A logo with text on it

Description automatically generated**University of Wollongong**

**ISIT-307**

**Assignment 2**

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| **Name:** | **UOW ID:** | **UOW Mail:** |
| Toh Jing Wen | 7910502 | jwt799@uowmail.edu.au |

**README: Requirements of program**

The following programs were used in development of the assignment:

Language used: **PHP 8.2.13**

Program runs on:  **WAMP 3.3.2**

**Notes:**

createdb.php should be opened before other files to allow the database to be created.

**List of Website Files**

1. **createdb.php**

Creates the database, parking location and users tables.

1. **home.php**

The landing page of the website, which prompts the user to identify themselves as either an administrator or user.

1. **adminLogin.php**

Allows either logging in or registering for an administrator. The website takes input for the user’s email address and phone number when logging in to verify at verifyAdmin.php. Registration takes input for name, surname, email address and phone number, then verifies the input at registerAdmin.php.

1. **userLogin.php**

Similar to adminLogin.php, but caters to logging in and registering for regular users and verification is done at verifyUser.php and registerUser.php respectively.

1. **registerAdmin.php**

Verifies validity of email and phone number, then adds a new entry in the table with the type ‘admin’ and gives the user a new ID.

1. **registerUser.php**

Operates similarly as registerAdmin.php, where the new user is given the type ‘user’ instead.

1. **verifyAdmin.php**

Connects to the database to find an existing entry for the email address and phone number, then allows the user to continue to parkingAdmin.php if successful.

1. **verifyUser.php**

Operates similarly as verifyAdmin.php, where the user will continue to parkingUser.php.

1. **parkingAdmin.php**

The administrator’s page, which consists of 3 sections. The first section details the parking locations in the database, and allows different list viewing filters as well as searching, adding and editing. The second section lists out all users in the database, and allows for searching of particular user(s). The third section lists out all checked-in parkings, and allows the administrator to enter a specific parking lot ID to filter the list, as well as check-in or out a user from a parking lot.

1. **parkingUser.php**

The user’s page, which consists of 2 sections. The first section details the parking locations in the database that have available capacity, and allows the user to search for particular parking lot(s). The second section lists out information about the user’s current checked-in parking lots as well as their check-out history. The user is also allowed to enter details of the parking lot they want to check in or out of.

1. **logout.php**

Both the administrator and user will be redirected here upon selecting the ‘Log out’ button. This page would prompt the users to return to home.php after logging out.

**User Manual**

A screenshot of a computer screen

Description automatically generatedUpon entering the website, the main menu would appear as shown below. The user will be prompted to select their respective role (user/administrator) to continue.

A screenshot of a login form

Description automatically generatedClicking on the ‘Administrator’ button would direct the user to either login or register as a new administrator.

A close-up of a white background

Description automatically generatedA screenshot of a login screen

Description automatically generatedLogging in requires the user’s registered email address and phone number, and they have to be in the correct format. Incorrect inputs would be rejected by the website and users would have to return to the login page to correct their inputs.

Resulting error message

Incorrect inputs with an invalid email and phone number format

A screenshot of a computer screen

Description automatically generatedA screenshot of a login screen

Description automatically generatedOn the other hand, a successful login would allow the user to continue to the administrator’s page by clicking on ‘Continue’.

A close up of a text

Description automatically generatedA screenshot of a registration form

Description automatically generatedIf the user wishes to register a new administrator account, they would have to fill in all the fields in the registration form. Clicking on ‘Register’ allows the website to process the information and create a new record of type ‘admin’.

A screenshot of a computer

Description automatically generatedIn the administrator’s page, the user would be allowed to view details on parking locations, list of users and check-in and out information. A full list of parking locations would be shown by default.

A screenshot of a computer

Description automatically generatedA close-up of a computer screen

Description automatically generatedA form below the table allows the administrator to search, add or edit a parking location. For example, if the user wants to create a parking location at Yishun, they can enter the details of the parking lot, then click ‘Add location’.

A close-up of a computer screen

Description automatically generatedA screenshot of a parking lot

Description automatically generatedThe user could also edit the record by entering the parking lot ID and the fields to amend, then clicking on ‘Edit location’.

