#### PYTHON BASED TRAFFIC CONTROLS AND VEHICLE REGISTRARTIONS

A project submitted in partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science to the Mahendra Arts & Science College (Autonomous)

by

PRAVEENKUMAR.D (19BCS1052)

Under the Guidance of Mr. C. SENTHILRAJA, M.C.A., M.Phil.,



# DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS MAHENDRA ARTS & SCIENCE COLLEGE (Autonomous)

**Affiliated to Periyar University** 

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Kalippatti (Po), Namakkal (Dt) - 637501

APR/MAY(JUNE)-2022

#### MAHENDRA ARTS & SCIENCE COLLEGE (Autonomous)

#### Kalippatti

(Affiliated to Periyar University, Salem)



# This is to certify that the project entitled PYTHON BASED TRAFFIC CONTROLS AND VEHICLE REGISTRATIONS

is the Bonafide record of project work done

by
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A project submitted in partial fulfillment of the requirements for the of Bachelor of Science in Computer Science to the Mahendra Arts & Science College (Autonomous)

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#### **DECLARATION**

**TRAFFIC CONTROL OF VEHICLE REGISTRATIONS** "submitted to the Mahendra Arts & Science College (Autonomous), Kalippatti in partial fulfillment of the requirements for the award of the degree of **Bachelor of Computer Science** is a record of the original project work done by me under the supervision and guidance of **Mr. C. SENTHILRAJA, M.C.A., M.Phil., Assistant Professor,** Department of Computer Science & Applications, Mahendra Arts & Science College (Autonomous), Kalippatti and it has not formed the basis for the award of any Degree / Diploma / Associate ship / Fellowship or other similar title to any candidate in any university.

Place: Kalippatti Signature of the Candidate

Date: [PRAVEENKUMAR.D]

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# PYTHON BASED TRAFFIC CONTROLS AND VEHICLE REGISTRARTIONS

#### **ABSTRACT**

Traffic is a major concern for most of the metropolitan cities of the world. Efficient traffic management can have a major impact on the country's economy. This paper proposes a new digital-logic based system which is more efficient than currently used traffic control systems. The intelligent traffic control system (ITSC) is based on a simple principle; the principle being that "a car can only move ahead if there is space for it" and "the signal remains green until the present cars have passed". By placing sensors at every entry and exit of a junction. Vehicle Registration, using python based control system and python based frameworks, is indicating new ways of capturing traffic data. Such default python (UI) frameworks can store the user vehicle information such as license. The prerequisite is to build up a working on python default (UI) framework that works with various categories, various sizes and text styles. The reason for this investigation is to utilize neural system innovation to perceive user details, license information and accomplish an adequate degree of exactness. To depend on such frameworks to supplant customary strategies for gathering vehicle registrations, their degree of accuracy must match traditional techniques. The upside of using a python default (UI) can work in any factors and troublesome circumstances.

#### INTRODUCTION

#### 1.1 BACKGROUND STUDY:

The Motor Vehicle Act 1998 makes it mandatory to for the owner to apply for vehicle registration at the local RTO office within the stipulated time. You can allow the dealer to complete the registration on your behalf or you could do it yourself. On completion of the registration process, you will receive the Registration Certificate (RC) for your car. The RC copy is an official document which comprises general information regarding the vehicle – including the make, date of purchase, colour, chassis number, registration number, the name of the owner etc. It is mandatory to keep the RC copy in the car while driving. If you have chosen to do the registration yourself, here's the process to follow. Fill up the relevant forms and carry copies or originals of the documents as required with you to the RTO. Pay the following charges: Registration fees: which is chargeable according to the size of the vehicle. The registration fee is different for bikes, cars, trucks etc. Road tax: Percentage of amount varies from one city to another Hypothecation charges: It is applicable only if the loan is taken. This is for the processing of the hypothecation. After submitting the documents, the Regional Transport Office (RTO) authorities will inspect the car. For this, you will be asked to drive yourvehicle to the RTO office. The inspection is mainly to check if the vehicle and its documents are the same. After the successful physical verification of the vehicle, the RTO officials take few days to process and register your vehicle. You then receive the vehicle number and the registration papers. This completes the vehicle registration process. Your vehicle registration comes with a validity period of 15 years. You must renew or re-register your vehicle within 30 days from the date of expiry. Traffic laws and regulations in Nigeria where inherited from colonial administration. The fist edith is the 1920 road traffic ordinace of lagos colony and southern protectorate of Nigeria which was applied to the operations of all type of vehicles until the country was demarcated into regions (northern, western and eastern) thereafter each region was empowered to promulgate its traffic regulations. before 1939, vehicle inspection was carried out by the directorate of works, while licensing supervised by the licensing office under finance. As a result of a critical issue with the colonial regiment England during the world war, the inspector general of police was mandated to undertake the responsibility vehicle inspection as well as licensing until the 1958 constitution of Nigeria which conferred powers of on regional state government create their Own traffic laws On 1st January 1949 the road traffic act was promulgated which is available to the road traffic act chapter 548 laws of the Federation of Nigeria (1990).it is the act (1949) that gave birth to vehicle inspection office. Vehicle registration is

the process of adding the vehicle to the motor vehicle register and issuing with it registration plates. Vehicle licensing is the payment of a fee for the use of motor vehicle on public roads when the fee is paid you receive a label indicating the expiry date of the license. This label must be displayed on the vehicle In Nigeria there are three arms of government agencies that are responsible for Automobile licensing ,registration and control. They are federal road safety commission, the state vehicle inspection officer (VIO) and the state board of Internal revenue (BIR) the usual practice is for an owner to visit these three arms of necessary payment, data collection and issuance of necessary documents and material such as plate numbers. The state board of internal revenue collects fees for new automobile license and registration from Owners through a designated bank. They request more documents such as Custom papers, purchase receipt or a change of a owner certificate on automobile Every automobile within the nation must to be registered under a state and local government before a license plate is issued. Nigerian automobile registration plates often have the state written at the top and have group of three letters at the right hand side, indicating the district of registration followed by their main town to aid in tracing and identifying location.

License plate serve to help a law enforcement, motor vehicle authorities and others identify a vehicle while simultaneously indicating the registrant has Paid the proper registration fee and taxes on the automobile. License plates also offer information such as a weight class, the country, state and local government. In which the vehicle is registered use restrictions (private or commercial) and the age and engine capacity. In addition, some license plates show weather the owner of the vehicle is the member of special organization or a group such as the police force, custom and federal road safety commission. Moreover proof. Of ownership certificates are issued to owners of automobiles on payment of certain fee by the board.

Apart from other advantages ,this will now replace the manual process of registering vehicle , issuing during licensing , renewing expired licenses as Changing of ownership of the vehicle. Since the computerize mode of operation Is flexible and accurate record keeping assured , it will give the management of The licensing authority enough time for planning and decision making rather than being immersed in the detail of routing function (manual work) This is necessary since the control of any establishment alternatively lies in The hand of management. Also the computerized operations of the licensing authority will ensure the very fast retrieval of necessary information about (Eg) vehicle information to the police in term of urgent need like during that of road accident.

