 50%;
    -webkit-border-radius: 50%;
    border-radius: 50%;
.select-name{
    display: block;
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```

```
height: 96px;
margin: 0 auto 10px;
display: block;
-moz-border-radius: 50%;
-webkit-border-radius: 50%;
border-radius: 50%;
}
```

Output

Congratulations! We just made the set up for our web pages. Our login page, register page, index page and other pages will look more beautiful now.

We do not have an output on a webpage yet. Continue the tutorial below to achieve the output of our login page.

Create login form

Include basic settings

This file is where the user will enter his email and password.

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```
<!php
// core configuration
include_once "config/core.php";

// set page title
$page_title = "Login";

// include login checker
$require_login=false;
include_once "login_checker.php";

// default to false
$access_denied=false;

// post code will be here

// login form html will be here

?>
```

Login form HTML

Next, we will add the actual HTML form that contains the email field, password field and login button.

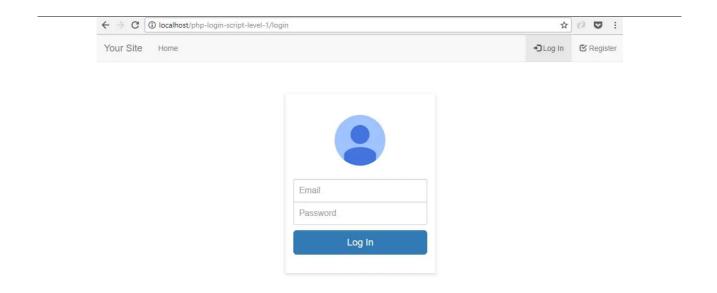
```
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```

```
// include page header HTML
include once "layout head.php";
echo "<div class='col-sm-6 col-md-4 col-md-offset-4'>":
    // alert messages will be here
    // actual HTML login form
    echo "<div class='account-wall'>";
        echo "<div id='my-tab-content' class='tab-content'>";
             echo "<div class='tab-pane active' id='login'>";
                 echo "<img class='profile-img' src='images/login-icon.png'>";
                 echo "<form class='form-signin' action='" . htmlspecialchars(
                     echo "<input type='text' name='email' class='form-control</pre>
                     echo "<input type='password' name='password' class='form-d
                     echo "<input type='submit' class='btn btn-lg btn-primary b
                 echo "</form>":
            echo "</div>";
        echo "</div>";
    echo "</div>":
echo "</div>";
// footer HTML and JavaScript codes
include once "layout foot.php":
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```

Finally! We just made our first output. Open a new tab and go to http://localhost/php-login-script-level-1/login, you should see something like the following.

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< https://i0.wp.com/www.codeofaninja.com/wp-content/uploads/2013/03/login-page-php-login-script-with-sessions.jpg?ssl=1>



These alert messages are shown based on the given action parameter. The system action was generated as a result of the activity the user has taken.

For example, the user tries to access a page where a login is required. The system will generate the "please_login" action that will be used to show a "Please login to access that page." message.

Replace "// alert messages will be here" of the previous section with the following code.

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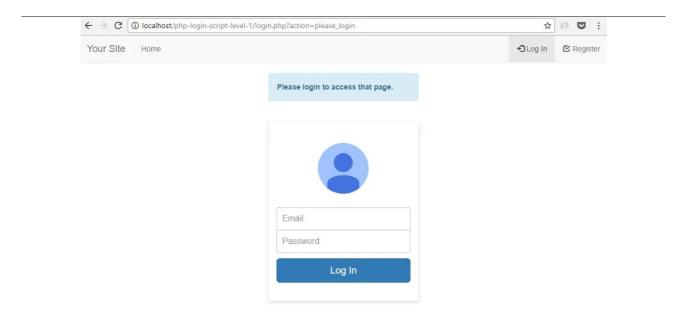
```
// get 'action' value in url parameter to display corresponding prompt message
$action=isset($ GET['action']) ? $ GET['action'] : "";
// tell the user he is not yet logged in
if($action =='not yet logged in'){
    echo "<div class='alert alert-danger margin-top-40' role='alert'>Please ld
// tell the user to login
else if($action=='please login'){
    echo "<div class='alert alert-info'>
        <strong>Please login to access that page.
    </div>";
// tell the user email is verified
else if($action=='email verified'){
    echo "<div class='alert alert-success'>
       <strong>Your email address have been validated.
    </div>";
// tell the user if access denied
if($access denied){
    echo "<div class='alert alert-danger margin-ton-40' role='alert'>
```

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Alert message output

Here's a sample output if we added the previous section's code. The alert message below were seen if the user tries to access the customer index page http://localhost/php-login-script-level-1/ without logging in.

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< https://i0.wp.com/www.codeofaninja.com/wp-content/uploads/2013/03/php-login-pagealert-message.jpg?ssl=1>



Find "// post code will be here" in "login.php" file. Replace it with the following code.

