# Instruction document/user manual 2810ICT/7810ICT 2022 Assignment

### Part B – Data Analysis and Visualization

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## NSW Traffic Penalty Data GUI (2011-2017):

### Step 1: Main Menu

The Main Menu displays all Related Headings (Title, Developer Names etc.) and Options to Display the Requested Dataset Visually, Specifically, the Main Menu will be ‘Run’ by the user, and the user will be presented with a Graphical User Interface (GUI) that has been developed in Python and Stylized with the Tkinter Package. There are four options the user can/must select from (“Limit to Mobile Phone Usage?” is Optional), these include;

* Select a Report
* Start Date
* End Date
* (\*Optional) Limit to Mobile Phone Usage?

After the User Has Selected these options, they are able to click and interact with the submit button, this is the final button displayed within this view.

### Step 2: Select a Report

After the User has the GUI ‘Running’ they must Select what report they want to produce a GUI for from the dropdown menu, these report options include:

* For a user-selected period, report the information of all penalty cases.
* For a user-selected period, produce a chart to show the distribution of cases in each offence code
* For a user-selected period, retrieve all cases captured by radar or camera based on offence description
* Analyzing the cases caused by mobile phone usage - ie: trend over time, offence code, and so on.

### Step 4: (\*Optional) Offence Code

Once a User has Selected a Report, they can optionally select whether they want to input an Offence Code. If the User utilizes this data function it will reduce the final graphical data to only include the penalty data that has that Specific Code. If the User does not input anything, it will not alter the result

### Step 3: Select the Date Range

Once the User has Selected a Specific Report and Optionally Specified an Offence Code, they will then be required to select a Date Range;

* Start Date
* End Date

The Start Date is the Beginning Date they want the Traffic Penalty Data to Be tracked (January – 2011) and the End Date is the Date they want the Data to be tracked until (December – 2017). This allows the user to be precise with what time bound information they are wanting to view graphically.

### Step 4: (\*Optional) Limit to Mobile Phone Usage

The User has the Option to Select the Radio Check Button, ‘Limit to Mobile Phone Usage’, this will limit all the Traffic Penalty Data down to Mobile Phone Infringements Only, regardless of the Selected Report or Date Range. Once this is Selected the Visualization produced will only Mobile Phone Infringements under the Selected Report and within the Selected Range.

### Step 4: Submit Button

Once a Report has been selected and a date range has been entered (Optionally Adding; Step 4) the User can click the Submit Button, this will then produce the requested GUI Data Visualization Graph.

### Step 5: Review Visualization

The Users Graph will then load, the Graph view will appear below the Main Menu. The graph type will vary based on the user input. However, each Graph appears as a popup so it is clear for the user.

### Step 6: Return to Main Screen Button/Abort

Below the Graph, a ‘Home’ Icon will appear. This will remove the produced graph and reset the details entered, the user has the option to click this button and reset the GUI or Abort the Program by exiting in the top right corner.