In this research work, interaction will be created on the computerization and implementation of motor vehicle licensing authority at the three level organization; vehicle inspection officer (VIO), federal road safety commission (FRSC) and the board of internal revenue. Which are required to monitor the process that are involved starting from the exact date of motor vehicle is registered,

licensed, renewed etc.. in the early 80s the vehicle licensing systemThen was that each vehicle was licensed based on the local government Issuing the licenses. For instance, a vehicle licensed from Ikorodu cloud bear (LAG 28 IKD) as plate number. Later with the formation of the federal road safety commission in February 18,1988 many procedures were changed the plate number format and their slogans. Also it was made constitutional under the motor vehicle administration as a residual issue under the 1999 Nigerian constitution that a person seeking for vehicle licensing must first process the National driving license. Motor vehicle administration is a composite process and revolves around the management and the control of a motor licensing including driving and other related license which includes the following matters:

#### 1. Issuance and renewal of:

- Motor vehicle licenses
- Local driving licenses
- Learners permit
- Certificate of roadworthiness of all licenses issued

### 2. registeration of vehicle

3. prepare and keeping of statutory registers of all license issued.

In a highly populated country such as Nigeria , where a number of car owners increases yearly, and the registration of the vehicle is the slow process and sometimes in the sense of it a difficult task. This is true in the sense that motor vehicle licensing authority / system attend to thousands of car per year; thereby Keeping records of license and their registrations manually was a tedious work. It resulted in file containing records of application being misplaced, damage or misfiled due to the way the manual methods of writing these records also writing records of applicants in books affected the span of the records materials. And since the continue use and re-use of these booklets everyday might lead to wear and tear which eventually led to loss of important information.

#### 1.2 STATEMENT OF STUDY

The basic problem facing motor vehicle licensing are; lack of proper security in the system that creates avenue for fraud and manipulation of stored data in the system, lack of proper and accurate and concise information about the vehicle owner, poor performance of the system during information retrieval

Due to inefficient storage of data, lack of proper and accurate record keeping of stored information and finally lack of review process this is an situation where

There is no avenue created for review. This hinders adequate maintenance of the system

#### 1.3 OBJECTIVES OF THE STUDY

This aims of this study are:

- To develop software that will link by computerization all the procedures of vehicle registration licensing system in license authority (that is, to have a centralized system)
- To improve the system performance and efficiency
- To enhance the database for proper information and record keeping
- To provide a reliable security access in order to avoid tempering with stored data
- To provide means of accessibility in case accident and emergency

# 2. SYSTEM SPECIFICATION

Technologies Used:
OPERATING SYSTEMS : MICROSOFT WINDOWS
Front End : Python language
Web designing language : Python (UI) framework
Back End : MySql
2.1 SOFTWARE REQUIREMENTS :
Python 3.10
MySql
Microsoft Windows or Linux
Default (UI), FrontPage for End Programming
2.2 HARDWARE REQUIREMENTS :
Intel core i3 processor or equivalent or higher
512 MB Ram or Higher
256 SDD or Higher
Network connectivity

#### 3.SYSTEM STUDY AND ANALYSIS

Vehicle registration system is an information system with a strong database that is used to record vehicle information, using of SQL Database is an organized collection of information, data, or citations stored in electronic format that can be searched for specific information or records by techniques specific to each database. Vehicle registration system is also a database program used to electronically collect data, process it and also store it for future use. This Vehicle registration system program implements the techniques of database normalization. Normalization is the process of efficiently organizing data in a database. There are two goals of the normalization process: eliminating redundant data (for example, storing the same data in more than one table) and ensuring data dependencies make sense. Both of these are worthy goals as they reduce the amount of space a database consumes and ensure that data is logically stored. The program deal on Vehicle registration system. The sore purpose of this program is to enhance and facilitate the Management approach to information collection and storage for future use. This project work is implemented with python programming language and python based default framework with the back end support of MySql database system with the own user database purchasable user data base.

vehicle registration involves with the appropriate authorities is one of those necessary tasks on taking ownership of a vehicle. From the owner's perspective, it usually provides some proof of ownership and bestows a right to drive the vehicle on public roads assuming the appropriate fees have been paid. From the state authorities' perspective, the registration system provides multiple functions, including a means of generating revenue, for issuing traffic infringement enforcement notices and for ensuring that vehicles driven on the public roads meet the required safety standards. However, the vehicle registration system can also play a role in preventing and detecting vehicle crime. For example, it provides a means by which the police can confirm the link between a vehicle's ownership and its driver during a routine traffic stop which may detect a stolen vehicle.

The vehicle registration system can also be designed to reduce the opportunities for profiting from vehicle theft by making it difficult to re-register a stolen vehicle. Alterations to the vehicle registration system have long been identified as a means by which vehicle crime could be reduced. Indeed, identified the potential for reducing vehicle crime by improving the then fragmented vehicle registration system, which allowed vehicles stolen in one local authority area to be re-registered in another. More, a range of crime reduction proposals for tightening the vehicle registration system were developed recently.

#### 3.1 ALGORITHM TO EXTRACT VEHICLE INFORMATION:

The objective of the proposed thesis work is to extract the vehicle information on road based on its appearance that is color, shape, model, any identifiable mark or any other source of information that is apparently available on the vehicle.

The presented work is divided into following steps:

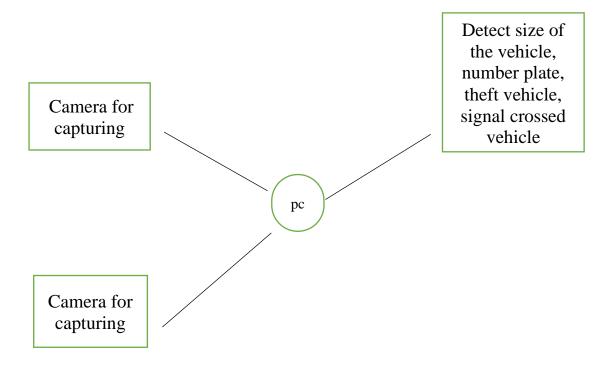
- Image Acquisition of vehicles on road
- Segmentation of vehicle amongst different vehicles
- Image Enhancement and binarization
- Extraction of vehicle shape, size and other dimensional features
- Normalization of features with respect to zooming effect With the rise in traffic related crimes the need
- Vehicle data storage for its identification

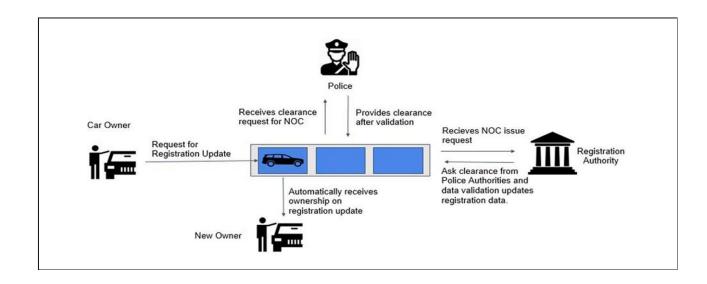
#### The basic method for extracting the vehicle data is divided into following steps:

- Image Acquisition
- Image Enhancement
- Image segmentation for different vehicles in individual frames
- Image binarization using Otsu algorithm
- Dimensional feature Extraction size, body aspect, length, width etc.
- Normalization of features with respect to zooming effect Storage of vehicle identification

# 3.2 PROPOSED METHOD FOR DETECTING VEHICLES:

Fig 1.1:

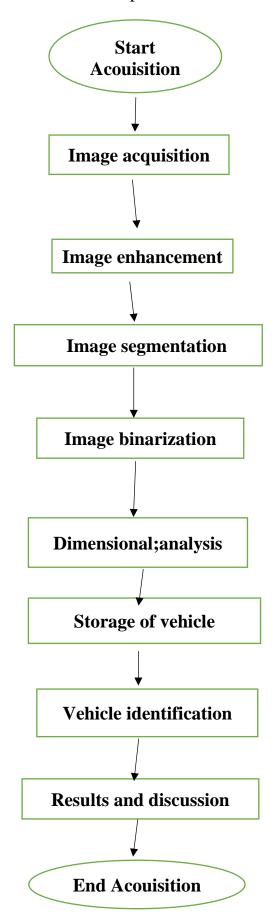




#### 3.3 EXTRACTED NUMBERPLATE INFORMATION

#### **FLOWCHART:**

Fig 1.2 represent extracted number plate information



Registration of motorised road vehicles in India is done by local Regional Transport Offices of the states. Commercial vehicles registered in one state cannot enter another state without a permit, which usually incurs a significant cost. Passenger vehicles registered in one state are allowed to pass through another state, but are not allowed to stay in another state for longer than a fixed number of months unless the road-tax being paid depending on Transport Rules of the States. A latest move by the Government of India may centralise the registration procedure in order to curb the corruption which prevails with all the regional transport offices. This is expected to make the registration of a vehicle valid in all states, unlike now, when many vehicle owners need to have separate registration certificates for each separate state, which is very hectic now

Every time a buyer purchases a new vehicle, the dealer issues a TR sticker. TR refers to 'To Register'. It is a temporary number which is valid only for a period of one month. Within this period, the owner must visit the district's RTO to officially register the vehicle and get a standard license plate. The motor vehicle inspector at the RTO office is responsible for the verification. During this period when your motor vehicle is yet to be registered, you cannot drive your vehicle on the road. It may be subjected to hefty fines. The process of registration includes verification of the vehicle purchased, your address etc. Before the registration is complete, the RTO inspector also checks the details such as the engine and chassis numbers. It is a must to carry all the important documents like PUC, driving license, sales invoice, etc while getting the vehicle registered. In the case of commercial vehicles, documents such as a roadworthiness certificate and transportation permit are also required. The license number is valid for 20 years.in order to make your vehicle stand out, you can opt for a custom number too. An example of this would be, codes such as 3333 or 6666. It is difficult to purchase a singular number, such as 7, particularly because numbers below 100 are commonly registered to government vehicles. These special 'lucky numbers' are often available for sale. The pricing for such a unique number can go as high as Rs. 3 lakh, and it is often a common practice for RTOs to hold an auction for them in certain states. You could check the details on an auction of such numbers on your state RTOs website

#### 4. SYSTEM DESIGN

#### **4.1 INPUT DESIGN:**

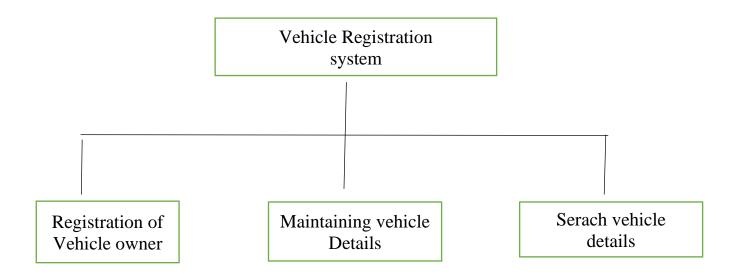
The overall system design objective is to provide an efficient, framework modular design That will help to the system implementation. Facilitate change and result in an easy implementation this will be accomplished by strong python default (UI) designing it provide a authentication n to the framework platform designing . in addition this document will provide an interface design models that are consistent user friendly and will provide straight forward transition through the various system functions

#### **4.2 OUTPUT DESIGN:**

- The extract number plate information design this design has the detailed diagram of the system, server ,client architecture
- Data design the data design include an MySql as well as database design
- Functional design description this section has the functional used by the both default and non default funtions

#### **4.3 DATABASE DESIGN:**

The vehicle registration which contain major part which include Owners detail, name, id proff. The user select one of the available options as an input to the system. According to the input by the system acts and rest of the functions are performed accordingly. The admin can operate an any vehicle registration. But the normal vehicle owner or users can only access their details Of all the function



Purpose of project is to maintain details of the vehicle registration such as storing information

Information
About:

Name
Address
Vehicle chassis number
Model.name
Vehicle payment
Vehicle support type
Distributer name
Payment details
Deposit
Balanced

Registered number

#### 5.SYSTEM DEVELOPMENT

#### **5.1 LOGIN MODULE:**

Login module will help in authentication of user accounts users who have valid login id and password can only login into their respective account

#### **5.2 SERACH MODULE:**

Suppose there are some of vehicle information to know this we have a search a particular vehicle and we know the information of the vehicle. In a manual system it is a tedious task though we know the information of the vehicle, but using this module we can easily search the vehicle information by the specifying the name of the vehicle owner in the search criteria. Thus this module will help the administrator in searching the vehicle information with the various criteria easily

#### 5.3 REGISTERATION MODULE AND ACCOUNT MODULE:

This module will help the vehicle users get registered from anywhere if Internet is present. This module will really simplify the task of an paper registration. Also after successfully registration the user can update information and change their password. As and when is required

#### **5.4 USER MANAGEMENT:**

This module will help the administrator in enabling/disabling a user Account and updating user information as required

# 6.FEATURES

The sample program provides following of the user:
Administrator:
Login \ logout
View vehicle information edit vehicle information
Enable / disable edit vehicle information

#### 7. CONCLUSION

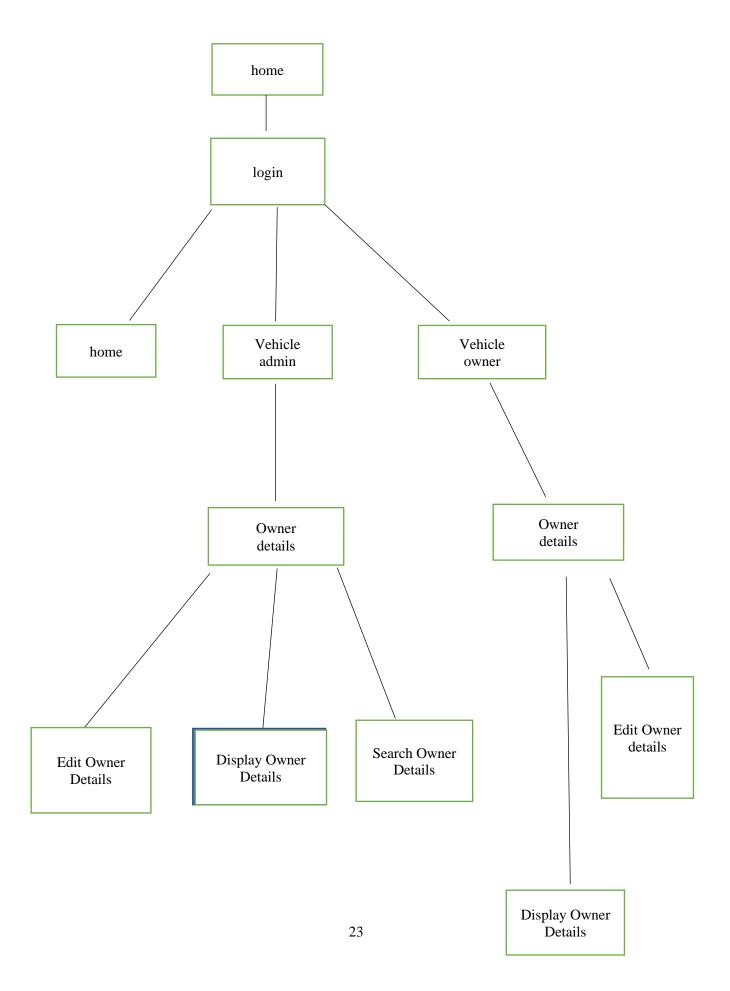
Issuance of Driving License and Vehicle registration are the normal activities of RTA in India. Additionally the back tracking of the said information is more meaningful in many areas. Number Plate Recognition is used increasingly for many of the purposes in these lines. Integrating this with Road Transport Authorities in a country with Big Data will be of great advantage for information seekers especially for automatic toll collection, maintaining traffic activities and law enforcement apart from identification of the vehicle owner and bringing discipline. Many methods for Vehicle Number plate identification systems are used for the purpose of successful monitoring and control. A number plate is used to identify each vehicle uniquely, which states a legal license to participate in the public traffic.