```
// if the login form was submitted
if($_POST){
    // email check will be here
}
```

Check if email exists

The code below will check if the submitted email address exists in the database. The \$user>emailExists(); function will return true or false.

Replace "// email check will be here" of the previous section with the following code.

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OK

```
// include classes
include_once "config/database.php";
include_once "objects/user.php";

// get database connection
$database = new Database();
$db = $database->getConnection();

// initialize objects
$user = new User($db);

// check if email and password are in the database
$user->email=$_POST['email'];

// check if email exists, also get user details using this emailExists() methous the semail_exists = $user->emailExists();

// login validation will be here
```

Add emailExists() method

The previous section will not work without the following method inside the user class. This method



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OK

```
// check if given email exist in the database
function emailExists(){
    // query to check if email exists
    $query = "SELECT id, firstname, lastname, access level, password, status
             FROM " . $this->table name . "
            WHERE email = ?
            LIMIT 0,1";
    // prepare the query
    $stmt = $this->conn->prepare( $query );
    // sanitize
    $this->email=htmlspecialchars(strip tags($this->email));
    // bind given email value
    $stmt->bindParam(1, $this->email);
    // execute the query
    $stmt->execute();
    // get number of rows
    $num = $stmt->rowCount();
    // if email exists, assign values to object properties for easy access and
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                                        ΟK
```

```
// assign values to object properties
$this->id = $row['id'];
$this->firstname = $row['firstname'];
$this->lastname = $row['lastname'];
$this->access_level = $row['access_level'];
$this->password = $row['password'];
$this->status = $row['status'];

// return true because email exists in the database return true;
}

// return false if email does not exist in the database return false;
}
```

Validate login credentials

The user will be allowed to login when \$email_exists is true, the password matches and user status is equal to 1.

We used the built in PHP password_verify() function <



User status 1 means the user is verified. 0 means unverified. For this tutorial, we assume all users are verified.

Replace "// login validation will be here" of "login.php" with the following code.

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```
// validate login
if ($email exists && password verify($ POST['password'], $user->password) &&:
               // if it is, set the session value to true
               $ SESSION['logged in'] = true;
               $ SESSION['user id'] = $user->id;
               $ SESSION['access level'] = $user->access level;
               $ SESSION['firstname'] = htmlspecialchars($user->firstname, ENT QUOTES, 'User->firstname, E
               $ SESSION['lastname'] = $user->lastname;
               // if access level is 'Admin', redirect to admin section
               if($user->access level=='Admin'){
                             header("Location: {$home url}admin/index.php?action=login success");
               // else, redirect only to 'Customer' section
               else{
                             header("Location: {$home url}index.php?action=login success");
// if username does not exist or password is wrong
else{
               $access denied=true;
```

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This file is shown when the user was successfully logged in.

Create "index.php" file. Place the following code.

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OK

```
<?php
// core configuration
include once "config/core.php";
// set page title
$page title="Index";
// include login checker
$require login=true;
include once "login checker.php";
// include page header HTML
include once 'layout head.php';
echo "<div class='col-md-12'>";
    // to prevent undefined index notice
    $action = isset($ GET['action']) ? $ GET['action'] : "";
    // if login was successful
    if($action=='login success'){
        echo "<div class='alert alert-info'>";
            echo "<strong>Hi " . $ SESSION['firstname'] . ", welcome back!</st
        echo "</div>";
```

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OK

```
echo "</div>";
}

// content once logged in
echo "<div class='alert alert-info'>";
    echo "Content when logged in will be here. For example, your premium pecho "</div>";

echo "</div>";

// footer HTML and JavaScript codes
include 'layout_foot.php';
?>
```

Logout file

Here's how to logout the logged in user.

Create "logout.php" file. Place the following code.



```
<?php
// core configuration
include_once "config/core.php";

// destroy session, it will remove ALL session settings
session_destroy();

//redirect to login page
header("Location: {$home_url}login.php");
?>
```

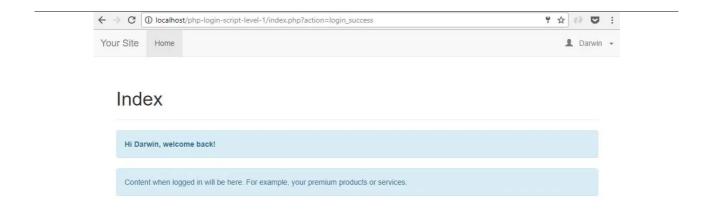
Output

The login form and logout should work at this point. When you try to login a customer account. Use the following login credentials.

Username: darwin@example.com Password: darwin12qw!@QW

Once logged-in, you will see the following.

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< https://i0.wp.com/www.codeofaninja.com/wp-content/uploads/2013/03/customer-index-page-php-login-script.jpg?ssl=1>



The register page, also known as the "sign up" page, is where people will enter their information to be a registered user of the system.

Create "register.php" file. Place the following code.

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```
<?php
// core configuration
include once "config/core.php";
// set page title
$page title = "Register";
// include login checker
include_once "login checker.php";
// include classes
include_once 'config/database.php';
include_once 'objects/user.php';
include once "libs/php/utils.php";
// include page header HTML
include_once "layout head.php";
echo "<div class='col-md-12'>";
    // registration form HTML will be here
echo "</div>";
// include page footer HTML
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```

This class is used for accessing common or general methods used by our application. This is a good practice. We will add this here so that it can be used later in this tutorial as well.

Open "libs" folder. Create "php" folder and open it. Create "utils.php" file. Place the following code.

```
<?php
class Utils{
}
?>
```

Registration form HTML

The register.php file does not have the registration form. We will place the registration form using the code below.

