

# Milestone One

## DMDigger



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Authored by: Nick Kean



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# Introduction

## DM Digger background information

DM Digger is an application designed to inspect the national register of alcohol Duty Managers in a user-friendly way. The “Sale and Supply of Alcohol Act (2012)” created the requirement that a register “... recording all prescribed particulars relating to licences and managers' certificates” (SASAA 2012 §65) be set up and maintained. The act also required that this register be made available to the public. This was done via the periodic publication of certificate information via an excel spreadsheet. The spreadsheet is very basic and is merely a dump of certificate information.

## Intended audience

The DM Digger application's target users are those appointed by the Medical Officer of Health (see References) who need to analyse information in the national register but lack the necessary skills in Microsoft Excel to do so.

## Application purpose

The DM Digger application was created to make sense of the information in the published spreadsheet. It allows the user to interrogate the data to see which licensing authorities are processing the most applications and what part of the year has the most applications made. This allows the user to schedule their resources to the right part of the country at the right time of year.

# Operating environment

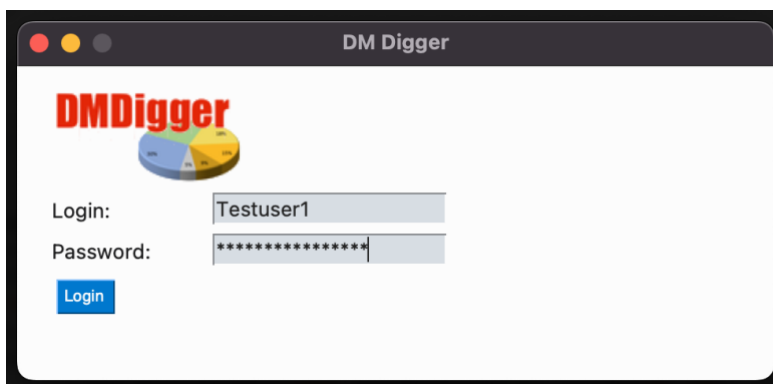
The DM Digger application is a graphical application written in python. Any python version 2.x or above will do. Any Operating System capable of running graphical python3 applications should suffice but DM Digger does require the following python libraries to be available.

- **PySimpleGUI**

- pandas
- numpy
- matplotlib.pyplot
- urllib

## Screen layout

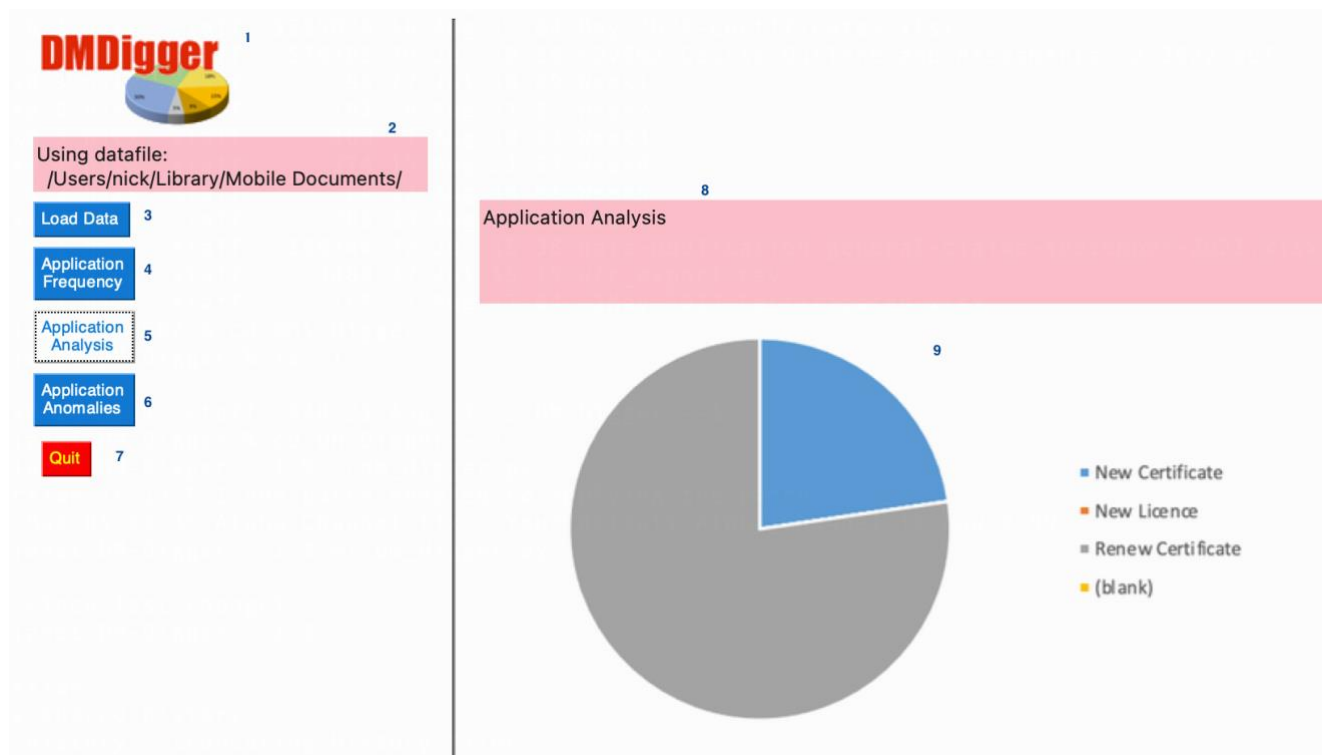
### Login screen



Note that all user management functions (add, remove, change password) are not application functions and must be performed by the “DM Digger Management” application (sold separately).