Vehicles all over the world should have its own unique number plate - mounted onto its body (at least at the back side). A vehicle without a properly mounted and well noticeable number plate should not run on the roads. To process, arrange or evaluate data everyone thinks about using computers. If the data is already in the computer most of these tasks are rather easy to be carried out. The proposed method consists of four major stages which include RGB to gray-scale conversion, image binarization and filtration, analysis and dilation, and extracting the accurate location of the number plate. The algorithm presented in this paper could detect the vehicles and recognize the characters in the number plate quickly with good accuracy. Various experiments have been conducted to test the efficiency, like obtaining a number of images varying in illumination and weather conditions, and achieved satisfactory results

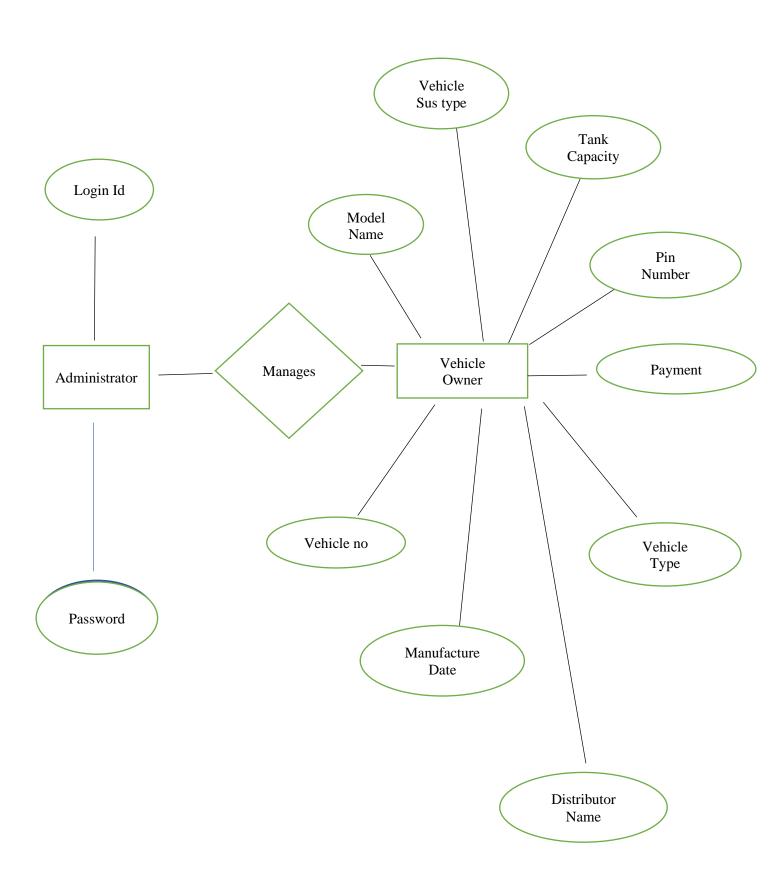
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# **DECISION TREE**



# **DECISION TREE REPRESENTATION**



#### 9.APPENDIX

#### 9.1 SOURCECODE:

```
1.FORM20.PY:
import requests
from tkinter import *
from tkinter import messagebox
from tkinter.messagebox import INFO
from PIL import Image, ImageTk
from tkinter import ttk
from tkinter import scrolledtext
import winsound as sound
import pymysql as m
import time
import pathlib
class Form20:
  def __init__(self,root):
    self.root = root;self.root.geometry("900x580")
    self.root.title('FORM.20 -> Registion Form For 2WDV & 4WDV'.center(65))
    self.root.config(bg='#848482');self.root.resizable(False,False)
    self.root.iconbitmap('{}\image\\ch.ico'.format(pathlib.Path().resolve()))
    #Form20.internet(self)
  def internet(self):
    url = "https://www.google.com"
    timeout = 1
    try:
        request = requests.get(url, timeout=timeout)
```

```
onl = Label(self.root,text="Internet Status:",bg = "GRAY")
        onl.place(x = 300, y = 10)
        on = Label(self.root,text="ON",fg="GREEN")
        on.place(x = 390, y = 10)
    except (requests.ConnectionError, requests.Timeout) as exception:
        onl = Label(self.root,text="Internet Status:",bg = "GRAY")
        onl.place(x = 300, y = 10)
        on = Label(self.root,text="OFF",fg="RED")
        on.place(x = 390, y = 10)
        sound.MessageBeep()#
        messagebox.showwarning("INTERNET","UNABLE TO CONNECT")
  def inject(self):
    Form20.internet(self)
    self.name = self.NAME Entry.get();self.age = self.AGE Entry.get();self.dob =
self.DOB ENTRY.get()
    self.address = self.txt.get('1.0','end');self.pin = self.PIN ENTRY.get();self.pan =
self.PAN_ENTRY.get()
    self.mob=self.MOB ENTRY.get();self.dis = self.SID ENTRY.get();self.place =
self.PLACE_ENTRY.get()
    self.contact = self.CON ENTRY.get();self.daddress = self.DIStxt.get('1.0','end')
    self.ventry = self.VT ENTRY.get();self.chassis =
self.CHASSIS_ENTRY.get();self.mfname = self.VTMF_ENTRY.get()
    self.model = self.MODELN ENTRY.get();self.pay =
self.VTPA_ENTRY.get();self.mfdate = self.MDATE_ENTRY.get()
    self.cylinder = self.VCMF_ENTRY.get();self.sus = self.VSUS_ENTRY.get();self.tank
= self.VTTK ENTRY.get()
    self.seat = self.SEAT ENTRY.get();self.amt = self.AMT ENTRY.get();self.reg =
self.RAMT_ENTRY.get();self.gen = self.GENDER_ENTRY.get()
    time.sleep(2)
```

```
if (self.name == "" or self.age== "" or self.dob == "" or self.address == ""
    or self.pin == "" or self.pan == "" or self.mob == "" or self.dis == ""
    or self.gen == "---SELECT---" or self.place == "" or self.contact == ""
    or self.daddress == "" or self.ventry == "---SELECT---" or self.chassis == "" or
self.mfname == "---SELECT---"
    or self.model == "" or self.pay == "---SELECT---" or self.mfdate == "" or
self.cylinder == "---SELECT---"
    or self.sus == "---SELECT---" or self.seat == "" or self.amt == ""or self.reg == ""or
self.tank == "---SELECT---"):
        sound.MessageBeep()#
        messagebox.showwarning("WARNING","Value Missing")
    else:
        db = m.connect(host='localhost',user='root', password = "",db='sasi')
        cur = db.cursor()
        time.sleep(1)
        #¬¬¬¬¬¬¬¬¬¬¬¬ data base loader...
        exe = "INSERT INTO
vehical(name,age,gender,DOB,Adderss,Pin,Pan,Mobile_no,Distributor_Name,Place,
Contact_No,Address,Vehical_type,Chassis,Manufacture_By,Model_name,Manufact
ure_date,Cylinder_type,Tank_capacity,Suspension,Payment_type,Total_Bill_Amoun
s,%s,%s,%s,%s,%s,%s,%s)"
        val
=(self.name,self.age,self.gen,self.dob,self.address,self.pin,self.pan,self.mob,self.dis,
self.place,self.contact,self.daddress,self.ventry,self.chassis,self.mfname,self.model,s
elf.mfdate,self.cylinder,self.tank,self.sus,self.pay,self.amt,self.reg)
        cur.execute(exe,val) #
        time.sleep(1)
```