Replace "// registration form HTML will be here" of the previous section with the following code.

```
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```

```
// code when form was submitted will be here
<form action='register.php' method='post' id='register'>
   >
          Firstname
          <input type='text' name='firstname' class='form-control' requi</pre>
       Lastname
          <input type='text' name='lastname' class='form-control' requir</pre>
       >
          Contact Number
          <input type='text' name='contact number' class='form-control'</pre>
       >
          Address
          <textarea name='address' class='form-control' required><?php e
       By using this site, you agree to our Privacy Policy < https://www.codeofaninja.com/privacy-policy> and Terms of Use <
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```

If registration form was submitted

This is code where the system will catch the information submitted by the user. The code below will

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Replace "// code when form was submitted will be here" of the previous section with the following code.

```
// if form was posted
if($_POST){

    // get database connection
    $database = new Database();
    $db = $database->getConnection();

    // initialize objects
    $user = new User($db);
    $utils = new Utils();

    // set user email to detect if it already exists
    $user->email=$_POST['email'];

    // check if email already exists
    if($user->emailExists()){
        echo "<div class='alert alert-danger'>";
        echo "The email you specified is already registered. Please try age echo "</div>";
}
```

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OK

Create new user

If the email does not exist, the program will create the user in the database. The code below will assign the submitted data to "user object" properties and then call the create() method.

Replace the comment "// create user will be here" of the previous section with the following code.

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OK

```
// set values to object properties
$user->firstname=$ POST['firstname'];
$user->lastname=$ POST['lastname'];
$user->contact number=$ POST['contact number'];
$user->address=$ POST['address'];
$user->password=$ POST['password'];
$user->access level='Customer';
$user->status=1;
// create the user
if($user->create()){
    echo "<div class='alert alert-info'>";
        echo "Successfully registered. <a href='{$home url}login'>Please logir
    echo "</div>":
    // empty posted values
    $ POST=array();
}else{
    echo "<div class='alert alert-danger' role='alert'>Unable to register. Ple
```

```
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OK
```

and executes the query.

Open "objects" folder. Open "user.php" file. Add the following function inside the class.

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OK

```
// create new user record
function create(){
    // to get time stamp for 'created' field
    $this->created=date('Y-m-d H:i:s');
    // insert query
    $query = "INSERT INTO
                 " . $this->table name . "
             SET
                 firstname = :firstname,
                 lastname = :lastname,
                 email = :email,
                 contact number = :contact number,
                  address = :address.
                 password = :password,
                  access level = :access level,
                  status = :status,
                 created = :created";
    // prepare the query
    $stmt = $this->conn->prepare($query);
    // sanitize
    $this->firstname=htmlsnecialchars(strip_tags($this->firstname)):
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```

```
$this->access level=htmlspecialchars(strip tags($this->access level));
$this->status=htmlspecialchars(strip tags($this->status));
// bind the values
$stmt->bindParam(':firstname', $this->firstname);
$stmt->bindParam(':lastname', $this->lastname);
$stmt->bindParam(':email', $this->email);
$stmt->bindParam(':contact number', $this->contact number);
$stmt->bindParam(':address', $this->address);
// hash the password before saving to database
$password hash = password hash($this->password, PASSWORD BCRYPT);
$stmt->bindParam(':password', $password hash);
$stmt->bindParam(':access level', $this->access level);
$stmt->bindParam(':status', $this->status);
$stmt->bindParam(':created', $this->created);
// execute the query, also check if query was successful
if($stmt->execute()){
    return true:
}else{
   $this->showError($stmt);
   return false:
```

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OK

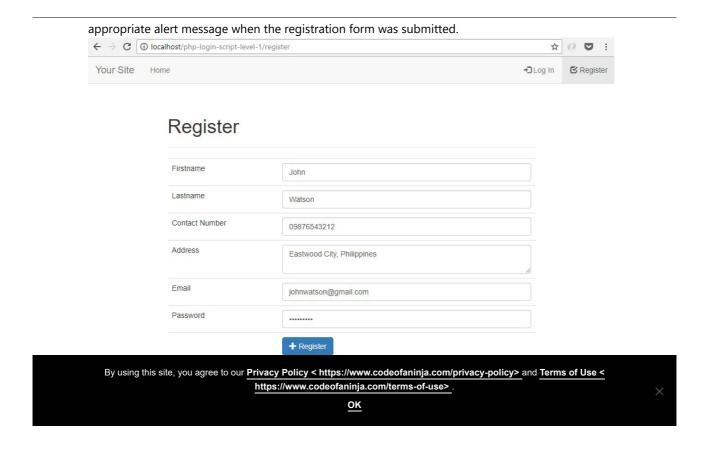
Add showError() method

The purpose of this method is to show additional details about an error.

```
public function showError($stmt){
    echo "rection of the property of the property
```

Output

Run http://localhost/php-login-script-level-1/register , you should see an output the looks like the screenshot below. It will display



page-php-login-script.jpg?ssl=1>

Admin section

Create admin index page

Once the an admin user successfully logged in, this admin index page is where he will land.

Create "admin" folder. Create "index.php" file. Place the following code.

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```
<?php
// core configuration
include once "../config/core.php";
// check if logged in as admin
include_once "login checker.php";
// set page title
$page title="Admin Index";
// include page header HTML
include 'layout head.php';
    echo "<div class='col-md-12'>";
        // get parameter values, and to prevent undefined index notice
        $action = isset($ GET['action']) ? $ GET['action'] : "";
        // tell the user he's already logged in
        if($action=='already logged in'){
            echo "<div class='alert alert-info'>";
                echo "<strong>You</strong> are already logged in.";
            echo "</div>";
```

```
echo "<div class='alert alert-info'>";
        echo "Contents of your admin section will be here.";
    echo "</div>";

echo "</div>";

// include page footer HTML
include_once 'layout_foot.php';
?>
```

Create navigation bar

The admin section has its own navigation bar. The reason is the admin menu can be very different from the user menu.

Open "admin" folder. Create "navigation.php" file. Place the following code.

