

Technical Manual

1. Installation

Install a web server with PHP support (such as Apache)

Install MySQL

Import the provided database by running the SQL commands listed in database.sql

Place all of the PHP files in a directory accessible by the web server

Update the database connection information in db.inc.php with your MySQL credentials

2. Database Description

The database used for this project consists of eight tables: Fines, Incident, Offence, Ownership, People, users, audit_trail and Vehicle.

The Fines table stores information about fines issued for traffic offenses. It has the following fields:

Fine_ID: a unique identifier for the fine

Fine_Amount: the amount of the fine

Fine_Points: the number of points added to the offender's driving license

Incident_ID: the ID of the incident associated with the fine

The Incident table stores information about traffic incidents. It has the following fields:

Incident_ID: a unique identifier for the incident

Vehicle_ID: the ID of the vehicle involved in the incident

People_ID: the ID of the person involved in the incident

Incident_Date: the date of the incident

Incident_Report: a report of the incident

Offence_ID: the ID of the offense committed in the incident

The Offence table stores information about different types of traffic offenses. It has the following fields:

Offence_ID: a unique identifier for the offense

Offence_description: a description of the offense

Offence_maxFine: the maximum fine that can be issued for the offense

Offence_maxPoints: the maximum number of points that can be added to the offender's driving license for the offense

The Ownership table stores information about vehicle ownership. It has the following fields:

People_ID: the ID of the owner of the vehicle

Vehicle_ID: the ID of the vehicle owned

The People table stores information about people. It has the following fields:

People_ID: a unique identifier for the person

People_name: the name of the person

People_address: the address of the person

People_licence: the driving license number of the person

The audit_trail table stores information about database record accesses and changes that are made. It has the following fields:

Time: the time of the changes/accesses

User: the user who made the changes/accesses

Action: what kind of operation has the user done to the database

Record_ID: the ID of the operation made

The users table stores information about officer accounts. It has the following fields:

id: the ID of the user

Username: the name of the user

Password: the password of the user

type: the type of the user (user or admin)

The Vehicle table stores information about vehicles. It has the following fields:

Vehicle_ID: a unique identifier for the vehicle

Vehicle_registration: the registration (plate) number of the vehicle

Vehicle_make: the make of the vehicle

Vehicle_model: the model of the vehicle

Vehicle_colour: the colour of the vehicle

3. SQL Queries

The following is a list of the SQL queries used in this project:

`SELECT * FROM People WHERE People_name='$people_name' OR People_licence='$people_licence':` This query selects all records from the People table where the People_name or People_licence fields match the provided name or license number.

``SELECT * FROM Vehicle WHERE Vehicle_registration='$vehicle_registration':` This query selects all records from the Vehicle table where the Vehicle_registration field matches the provided registration number.

`INSERT INTO Ownership (People_ID, Vehicle_ID) VALUES ('$people_id', '$vehicle_id'):` This query inserts a new record into the Ownership table, assigning the provided People_ID to the provided Vehicle_ID.

`INSERT INTO Vehicle (Vehicle_registration, Vehicle_make, Vehicle_model, Vehicle_colour) VALUES ('$vehicle_registration', '$vehicle_make', '$vehicle_model', '$vehicle_colour'):` This query inserts a new record into the Vehicle table, with the provided values for the Vehicle_registration, Vehicle_make, Vehicle_model, and Vehicle_colour fields.

`INSERT INTO People (People_name, People_address, People_licence) VALUES ('$people_name', '$people_address', '$people_licence'):` This query inserts a new record into the People table, with the provided values for the People_name, People_address, and People_licence fields.

`INSERT INTO Incident (Vehicle_ID, People_ID, Incident_Date, Incident_Report, Offence_ID) VALUES ('$vehicle_id', '$people_id', '$incident_date', '$incident_report', '$offence_id'):` This query inserts a new record into the Incident table, with the provided values for the Vehicle_ID, People_ID, Incident_Date, Incident_Report, and Offence_ID fields.

`SELECT * FROM Incident WHERE Incident_ID='$incident_id':` This query selects the record from the Incident table with the provided Incident_ID.

`UPDATE Incident SET Vehicle_ID='$vehicle_id', People_ID='$people_id', Incident_Date='$incident_date', Incident_Report='$incident_report', Offence_ID='$offence_id' WHERE Incident_ID='$incident_id':` This query updates the record in the Incident table with the provided

3. PHP Code

The PHP code in this project is used to retrieve data from the database and display it to the

user, as well as to handle form submissions and update the database.

There are several files included in the project:

db.inc.php: This file contains the necessary configuration for connecting to the MySQL database, including the database host, username, password, and database name. These values need to be updated to match the setup of the MySQL server.

login.php: This file displays the login form and handles the process of logging in a user.

admin.php: This file displays the dashboard for an administrator.

dashboard.php: This file displays the dashboard for a user.

logout.php: This file allows a user to log out.

reset_password.php: This file allows a user to change their password.

search.php: This file allows a user to search for people in the database.

search_vehicle.php: This file allows a user to search for vehicles in the database.

add_vehicle.php: This file allows a user to add a new vehicle to the database.

edit_vehicle.php: This file allows a user to edit an existing vehicle in the database.

add_person.php: This file allows a user to add a new person to the database.

edit_person.php: This file allows a user to edit an existing person in the database.

add_incident.php: This file allows a user to add a new incident to the database.

edit_incident.php: This file allows a user to edit an existing incident in the database.

retrieve_incident1.php: This file displays a list of incidents in the database.

addofficer.php: This file allows an administrator to add a new officer account to the database.

add_fine.php: This file allows an administrator to add a fine to the database.

audit.php: This file displays the audit trail for a specific user.

offence_description.php: This file get all offence descriptions.

submit_report.php: This file allows a user to submit a new report to the system.

update_incident.php: This file allows a user to edit an existing incident in the database.

update_person.php: This file allows a user to edit a existing incident in the database

*.css: Stylesheets to style the HTML pages

That concludes the technical manual for this project.