db.close()

```
print("updated Sucessfully..")
        for i in val:
             print(i)
  def clear(self):
      t = (0, 'end',"---SELECT---") #Change value Easily for future updates & Tuples
consume memory Lesser than List
      try:
        self.NAME Entry.delete(t[0],t[1])
        self.AGE_Entry.delete(t[0],t[1])
        self.DOB_ENTRY.delete(t[0],t[1])
        self.PIN ENTRY.delete(t[0],t[1])
        self.PAN ENTRY.delete(t[0],t[1])
        self.MOB_ENTRY.delete(t[0],t[1])
        self.SID ENTRY.delete(t[0],t[1])
        self.PLACE_ENTRY.delete(t[0],t[1])
        self.CON_ENTRY.delete(t[0],t[1])
        self.MODELN ENTRY.delete(t[0],t[1])
        self.CHASSIS ENTRY.delete(t[0],t[1])
        self.RAMT_ENTRY.delete(t[0],t[1])
        self.SEAT_ENTRY.delete(t[0],t[1])
        self.AMT_ENTRY.delete(t[0],t[1])
        self.MDATE ENTRY.delete(t[0],t[1])
        self.txt.delete(0.0,t[1])
        self.pretxt.delete(0.0,t[1])
        self.DIStxt.delete(0.0,t[1])
      finally:
        self.VTPA ENTRY.set(t[2])
        self.GENDER ENTRY.set(t[2])
```

```
self.VSUS ENTRY.set(t[2])
        self.VTMF ENTRY.set(t[2])
        self.VCMF ENTRY.set(t[2])
        self.VTTK ENTRY.set(t[2])
        self.VT ENTRY.set(t[2])
        sound.MessageBeep()
        messagebox.showinfo("{}".format('cleared'))
  def pre(self):
      Form20.internet(self)
      #self.pretxt.config(bg ="gray")
      self.pretxt.delete(0.0,'end')
      self.load = {"NAME:":self.NAME Entry.get(),"AGE:":self.AGE Entry.get(),
          "GENDER:":self.GENDER ENTRY.get(),"DOB:":self.DOB ENTRY.get(),
          "ADDERSS:":self.txt.get('1.0','end'),"PIN.NO:":self.PIN ENTRY.get(),
          "PAN.NO:":self.PAN_ENTRY.get(),"MOBILE.NO:":self.MOB_ENTRY.get(),
"DISTRIBUTOR.NAME:":self.SID ENTRY.get(),"DISTRIBUTOR.PLACE:":self.PLACE ENT
RY.get(),
"DISTRIBUTOR.MOBILE.NO:":self.CON ENTRY.get(),"DISTRIBUTOR.ADDRESS:":self.D
IStxt.get('1.0','end'),
"VEHICAL.TYPE:":self.VT ENTRY.get(),"CHASSIS:":self.CHASSIS ENTRY.get(),
"MANUFACTURE.BY:":self.VTPA_ENTRY.get(),"VEHICAL.MODEL:":self.MODELN_ENT
RY.get(),
"PAY.TYPE:":self.VTMF ENTRY.get(),"MANUFACTURE.DATE:":self.MDATE ENTRY.ge
```

```
t(),
```

```
"NO.OF.CYLINDER:":self.VCMF ENTRY.get(),"SUSPENSION.TYPE:":self.VSUS ENTRY.
get(),
"TANK.CAPACITY:":self.VTTK ENTRY.get(),"SEAT":self.SEAT ENTRY.get(),"FINAL.PAY.
AMOUNT:":self.AMT ENTRY.get(),
          "REGISTRATION.FEE:":self.RAMT_ENTRY.get()}
      for i in self.load.items():
        self.pretxt.insert(END,i)
        self.pretxt.insert(END,'\n')
  def form(self):
    #self.root.wm attributes('-transparentcolor', 'gray')
    Form20.internet(self)
    self.INFO = Label(self.root,text=('The Registering Authority'),font = ("Times New
Roman",11),bg = 'black',fg='#1780C2')
    self.INFO.place(x = 100, y = 5)
    self.NAME = Label(self.root,text="Name",bg='gray',font=('Arial
bold',10));self.NAME.place(x=10,y=30)
    self.NAME_Entry = Entry(self.root,width=20,fg='black',bg='white',font = ("Times
New Roman",11))
    self.NAME_Entry.place(x = 58,y = 30)
    self.DIS = Label(self.root,text='Details of Vehical & Distributor',font = ("Times
New Roman",11),bg = 'black',fg='#1780C2')
    self.DIS.place(x = 100,y=225)
#-----#
    self.AGE = Label(self.root,text="Age",font=('Arial
bold',10),bg='gray');self.AGE.place(x=210,y=30)
    self.AGE Entry = Entry(self.root,width=5,fg='Black',font = ("Times New
```

```
Roman",11))
   self.AGE Entry.place(x = 250, y = 30)
#-----#
   self.GENDER = Label(self.root,text="Gender",bg='#848482',font=('Arial
bold',10));self.GENDER.place(x=10,y=60)
   self.GENDER ENTRY = ttk.Combobox(self.root, width=12, state='readonly', font =
("Times New Roman",11))
   self.GENDER ENTRY['value'] = ('MALE','FEMALE')
   self.GENDER ENTRY.place(x = 65,y=60);self.GENDER ENTRY.current()
   self.GENDER ENTRY.set("---SELECT---")
#-----#
   self.DOB = Label(self.root,text='DOB',bg='#848482',font=('Arial
bold',10));self.DOB.place(x = 195, y = 60)
   self.DOB ENTRY = Entry(self.root,width=10,fg='Black',font = ("Times New
Roman",11))
   self.DOB ENTRY.place(x=230,y =62)
#-----#
   self.ADDRESS = Label(self.root,text='Address',bg='#848482',font=('Arial
bold',10));self.ADDRESS.place(x = 10, y = 110)
   self.txt=scrolledtext.ScrolledText (self.root,width=30,height=3,font = ("Times
New Roman",11))
   self.txt.place(x = 77,y = 95)
#-----#
   self.PIN = Label(self.root,text='Pin.NO',bg='#848482',font=('Arial
bold',10));self.PIN.place(x = 10,y = 165)
   self.PIN_ENTRY = Entry(self.root, width=15, fg='Black', font = ("Times New
Roman",11))
   self.PIN ENTRY.place(x=70,y=165)
#-----#
```

```
self.PAN = Label(self.root,text='Pan.NO',bg='#848482',font=('Arial
bold',10); self.PAN.place(x = 180,y = 165)
   self.PAN ENTRY = Entry(self.root,width=15,fg='Black',font = ("Times New
Roman",11))
   self.PAN ENTRY.place(x=240,y=165)
#-----#
   self.MOB = Label(self.root,text='Mobile.NO',bg='#848482',font=('Arial
bold',10));self.MOB.place(x = 10,y = 195)
   self.MOB ENTRY = Entry(self.root, width=15,fg='Black',font = ("Times New
Roman",11))
   self.MOB_ENTRY.place(x=95,y=195)
#-----#
   self.SIDNAME = Label(self.root,text='Distributer Name',font=('Arial
bold',10),bg='gray');self.SIDNAME.place(x=10,y=265)
   self.SID ENTRY = Entry(self.root,width=30,fg='Black',font = ("Times New
Roman",11))
   self.SID ENTRY.place(x = 120, y = 267)
#-----#
   self.SIDPLACE = Label(self.root,text='Place',font=('Arial
bold',10),bg='gray');self.SIDPLACE.place(x=10,y=295)
   self.PLACE ENTRY = Entry(self.root, width=25, font = ("Times New Roman", 11))
   self.PLACE_ENTRY.place(x = 50,y = 297)
#-----#
   self.CON = Label(self.root,text='Contact.NO',bg='#848482',font=('Arial
bold',10));self.CON.place(x = 250, y = 295)
   self.CON_ENTRY = Entry(self.root,width=15,fg='Black',font = ("Times New
Roman",11))
   self.CON ENTRY.place(x=330,y=295)
#-----#
```

```
self.DISADDRESS = Label(self.root,text='Address',bg='#848482',font=('Arial
bold',10));self.DISADDRESS.place(x = 10,y = 347)
   self.DIStxt=scrolledtext.ScrolledText (self.root,width=25,height=3,font =
("Times New Roman",11))
   self.DIStxt.place(x = 77, y = 330)
#-----#
   self.VT = Label(self.root,text="Vehicle Type",bg='#848482',font=('Arial
bold',10));self.VT.place(x=10,y=400)
   self.VT ENTRY = ttk.Combobox(self.root, width=12, state='readonly', font =
("Times New Roman",11))
   self.VT_ENTRY['value'] = ('2WD-BIKE','2WD-E.BIKE','2WD-PL.BIKE','2WD-
DL.BIKE', '2WD-PL.SCOOTY', '2WD-E.SCOOTY')
   self.VT ENTRY.place(x =
100,y=400);self.VT ENTRY.current();self.VT ENTRY.set("---SELECT---")
#-----#
   self.CHASENO = Label(self.root,text='Enter CHASSIS.NO',font=('Arial
bold',10),bg='gray');self.CHASENO.place(x=220,y=400)
   self.CHASSIS ENTRY = Entry(self.root, width=20, font = ("Times New
Roman",11))
   self.CHASSIS_ENTRY.place(x = 345, y = 400)
#-----#
   self.VTMF = Label(self.root,text="Vehicle Mf.N",bg='#848482',font=('Arial
bold',10));self.VTMF.place(x=10,y=430)
   self.VTMF ENTRY = ttk.Combobox(self.root,width=12,state='readonly')
   self.VTMF ENTRY['value'] = ('BAJAJ','HERO','HONDA','ROYAL
EF','SUZUKI','TVS','YAMAHA')
   self.VTMF ENTRY.place(x =
100,y=430);self.VTMF ENTRY.current();self.VTMF ENTRY.set("---SELECT---")
#-----#
```

```
self.MODELN = Label(self.root,text='Model.Name',font=('Arial
bold',10),bg='gray');self.MODELN.place(x=10,y=460)
   self.MODELN ENTRY = Entry(self.root, width=20, font = ("Times New
Roman",11))
   self.MODELN ENTRY.place(x = 100, y = 460)
#-----#
   self.VP = Label(self.root,text='V.Payment',font=('Arial
bold',10),bg='gray');self.VP.place(x=215,y=460)
   self.VTPA ENTRY = ttk.Combobox(self.root,width=12,state='readonly')
   self.VTPA ENTRY['value'] = ('FULL PAYMENT','DUE TYPE')
   self.VTPA ENTRY.place(x =
290,y=460);self.VTPA ENTRY.current();self.VTPA ENTRY.set("---SELECT---")
#------MANUFACTURE------
#
   self.MDATE = Label(self.root,text='MF.Date',font=('Arial
bold',10),bg='gray');self.MDATE.place(x=205,y=430)
   self.MDATE_ENTRY = Entry(self.root,width=20,font = ("Times New Roman",11))
   self.MDATE ENTRY.place(x = 265, y = 430)
#-----#
   self.VTCT = Label(self.root,text="NO.Of Cylinder",bg='#848482',font=('Arial
bold',10));self.VTCT.place(x=10,y=490)
   self.VCMF ENTRY = ttk.Combobox(self.root,width=12,state='readonly',font =
("Times New Roman",11))
   self.VCMF ENTRY['value'] = ('1-CYLINDER','2-CYLINDER')
   self.VCMF ENTRY.place(x =
115,y=490);self.VCMF_ENTRY.current();self.VCMF_ENTRY.set("---SELECT---")
#-----#
   self.VSUS = Label(self.root,text="V.Sus.Type",bg='#848482',font=('Arial
bold',10));self.VSUS.place(x=225,y=490)
```

```
self.VSUS ENTRY = ttk.Combobox(self.root,width=12,state='readonly',font =
("Times New Roman",11))
   self.VSUS_ENTRY['value'] = ('TELESCOPIC FORKS','HOSSACK/FIOR','SINGLE-
sided','HUB-CENTER','SWINGARMS')
   self.VSUS ENTRY.place(x =
315,y=490);self.VSUS ENTRY.current();self.VSUS ENTRY.set("---SELECT---")
#-----#
   self.VTTK = Label(self.root,text="Tank.Cap",bg='#848482',font=('Arial
bold',10));self.VTTK.place(x=10,y=520)
   self.VTTK ENTRY = ttk.Combobox(self.root,width=12,state='readonly',font =
("Times New Roman",11))
   self.VTTK ENTRY['value'] = ('2Ltr & 2T-OIL','4Ltr','4.5Ltr','5.5Ltr')
   self.VTTK ENTRY.place(x =
80,y=520);self.VTTK ENTRY.current();self.VTTK ENTRY.set("---SELECT---")
#-----#
   self.SEAT = Label(self.root,text='NO.Seat MAX',font=('Arial
bold',10),bg='gray');self.SEAT.place(x=10,y=550)
   self.SEAT ENTRY = Entry(self.root, width=2, font = ("Times New Roman", 11))
   self.SEAT ENTRY.place(x = 100, y = 550)
#-----#
   self.AMT = Label(self.root,text='TOTAL.Amount',font=('Arial
bold',10),bg='gray');self.AMT.place(x=120,y=550)
   self.AMT_ENTRY = Entry(self.root,width=10,font = ("Times New Roman",11))
   self.AMT ENTRY.place(x = 225, y = 550)
#-----#
   self.RAMT = Label(self.root,text='Reg.Amount',font=('Arial
bold',10),bg='gray');self.RAMT.place(x=295,y=550)
   self.RAMT ENTRY = Entry(self.root,width=10,font = ("Times New Roman",11))
   self.RAMT ENTRY.place(x = 380, y = 550)
```

```
#-----#
   self.RAMT = Label(self.root,text='='*130,font=('Arial
bold',10),bg='gray');self.RAMT.place(x=0,y=570)
#-----#
   self.preview = Label(self.root,text='Preview',bg='#848482',font=('Arial
bold',10));self.preview.place(x = 500, y = 5)
   self.pretxt=scrolledtext.ScrolledText (self.root,width=50,height=30,font =
("Times New Roman",11))
   self.pretxt.place(x = 500,y = 30);self.pretxt.config(state='normal')
#-----#
   self.clr =
Button(self.root,text='CLEAR',bg='GREEN',command=self.clear);self.clr.place(x =
530,y = 550)
   self.pre = Button(self.root,text='PREVIEW',bg='PURPLE',command =
self.pre);self.pre.place(x = 620, y = 550)
   self.reg =
Button(self.root,text='UPLOAD',bg='MAGENTA',command=self.inject);self.reg.place(
x = 730, y = 550
   self.exit =
Button(self.root,text='EXIT',bg='RED',command=self.root.destroy);self.exit.place(x =
830, y = 550
```