### Main screen

Note that the pink areas in the screenshot below are only there to show the bounding boxes for that area of the application. On normal execution these areas are white.



### 1. Logo

Non functional. Shows “LOGO” when you mouse-over it.

### 2. Information pane

Shows the name of the dataset current under examination. This will be the name of the file loaded or the URL of the data source.

### 3. Load button

When clicked the user will be presented with a dialogue box to either load an excel file from disk or load the latest version of the excel file from the ARLA website (See References). Only “Sheet1” from an excel file will be loaded.

### 4. Frequency button

Displays a line graph in the result pane (9)

### 5. Analysis button

Displays a pie graph in the result pane (9)

### 6. Anomalies button

Shows the non-standard applications in the result pane (9). A non-standard application is one where any of the following are true:

- Contested
- Public hearing held

### 7. Quit button

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Exits the application

**8. Debug pane**

Any warning messages that the application encounters are displayed in this area of the window. The most common type of non-fatal errors are missing image files (eg: The logo).

**9. Result pane**

This area is where the chart/graph relevant to the current operation is displayed.

## Functional Testing

Use case	Function	Initial state	Input	Expected result
<b>Login</b>	Authenticates access to the application	Application is presenting login screen dialogue.	Username/ Password pair	Login successful if and only if the username/password combo is found in the user information table.  Failure: "Access denied" message is displayed, and the login screen is shown again.  Success: The main application screen is shown.
<b>Quit</b>	Exits the application	Anytime the main application screen is active	"Quit" button pressed	The application exits immediately, without error.
<b>Close</b>	Exits the application	Anytime the main application screen is active	Application window is closed	The application exits immediately, without error.
<b>Load</b>	Retrieves an excel file from	Anytime the main application screen is active	"Load Data" button pressed	A new dialogue box is presented to choose loading from a local file or from a remote website.
<b>Frequency</b>	Graphs application frequency	Anytime the main application screen is active	"Application Frequency" button pressed	A line graph appears in the result pane of the application window.

<b>Analysis</b>		Anytime the main application screen is active.	“Application Analysis” button pressed	A pie chart appears in the result pane of the application window.
<b>Anomalies</b>			“Application Anomalies” button pressed	

# Data Schema

## User data table

The information held regarding users of the application. The table is called user\_info.

Column	Type	Description
ID	INTEGER	Unique reference for the user
LOGIN	VARCHAR(20)	The user's login name
PASSWORD	CHAR(32)	The (MD5 hashed) password for the user
NAME	VARCHAR(128)	The user's full name

## Certificate info

The certificate data is a flat, non-normalized, table representing the raw data as contained in the Excel spreadsheet. The “user” column references which user loaded the data and only they can see that data set. The table is called certificate\_info.

Column	Type	Description
USER	INTEGER	Which user loaded the data set
DLC	VARCHAR(40)	District Licensing Committee
APP_TYPE	VARCHAR(30)	Application Type
SURNAME	VARCHAR(64)	Certificate Holder's Last Name
FIRST_NAMES	VARCHAR(64)	Certificate Holder's First Names
CERT_NO	VARCHAR(20)	Certificate Number
VALID_FROM	DATE	Date Licence is Valid From
EXPIRES	DATE	Date Licence Expires
FIRST_ISSUED	DATE	Date Certificate First Issued
DETERMINED	DATE	Date Application was Determined
RECEIVED	DATE	Date Application was Received
PUBLIC	VARCHAR(3)	Public Hearing
CONTESTED	VARCHAR(3)	Application Contested

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# Troubleshooting

Errors encountered when refreshing data from the ARLA website should be retried a few minutes later as the website suffers from frequent downtime.

Problems running the application should be notified to your IT support department.

Unresolved errors can be lodged at <https://dmdigger.com/idontcare/>

# Application Upgrade Support

Enhanced versions of the application are available to paying subscribers. More information, including details of subscription plans, can be found at <https://dmdigger.com/onebilliondollars>.

# Disclaimers

The developer makes no warranty, express or implied, with respect to any aspect of the application (DM Digger) and hereby expressly disclaims any and all implied warranties of merchantability and fitness for a particular purpose.

# References

Sale and Supply of Alcohol Act 2012:

<https://www.legislation.govt.nz/act/public/2012/0120/latest/DLM3339333.html>

Alcohol Regulatory & Licensing Authority (ARLA) Register of licences & certificates

<https://www.justice.govt.nz/tribunals/arla/register-of-licences-and-certificates/>