A screenshot of a computer

Description automatically generatedA screenshot of a parking lot

Description automatically generatedLastly, the administrator can search for parking lots by keying in particular fields and clicking ‘Search’.

A screenshot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generatedThe administrator can also filter the list by locations with available space, or by locations that are full.

List of locations that are full

List of locations with available space

A screenshot of a computer

Description automatically generatedNext, the administrator can view the list of all users as shown below.

A close-up of a contact box

Description automatically generatedA screenshot of a computer

Description automatically generatedThe administrator can also search for a specific user through the search form below. For example, if the user wants to search for a user with first name Peter and phone number containing ‘789’, the user with ID number 8 would be returned.

The administrator can also view the full list of checked-in and out parkings, as well as check users in and out of parking lots. It is assumed that a user can only check into a parking lot once every time, hence each combination of a user ID and parking lot ID would only occur once out of all active check-ins.

A screenshot of a computer screen

Description automatically generatedA screenshot of a computer screen

Description automatically generatedIn this example, the administrator would perform two check-ins as shown below.

A screenshot of a computer

Description automatically generatedA screenshot of a check-in

Description automatically generatedThese new entries are added to the list of checked-in parkings, and the capacities of the respective parking lots are also updated.

A screenshot of a computer

Description automatically generatedA close-up of a computer screen

Description automatically generatedThe check-in list can also be filtered based on the parking lot ID as shown below.

A close-up of a check-in

Description automatically generatedA close up of black text

Description automatically generatedTo check-out, the administrator has to enter the user ID and lot ID to check out as shown below.

A screen shot of a computer screen

Description automatically generatedFinally, the administrator can log out via the ‘Log out’ button at the top of the page. The logout page would be shown and users are prompted to return to the main menu.

A screenshot of a menu

Description automatically generated

A screenshot of a computer screen

Description automatically generatedA screenshot of a computer

Description automatically generatedAt the main menu, clicking on ‘User’ directs the user to the user login/register portal. The process is similar to that of the administrator’s login and registering process.

A screenshot of a car parking

Description automatically generatedAt the user’s page, the user would also be able to view a list of parking locations, however this list is filtered to only show the parking lots with available capacity. The search form below the table works in the same manner as that of the administrator’s page.

A screenshot of a computer

Description automatically generatedThe user can also view a list of parking locations they are currently checked-in, as well as a list of their previous check-ins. A form for checking in and out of another parking lot is also available for them.

A screenshot of a computer screen

Description automatically generatedA close-up of a sign

Description automatically generatedA screenshot of a computer

Description automatically generatedWhen the user checks into a parking lot, the website would register the information and display details of the check-in, such as the check-out time and total cost.

A screenshot of a computer

Description automatically generatedA close up of a sign

Description automatically generatedTo check out of a parking, the user simply needs to key in the parking lot ID, and the website would process and display the total cost based on the check-out time. In this example, the check-out time has exceeded by 4 hours, hence there is a late cost of 4 x 2.3 = $9.20. The check-out entry would also be added to the check-out list.

Similar to the administrator’s page, the user’s page has a ‘Log out’ button at the top of the page, which would redirect to the logout page.

**Database**

A computer screen shot of white text

Description automatically generatedThe database, named ‘Parking’ consists of 2 tables: ‘users’ and ‘parking\_location’. The database is created as shown below.

A screenshot of a computer program

Description automatically generatedThe ‘users’ table contains the columns id, name, surname, phone, email and type, where ‘type’ refers to whether the user is an administrator or a user. This differentiation comes into play when verifying login details, which prevents a user from accessing the administrator page and vice versa. All columns except ‘id’ are string types, and ‘id’ is set to auto increment.

A black screen with white lines

Description automatically generatedTwo user entries are inserted while creating the database, with one an administrator and the other a user.

A computer screen shot of a black screen

Description automatically generatedThe ‘parking\_location’ table consists of columns id, location, description, capacity, cost and cost\_late. Columns ‘location’ and ‘description’ are set as strings, while ‘capacity’ is set as an integer and ‘cost’ and ‘cost\_late’ set as float. This is to facilitate calculations in the code, where the capacities and costs are mathematically updated regularly.

A black screen with white text

Description automatically generatedTwo records are added into the ‘parking\_location’ table as well, as shown below.