#### 2.SECURITY.PY:

```
from tkinter import *
from tkinter import messagebox
import random as rd
from PIL import Image,ImageTk
from form20 import Form20
import pathlib
paths = pathlib.Path().resolve()
class Security:
  def init (self,sroot):
    self.root = sroot
    self.root.geometry("300x100")
    self.root.title('PASSWORD')
    self.root.resizable(False,False)
    img = PhotoImage(file='{}\image\\BACK3.png'.format(pathlib.Path().resolve()))
    self.root.iconphoto(False,img)
  def get(self):
    self.pass entry = Entry(self.root,width=20,font=("Times New
Roman",12),bg='#BED9E5',show='*')
    self.pass entry.place(x = 70,y = 20)
    self.entry_ok =
Button(self.root,text='OK',bg='#BCC9E5',command=self.value,cursor='hand2')
    self.entry ok.place(x = 200, y = 50)
    self.link = Label(self.root,text='change password',font=("Times New
Roman",9),fg ='red',cursor='hand2')
    self.link.place(x = 100, y = 50)
```

```
self.link.bind("<Button 1>",lambda p: self.change(self))
def value(self):
    #Get value from entry box..
  _a = self.pass_entry.get()
    #Get value from text file.
  file = open("{}\\pass.txt".format(pathlib.Path().resolve()),'r')
  scan = file.read()
  file.close()
    #Compare get and file value..
  if _a == scan:
    self.root.destroy()
    Froot = Tk()
    application = Form20(Froot)
    application.form()
    #rootf.mainloop()
  else:
    a = messagebox.askyesno("Incorrect","Try Again")
    if a == 'yes':
      self.pass_entry.delete(0,'end')
    else:
      self.pass_entry.delete(0,'end')
def change(self,a):
  num = '1234567890'
  num1 = '@$&#+'
  self.new = Toplevel()
  self.new.geometry('300x110')
```