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```
<!-- navbar -->
<div class="navbar navbar-default navbar-static-top" role="navigation">
   <div class="container-fluid">
       <div class="navbar-header">
          <!-- to enable navigation dropdown when viewed in mobile device --
          <button type="button" class="navbar-toggle" data-toggle="collapse"</pre>
          <span class="sr-only">Toggle navigation</span>
          <span class="icon-bar"></span>
          <span class="icon-bar"></span>
          <span class="icon-bar"></span>
          </button>
          <!-- Change "Site Admin" to your site name -->
          <a class="navbar-brand" href="<?php echo $home url; ?>admin/index.
       </div>
       <div class="navbar-collapse collapse">
          <!-- highlight for order related pages -->
              <a href="<?php echo $home url; ?>admin/index.php">Home</a>
```

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```
<!-- options in the upper right corner of the page -->
         <
                <a href="#" class="dropdown-toggle" data-toggle="dropdown'</pre>
                   <span class="glyphicon glyphicon-user" aria-hidden="tr</pre>
                     <?php echo $ SESSION['firstname']; ?>
                     <span class="caret"></span>
                </a>
                <!-- log out user -->
                   <a href="<?php echo $home url; ?>logout.php">Logout
                </div><!--/.nav-collapse -->
   </div>
</div>
<!-- /navbar -->
```


Open "admin" folder. Create "layout_head.php" file. Place the following code.

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OK

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title><?php echo isset($page title) ? strip tags($page title) : "Store Ad
    <!-- Bootstrap CSS -->
    <link href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.</pre>
    <!-- admin custom CSS -->
    <link href="<?php echo $home url . "libs/css/admin.css" ?>" rel="styleshee"
</head>
<body>
    <?php
    // include top navigation bar
    include once "navigation.php";
    ?>
    <!-- container -->
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```

```
<h1><?php echo isset($page_title) ? $page_title : "The Code of </div> </div>
```

Create page footer

This page footer file is for admin section only as well.

Open "admin" folder. Create "layout_foot.php" file. Place the following code.

```
</div>
    <!-- /container -->

<!-- jQuery library -->
    <script src="https://code.jquery.com/jquery-3.2.1.min.js < https://code.jquery

<!-- Bootstrap JavaScript -->
    <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.

<!-- end the HTML page -->
    </body>
    </brail>
```

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There are differences in style in the admin section as well. For this reason, we need a different custom.css file.

Open "libs" folder. Open "css" folder. Create "admin.css" file. Place the following code.

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```
.right-button-margin{
    margin: 0 0 1em 0;
    overflow: hidden;
.thumb-image {
    float:left;
    width: 150px;
    height: 150px;
    margin:.6em 1.2em 0 0;
    position:relative;
.thumb-image .delete-image {
    position:absolute;
    top: -10px;
    right:-10px;
.thumb-wrapper{
    border: thin solid #999;
    float:left;
    width: 150px;
    height: 150px;
    margin: .6em 1.2em 0 0:
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                                          ΟK
```

```
.width-20-em{ width: 20em; }
.width-13-em{ width: 13em; }
.margin-zero{ margin:0; }
.padding-zero{ padding:0; }
.btn-margin-right{ margin-right:.5em; }
.margin-bottom-1em{ margin-bottom:1em; }
.left-margin{ margin:0 .5em 0 0; }
.delete-image img{ width:25px; }
.thumb-wrapper img{ width:130px; height:130px; margin:10px; }
#html-btn { display:none; }
.delete-pdf{ margin-left:.5em; }
.delete-pdf img{ width:20px; cursor:pointer; }
.pdf-item{ padding:0 0 1em 0; }
```

Create login checker file

We choose to use a different login checker for the admin section. This is because there can be different redirects required by the admin section.

Open "admin" folder. Create "login_checker.php" file. Place the following code.

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OK

```
<?php
// login checker for 'admin' access level

// if the session value is empty, he is not yet logged in, redirect him to log
if(empty($_SESSION['logged_in'])){
    header("Location: {$home_url}login.php?action=not_yet_logged_in");
}

// if access level was not 'Admin', redirect him to login page
else if($_SESSION['access_level']!="Admin"){
    header("Location: {$home_url}login.php?action=not_admin");
}

else{
    // no problem, stay on current page
}
}
</pre>
```

Output

Use the following login credentials to login an admin account.



Once logged-in, you will see the following.



Admin Index

Welcome back admin Mike!

Contents of your admin section will be here.

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Create "read users" file

This file will is what was accessed in the browser to show the list of registered users.

Create read_users.php file. Place the following code.

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```
<?php
// core configuration
include once "../config/core.php";
// check if logged in as admin
include_once "login checker.php";
// include classes
include_once '../config/database.php';
include_once '../objects/user.php';
// get database connection
$database = new Database();
$db = $database->getConnection();
// initialize objects
$user = new User($db);
// set page title
$page title = "Users";
// include page header HTML
include once "layout head.php";
echo "<div class='col-md-12'>":
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                                        ΟK
```

Add readAll() method in user object

This method is needed by the previous section to retrieved records from the database.

Open "objects" folder. Open "user.php" file. Place the following code inside the class.

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OK

```
// read all user records
function readAll($from record num, $records per page){
    // query to read all user records, with limit clause for pagination
    $query = "SELECT
                 id,
                 firstname,
                 lastname,
                 email,
                 contact number,
                 access level,
                 created
             FROM " . $this->table name . "
             ORDER BY id DESC
             LIMIT ?. ?":
    // prepare query statement
    $stmt = $this->conn->prepare( $query );
    // bind limit clause variables
    $stmt->bindParam(1, $from record num, PDO::PARAM INT);
    $stmt->bindParam(2, $records per page, PDO::PARAM INT);
    // execute query
    $stmt->execute():
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                                        ΟK
```

Create "read users" template file

The HTML table is where the records are placed. We used a template file so that we can use the same layout for the search feature.

