Technical documentation

Install

The php, css and javascript files must all be placed in the same folder. These files should be placed in the directory that stores the html files that are to be viewed on the internet, this may be called public_html.

Database design

There are 6 tables in the database.

- Login details: this contains the Username, Password, and admin status of the users. The username has to be unique and is used as the primary key. If the admin column is one the account is an admin account.
- People: This table has People_ID as the primary key and auto-increments, it then has the columns; People_First_Name,People_Second_Name,People_address,People_licence. These are all VARCHAR with the licence being VARCHAR(16) as this the length of the licence number.
- Vehicle: This table has Vehicle_ID as the auto-incrementing Primary Key. The are then columns; Vehicle_type,Vehicle_colour,Vehicle_licence, which are all VARCHAR and then the column People_ID which is a foreign key from People. The People_ID is included as a foreign key as it is a one to many relationship (one owner, many vehicles) and this is the best way to link the tables.
- Offence: This is a table storing the types of offence possible. It has Offence_ID as the primary key and then Offence_description which is a VARCHAR and then Offence_maxFine and Offence_maxPoints which are INT.
- Incident: This table has Incident_ID as the primary key and Vehicle_ID, People_ID, and Offence_ID as foreign keys. It then has Incident_date and Incident_report wich store the date as a date and the report as a VARCHAR. The foreign keys are included as they are all on to many relationships (One person,vehicle, and offense per incident).
- Fines: This table has Fine_ID as the primary key and Incident_IS as the foreign key as well as Amount and points as INT values.

SQL Queries

There are a lot of sql queries in the code with many being very similar, so I will explain the main types and any interesting ones.

To display data in the table I use the SELECT query. When wanting to see the whole table it appears like SELECT * FROM TableName; however in some case only certain rows need to be shown therefore the WHERE col=val is added. In the Delete person file this is taken further and WHERE col IN (values) was used to select multiple row with multiple values.

When changing password or editing record the UPDATE query was used. This was used in the form UPDATE table SET col1=val1,col2=val2 etc.

When deleting a person from the database the DELETE query was used. The ID(primary key) of the table awas used to select the row to delete as it is unique and avoids accidentally deleting more than one record. DELETE FROM table WHERE Col_ID = val;

The INSERT query was used to insert data into the database. This was done in the form INSERT INTO table (col,col2) VALUES (val,val2);. When adding the data the ID was never manually set as this column autoincrements in all tables.

PHP

I will explain some of the core functionality of the PHP code here:

Session variables

The user is kept track of using session variables. There is a session variable for username and admin status these are cleared when the user logs off. If the user accesses a page without logging in the session variables will not be set therefore they will be redirected to the login page where the session variables will be set after login.

External files

Most of the java script is stored in a file called javascriptFunction.js and this is linked in the header of every file that requires the functions with the script tag. The style is set by myStyle.css which is linked using the link tag.

Types of display objects

Tables were made with the table tag and buttons were done with the button tag. The buttons within tables are links (a tag) that have been styled to look like buttons.

Different options for admins

When displaying tables and buttons the session variables are checked and if $_SESSION['admin'] is not 'Admin' these elements are not displayed.

Moving between pages

Most of the moving between pages is done using buttons and some javascript that changes the location.href however some the navigation such as the redirecting of non logged in users is done using the header() function.

List of files

- ChangePassword.php
- deletePage.php
- DeletePerson.php
- editFines.php
- editIncident.php
- editVehicle.php
- editPeople.php

- Incident.php
- javascriptFunctions.js
- Login.php
- Logout.php
- MainPage.php
- myStyle.css
- NewFine.php
- NewPoliceAccount.php
- PeopleLookup.php
- PersonEntry.php
- tableViewer.php
- VehicleEnty.php
- VehicleLookup.php