img = PhotoImage(file='{}\image\BACK3.png'.format(paths))

self.new.title("Change Password")

```
self.new.iconphoto(False,img)
  pwd = Label(self.new,text="New Password")
  pwd.place(x = 10, y = 30)
  self.epwd = Entry(self.new,width=15)
  self.epwd.place(x = 95,y=32)
  potp = Label(self.new,text="OTP")
  potp.place(x = 10, y = 70)
  self.epotp = Entry(self.new,width=10)
  self.epotp.place(x = 45,y=72)
  allok = Button(self.new,text='Ok',bg='#ACC155',command=self.save)
  allok.place(x = 200, y = 70)
  suf = num + num1
  size = 5
  self.otp= ".join(rd.sample(suf,size))
  la = Label(self.new,text='{}'.format(self.otp),fg='BLUE',bg='YELLOW')
  la.place(x = 110, y = 70)
def save(self):
  self.p = self.epwd.get()
  self.o = self.epotp.get()
  if self.p == "" and self.o == "":
    messagebox.WARNING("NO VALUE FOUND")
  else:
    if self.otp == self.o:
      self.file1 = open("{}\\pass.txt".format(pathlib.Path.resolve()),'w')
      self.file1.write(self.p)
                                                 sroot.mainloop()"""
      self.file1.close()
      self.new.destroy()
    else:
      messagebox.showwarning("Wrong OTP",'check OTP again')
```

```
"""if __name == ' main ':
                                                 security.get()
  sroot = Tk( security = Security(sroot)
3.__main__.py:
from tkinter import *
from tkinter import scrolledtext
from tkinter import messagebox
from PIL import Image,ImageTk
from security import Security
import winsound as sound
import pathlib
class Main():
  def init (self,root): #Constructor
    self.root= root
    self.root.geometry("800x500")
    self.root.title('Ministry of Vehicle Deportment')
    self.root.resizable(False,False)
  def photo(self):
    self.img =
PhotoImage(file='{}\\image\\TPicon.png'.format(pathlib.Path().resolve()))
    self.root.iconphoto(False,self.img)
    self.image1 =
ImageTk.PhotoImage(Image.open('{}\\image\\LEFT.png'.format(pathlib.Path().resol
ve())))
    self.img1 = Label(self.root,image=self.image1)
    self.img1.place(x = 10, y = 20)
```

```
def mainlabel(self):
    self.m = Label(self.root,text = 'Ministry Of Vehical Deportment',font=("times
new roman bold",30),fg="#138808")
    self.m.place(x = 120, y = 20)
    self.t = Label(self.root,text = 'Tamil Nadu.'.center(40),font=("times new roman"
bold",30),fg='#FF9A2F')
    self.t.place(x = 120, y = 70)
  def button(self):
    self.form = Button(self.root,text='FORM
20',bg='#BEE9E4',cursor='tcross',state='normal',command=self.confrim)
    self.form.place(x = 600, y = 420)
    self.licence = Button(self.root,text='LICENCE
REG.',bg='#BEE9E4',cursor='tcross',state='normal',command=self.update)
    self.licence.place(x = 150, y = 420)
    self.r =
Button(self.root,text='RESET',bg='Yellow',cursor='tcross',state='normal',command=s
elf.reset)
    self.r.place(x = 400, y = 420)
# other Cursore option-->
circlr,clock,cross,dotbox,exchange,fluer,heart,man,mouse,pirate,plus,shuttle,sizing,
spider,spraycan,star,target,tcross,trek,watch
  def tx(self):
    self.txt=scrolledtext.ScrolledText (self.root,width=80,height=10,font = ("Times
New Roman",12),bg='#7CE0F9')
    self.txt.place(x = 85, y = 180)
    I = 'FORM-20:\nAuto owners use RTO form 20 for issuing a permanent
registration number. When you purchase a brand \nnew automobile, the dealer
```

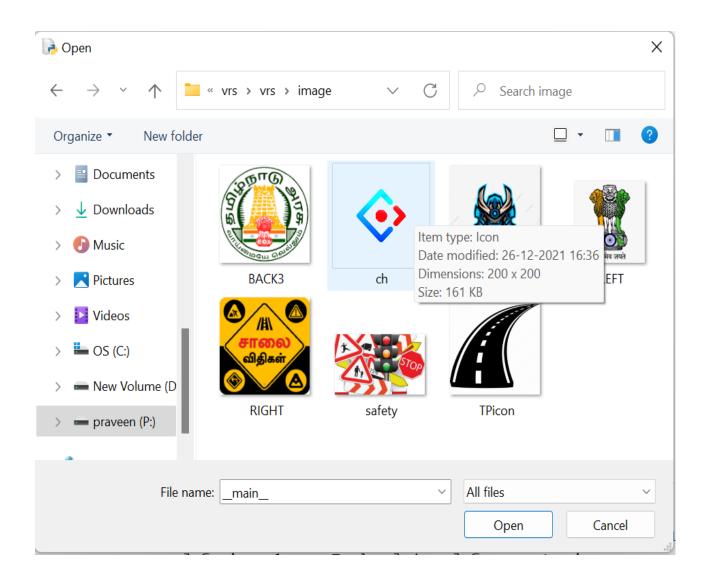
assigns a temporary registration number. Within one month of getting this \nnumber, you must apply for a permanent registration number by filling up RTO form 20.\n\nLICIENCE REG:\nThe license is your ID and certification for driving, the title is the cars ID and the registration ties the person\nto the car in a specific place.' self.txt.insert(END,I) self.txt.config(state='disable') def update(self): sound.MessageBeep()# messagebox.showinfo("INFO","Page in Updateing process.. Acesses Rejected") def confrim(self): sroot = Toplevel() self.security = Security(sroot)# self.security.get() self.form['state'] = 'disabled' self.licence['state'] = 'disabled' def reset(self): self.form['state'] = 'normal' self.licence['state'] = 'normal' if \_\_name\_\_ == '\_\_main\_\_': root = Tk()application = Main(root) application.photo() application.mainlabel() application.button()

application.tx()