Create read_users_template.php file. Place the following code.

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```
<?php
// display the table if the number of users retrieved was greater than zero
if($num>0){
   echo "";
   // table headers
   echo "";
     echo ">Firstname";
     echo "Lastname";
     echo "Email";
     echo "Contact Number";
     echo "Access Level";
   echo "";
   // loop through the user records
     while ($row = $stmt->fetch(PDO::FETCH ASSOC)){
     extract($row);
     // display user details
     echo "";
         echo "{$firstname}";
         echo "{$lastname}";
         echo "{$email}";
         echo "{$contact number}":
```

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Add countAll() method in user object

The data returned by the countAll() method is used for calculating the correct pagination buttons.

Open "objects" folder. Open "user.php" file. Place the following code inside the class.



```
// used for paging users
public function countAll(){

   // query to select all user records
   $query = "SELECT id FROM " . $this->table_name . "";

   // prepare query statement
   $stmt = $this->conn->prepare($query);

   // execute query
   $stmt->execute();

   // get number of rows
   $num = $stmt->rowCount();

   // return row count
   return $num;
}
```

Paginate list of users

This pagination file renders the clickable page buttons. It can be used for different objects as well, not just users.

```
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OK
```

```
<?php
echo "";
// button for first page
if($page>1){
   echo "<a href='{$page url}' title='Go to the first page.'>";
       echo "First Page";
   echo "</a>":
// calculate total number of pages
$total pages = ceil($total rows / $records per page);
// range of links to show
range = 2;
// display links to 'range of pages' around 'current page'
$initial num = $page - $range;
$condition limit num = ($page + $range) + 1;
for ($x=$initial num; $x<$condition limit num; $x++) {</pre>
   // be sure '$x is greater than 0' AND 'less than or equal to the $total pa
   if ((\$x > 0) \&\& (\$x <= \$total pages)) {
```

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OK

```
// not current page
    else {
        echo "<a href='{$page_url}page=$x'>$x</a>";
    }
}

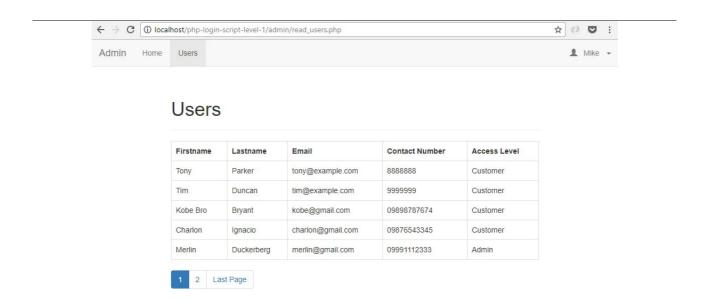
// button for last page
if($page<$total_pages){
    echo "<li><a href='" .$page_url . "page={$total_pages}' title='Last page i echo "Last Page";
    echo "</a>";
}

echo "";
}
```

Output

Login as admin and go to http://localhost/php-login-script-level-1/admin/read_users.php, you should see an output like the following.

```
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```



< https://i0.wp.com/www.codeofaninja.com/wp-content/uploads/2013/03/admin-



This feature needs a remote server where PHP mail function works. It does not work in localhost.

Change account status

If the user status is equal to 1, it means the email account is valid.

Since we want the user to validate his own email address, we will make it invalid (status equals to 0) the first time he register an account to our system.

Open register.php file and find:

Change the it to:

\$user->status=1;

Add access code field

Access code is a unique string of characters that is needed for email validation process. Still in register.php, place the following code under the code of the previous section.

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OK

Add getToken() method

This method will generate a unique string of characters for the access code field of the previous section.

Open "libs/php/utils.php" file and place the following code inside the class.

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```
function getToken($length=32){
    $token = "":
    $codeAlphabet = "ABCDEFGHIJKLMNOPORSTUVWXYZ";
    $codeAlphabet.= "abcdefghijklmnopqrstuvwxyz";
    $codeAlphabet.= "0123456789";
    for($i=0;$i<$length;$i++){</pre>
        $token .= $codeAlphabet[$this->crypto_rand_secure(0,strlen($codeAlphabet)
    return $token;
function crypto rand secure($min, $max) {
    $range = $max - $min;
    if ($range < 0) return $min; // not so random...</pre>
    log = log(loge, 2);
    \text{$bytes} = (int) (\frac{10g}{8} + 1; \frac{1}{length} in bytes)
    $bits = (int) $log + 1; // length in bits
    $filter = (int) (1 << $bits) - 1; // set all lower bits to 1
    do {
        $rnd = hexdec(bin2hex(openssl random pseudo bytes($bytes)));
        $rnd = $rnd & $filter; // discard irrelevant bits
    } while ($rnd >= $range);
    return $min + $rnd;
```

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Since we added a new field, we need to change the create() method in the User class.

Open objects/user.php file. Replace the create() method with the new one below.

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```
// create new user record
function create(){
    // to get time stamp for 'created' field
    $this->created=date('Y-m-d H:i:s');
    // insert query
    $query = "INSERT INTO " . $this->table name . "
             SET
        firstname = :firstname,
        lastname = :lastname,
        email = :email,
         contact number = :contact number,
         address = :address,
        password = :password,
         access level = :access level,
                 access code = :access code,
         status = :status,
        created = :created";
    // prepare the query
    $stmt = $this->conn->prepare($query);
    // sanitize
    $this->firstname=htmlsnecialchars(strip_tags($this->firstname)):
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```