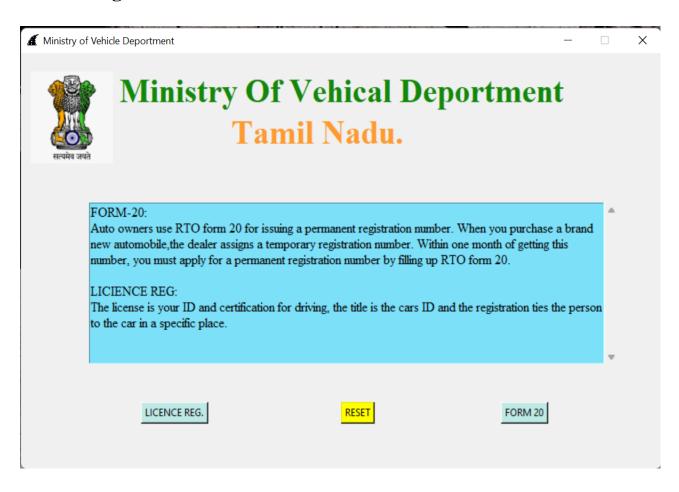
root.mainloop()

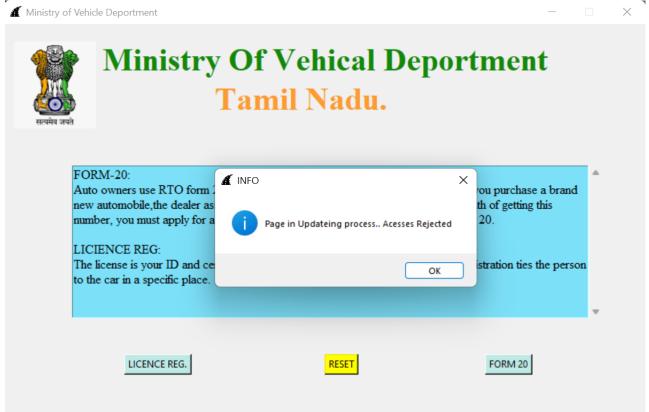
#### 9.2 SCREEN SHOTS:

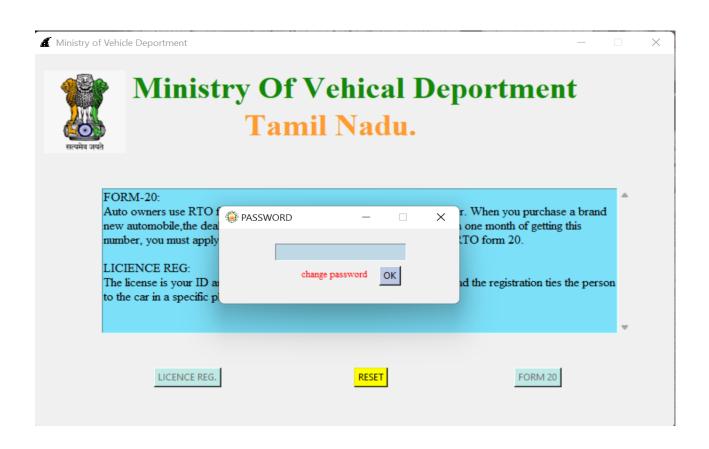
## **Traffic control symbols:**

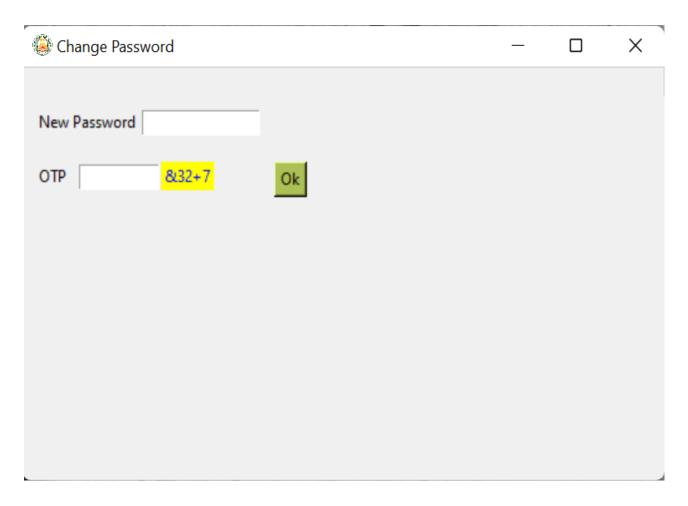


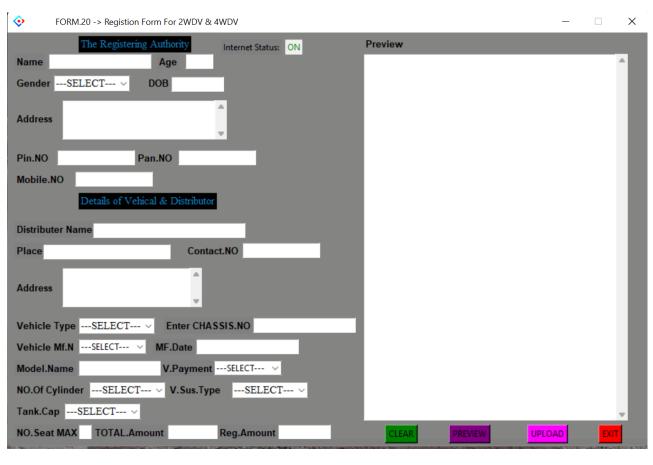
### Vehicle registration form:

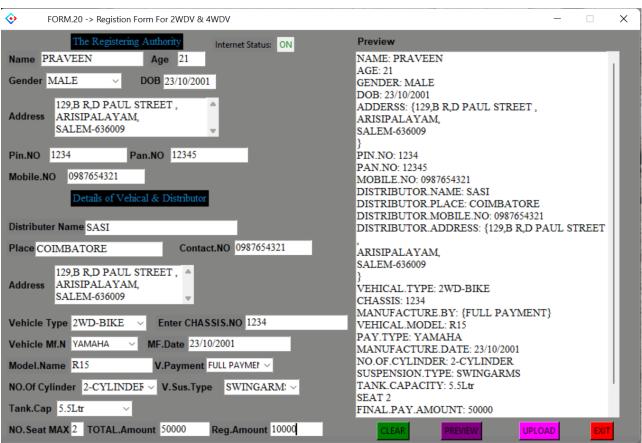












# Sample MySql Database stored picture:

mysql> USE library;  Reading table information for completion of table and  You turn off this feature to get a quicker startup  Database changed  mysql> SELECT * FROM books;		<b>②</b>		<b>〈 〉</b>
book_id   book_name	book_isbn	book_edition	author_id	publisher_id
1   Pilgrim Souls   2   Pilgrim Souls   3   Python for Data Science   4   Python for Data Science   5   Python for Data Science   6   C# 7.0 All-in-One	9780684843117 9780684843117 9781119547662 9781119547662 9781119547662 9781119428107	1 2 1 1 1 1 1 1	1 1 2 2 1 2 3	1   1   2   2   2   3

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