```
$this->access level=htmlspecialchars(strip tags($this->access level));
$this->access code=htmlspecialchars(strip tags($this->access code));
$this->status=htmlspecialchars(strip tags($this->status));
// bind the values
$stmt->bindParam(':firstname', $this->firstname);
$stmt->bindParam(':lastname', $this->lastname);
$stmt->bindParam(':email', $this->email);
$stmt->bindParam(':contact number', $this->contact number);
$stmt->bindParam(':address', $this->address);
// hash the password before saving to database
$password hash = password hash($this->password, PASSWORD BCRYPT);
$stmt->bindParam(':password', $password hash);
$stmt->bindParam(':access level', $this->access level);
$stmt->bindParam(':access code', $this->access code);
$stmt->bindParam(':status', $this->status);
$stmt->bindParam(':created', $this->created);
// execute the query, also check if query was successful
if($stmt->execute()){
   return true;
}else{
   $this->showError($stmt);
```

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OK

Add access_code property

The previous section will not work without this new "access_code" property. Open on objects/user.php file, find this line:

```
public $access_level;
```

And add the following code under it.

```
public $access_code;
```

11.6 Send verification email

Instead of just displaying "Successfully registered." message, we will send a verification link to user's email address.

This means we will use a new function and message saying "Verification link was sent to your email. Click that link to login.".

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OK

```
// create the user
if($user->create()){
    echo "<div class='alert alert-info'>";
        echo "Successfully registered. <a href='{$home_url}login'>Please logir
    echo "</div>";
    // empty posted values
    $_POST=array();
}else{
    echo "<div class='alert alert-danger' role='alert'>Unable to register. Ple
}
```

Replace it with the following code.

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```
// create the user
if($user->create()){
    // send confimation email
    $send to email=$ POST['email'];
    $body="Hi {$send to email}.<br /><br />";
    $body.="Please click the following link to verify your email and login: {$
    $subject="Verification Email";
    if($utils->sendEmailViaPhpMail($send to email, $subject, $body)){
        echo "<div class='alert alert-success'>
            Verification link was sent to your email. Click that link to logir
        </div>";
    else{
        echo "<div class='alert alert-danger'>
            User was created but unable to send verification email. Please cor
        </div>";
    // empty posted values
    $ POST=array();
}else{
```

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Add sendEmailViaPhpMail() method

This method will help send the email with verification link to the email address submitted by the user. It uses the built-in PHP mail() function.

Open "libs/php/utils.php" file. Place the following code inside the class.

```
// send email using built in php mail function
public function sendEmailViaPhpMail($send_to_email, $subject, $body){

    $from_name="Your Name";
    $from_email="yourname@yourdomain.com";

    $headers = "MIME-Version: 1.0\r\n";
    $headers .= "Content-type: text/html; charset=iso-8859-1\r\n";
    $headers .= "From: {$from_name} <{$from_email} > \n";

    if(mail($send_to_email, $subject, $body, $headers)){
        return true;
    }

    return false;
}
```

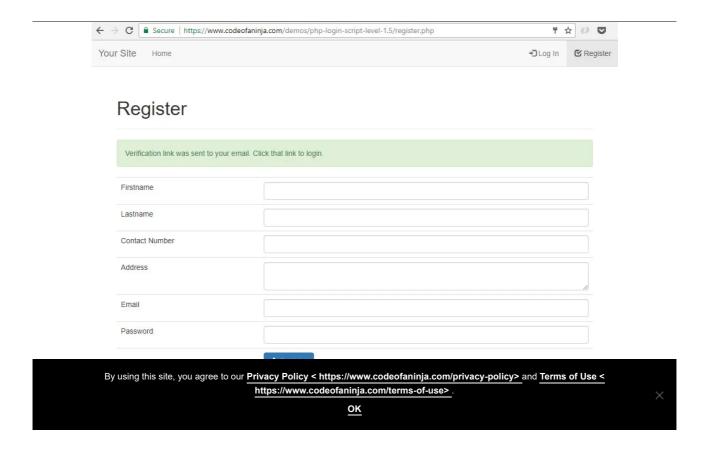
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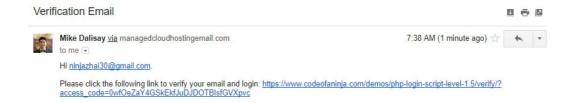
Output

Try to register a new account. After submitting the form, you will see a message box like the following. Follow what the message says to validate the email address.

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The verification email that the user will receive looks like the following. You can always change the copy of this message using the \$subject and \$body variables.



Create verification file

Once the user clicked the verification link, the system will change the status from 0 to 1.

He will be redirected to the login page with a confirmation message as well.

Create verify.php file in your project's main directory. Place the following code.



```
<?php
// core configuration
include once "config/core.php";
// include classes
include_once 'config/database.php';
include_once 'objects/user.php';
// get database connection
$database = new Database();
$db = $database->getConnection();
// initialize objects
$user = new User($db);
// set access code
$user->access code=isset($ GET['access code']) ? $ GET['access code'] : "";
// verify if access code exists
if(!$user->accessCodeExists()){
    die("ERROR: Access code not found.");
// redirect to login
elset
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                                        ΟK
```

```
// and the redirect
header("Location: {$home_url}login.php?action=email_verified");
}
}
```

Add accessCodeExists() method

This method will check the database if an access code already exists. It will return true if it found something, else, it will return false.

Open "objects/user.php" file. Add the following code inside the class.

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```
// check if given access code exist in the database
function accessCodeExists(){
    // query to check if access code exists
    $query = "SELECT id
             FROM " . $this->table name . "
             WHERE access code = ?
             LIMIT 0,1";
    // prepare the query
    $stmt = $this->conn->prepare( $query );
    // sanitize
    $this->access code=htmlspecialchars(strip tags($this->access code));
    // bind given access code value
    $stmt->bindParam(1, $this->access code);
    // execute the query
    $stmt->execute();
    // get number of rows
    $num = $stmt->rowCount();
    // if access code exists
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                         https://www.codeofaninja.com/terms-of-use>
```

```
// return false if access_code does not exist in the database
   return false;
}
```

Add updateStatusByAccessCode() method

Open "objects" folder. Open "user.php" file. Add the following method inside the class.

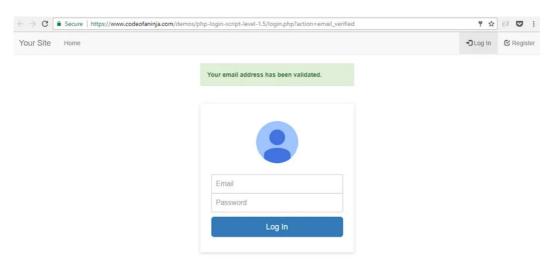
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```
// used in email verification feature
function updateStatusByAccessCode(){
    // update query
   $query = "UPDATE" . $this->table name . "
           SET status = :status
           WHERE access code = :access code";
   // prepare the query
    $stmt = $this->conn->prepare($query);
    // sanitize
    $this->status=htmlspecialchars(strip tags($this->status));
    $this->access code=htmlspecialchars(strip tags($this->access code));
    // bind the values from the form
    $stmt->bindParam(':status', $this->status);
    $stmt->bindParam(':access_code', $this->access_code);
    // execute the query
    if($stmt->execute()){
        return true;
    return false:
```

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The previous code will redirect the user to the following page.



PHP forgot password



Add forgot password link

Open login.php file and find the login button. Look for a line that looks like the following code.

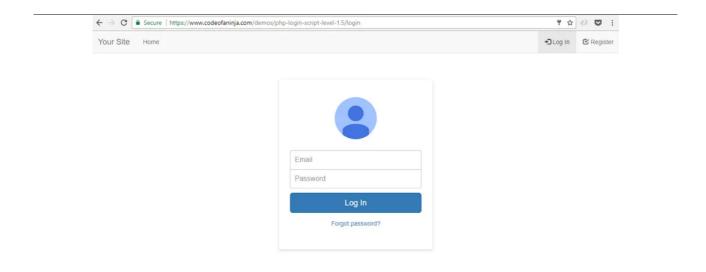
```
echo "<input type='submit' class='btn btn-lg btn-primary btn-block' value='Log
```

Once you found it, place the following code under it.

Login page new output

The login page will have the "Forgot password?" link after doing the code in the previous section.

```
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```



Create "forgot password" page



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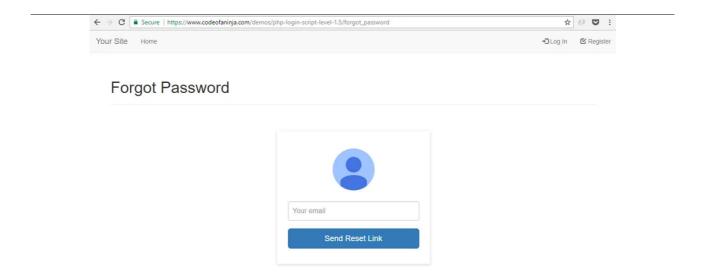
OK

```
<?php
// core configuration
include once "config/core.php";
// set page title
$page title = "Forgot Password";
// include login checker
include_once "login checker.php";
// include classes
include_once "config/database.php";
include_once 'objects/user.php';
include once "libs/php/utils.php";
// get database connection
$database = new Database();
$db = $database->getConnection();
// initialize objects
$user = new User($db);
$utils = new Utils();
// include page header HTML
include once "layout head.nhp":
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```

```
echo "<div class='col-md-4'>":
    echo "<div class='account-wall'>
        <div id='my-tab-content' class='tab-content'>
            <div class='tab-pane active' id='login'>
                 <img class='profile-img' src='images/login-icon.png'>
                 <form class='form-signin' action='" . htmlspecialchars($ SERVE)</pre>
                     <input type='email' name='email' class='form-control' place</pre>
                     <input type='submit' class='btn btn-lg btn-primary btn-bld</pre>
                </form>
            </div>
        </div>
    </div>";
echo "</div>";
echo "<div class='col-md-4'></div>";
// footer HTML and JavaScript codes
include_once "layout foot.php";
?>
```

Forgot password page output

```
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```



Add post code



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OK

```
// if the login form was submitted
if($ POST){
    echo "<div class='col-sm-12'>":
        // check if username and password are in the database
        $user->email=$ POST['email'];
        if($user->emailExists()){
             // update access code for user
             $access code=$utils->getToken();
             $user->access code=$access code;
             if($user->updateAccessCode()){
                 // send reset link
                 $body="Hi there.<br /><br />";
                 $body.="Please click the following link to reset your password
                 $subject="Reset Password";
                 $send to email=$ POST['email'];
                 if($utils->sendEmailViaPhpMail($send to email, $subject, $bod)
                     echo "<div class='alert alert-info'>
                              Password reset link was sent to your email.
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                         https://www.codeofaninja.com/terms-of-use>
                                        OΚ
```

```
else{ echo "<div class='alert alert-danger'>ERROR: Unable to s
}

// message if unable to update access code
else{ echo "<div class='alert alert-danger'>ERROR: Unable to updat
}

// message if email does not exist
else{ echo "<div class='alert alert-danger'>Your email cannot be found
echo "</div>";
}
```

Add updateAccessCode() method

Open "objects" folder. Open "user.php" file. Add the following method inside the class.



```
// used in forgot password feature
function updateAccessCode(){
    // update query
    $auerv = "UPDATE
                " . $this->table name . "
            SET
                access code = :access code
            WHERE
                email = :email";
    // prepare the query
    $stmt = $this->conn->prepare($query);
    // sanitize
    $this->access code=htmlspecialchars(strip tags($this->access code));
    $this->email=htmlspecialchars(strip tags($this->email));
    // bind the values from the form
    $stmt->bindParam(':access code', $this->access code);
    $stmt->bindParam(':email', $this->email);
    // execute the query
    if($stmt->execute()){
       return true:
```

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Output

Here's a sample email sent after the user submitted his email address in using the "forgot password" form.



PHP reset password form

The "reset password" form is shown when the user clicked the link sent by the system after the "forgot password" request.

Create "reset password" page



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OK

```
<?php
// core configuration
include once "config/core.php";
// set page title
$page title = "Reset Password";
// include login checker
include_once "login checker.php";
// include classes
include_once "config/database.php";
include_once "objects/user.php";
// get database connection
$database = new Database();
$db = $database->getConnection();
// initialize objects
$user = new User($db);
// include page header HTML
include once "layout head.php";
echo "<div class='col-sm-12'>":
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                                         ΟK
```

```
// include page footer HTML
include_once "layout_foot.php";
?>
```

Check access code

We need to check the access code to verify if the request came from the email generated by our system.

Replace the comment "// check acess code will be here" of the previous section with the following code.

```
// get given access code
$access_code=isset($_GET['access_code']) ? $_GET['access_code'] : die("Access
// check if access code exists
$user->access_code=$access_code;

if(!$user->accessCodeExists()){
    die('Access code not found.');
}
```

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Add "reset password" form

If the access code exists, the page will render a form where the user can enter his new password.

Once the user submitted a new password, the database will be updated with this new password data.

Replace the comment "// reset password form will be here" of the previous section with the following code.

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OK

Add post code

Replace the comment "// post code will be here" of the previous section with the following code.

```
// if form was posted
if($_POST){

    // set values to object properties
    $user->password=$_POST['password'];

    // reset password
    if($user->updatePassword()){
        echo "<div class='alert alert-info'>Password was reset. Please <a href
}

    else{
        echo "<div class='alert alert-danger'>Unable to reset password.</div>'
    }
}
```

Add undataDaccword() mothod

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Open "objects/user.php" file. Add the following code inside the class.

```
// used in forgot password feature
function updatePassword(){
    // update query
   $query = "UPDATE" . $this->table name . "
           SET password = :password
           WHERE access code = :access code";
   // prepare the query
    $stmt = $this->conn->prepare($query);
   // sanitize
    $this->password=htmlspecialchars(strip tags($this->password));
    $this->access code=htmlspecialchars(strip tags($this->access code));
    // bind the values from the form
    $password hash = password hash($this->password, PASSWORD BCRYPT);
    $stmt->bindParam(':password', $password hash);
    $stmt->bindParam(':access code', $this->access code);
    // execute the query
    if($stmt->execute()){
```

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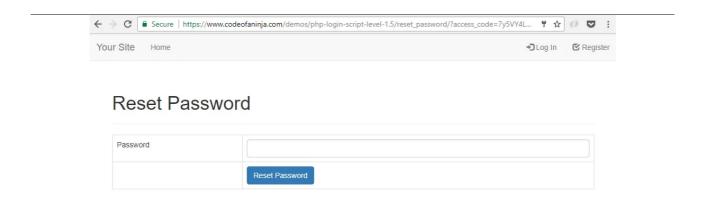
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Output

To run reset_password.php file, click the link sent to your email address via "forgot password" form.

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OK





But we believe you will learn faster if you'll see the final source code as well. We consider it as your additional guide.

Imagine the value or skill upgrade it can bring you. The additional income you can get from your work, projects or business. The precious time you save. Isn't that what you want?

By now, you need to download our source codes. To do it, use any download buttons in the next few sections below.

Once you downloaded the source codes, here's how you can run it.

I assume you work in localhost with your XAMPP server running. If not, learn from <u>our tutorial</u> <u>here < https://www.codeofaninja.com/2013/06/how-to-run-a-php-script.html></u>.

- 1. Extract the ZIP file in your htdocs directory. You should have "php-login-script-level-1" folder with the files there.
- 2. In your PhpMyAdmin, create a database "php_login_system"
- 3. Import the "php_login_system.sql" file in the "README" folder
- 4. If needed, configure database in /config/database.php

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Try to login using the following credentials.

Admin Section Login

Username: mike@example.com Password: ninja12qw!@QW

Customer Account Login

Username: darwin@example.com Password: darwin12qw!@QW

Other notes:

- 1. This system works with PHP 5.5 or greater.
- 2. Rewrite module is usually enabled by default. If not, it must be enable in your apache server.

Download LEVEL 1 Source Code

The LEVEL 1 source code is the source code of our tutorial above.

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