Database Management Systems Lab

Project Report

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DECLARATION

I hereby declare that the entire work embodied in this Mini Project thesis titled, "Project title" submitted to the Visvesvaraya Technological University, Belagavi has been carried out by me at the Department of ISE, NMAM Institute of Technology, Nitte under the supervision of Ms. Preethi Salian, Assistant Professor, Department of ISE, NMAM Institute of Technology, Nitte. This thesis has notbeen submitted in part or full for the award of any diploma or degree of this or any other University.

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CERTIFICATE FROM THE SUPERVISOR

This is to certify that Ms. Vaishnavi Kundeshwara Bhat, bearing USN: 4NM20IS170 and Ms.Vaishnavi S Rai, bearing USN: 4NM20IS171 has worked under my supervision for their mini project thesis titled, "Accident Analysis System". I also certify that; the work is original and has not been submitted to any other University wholly or in part for the award of any other degree.

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ABSTRACT

This main aim of this project is to analyze data based on accidents and display it in a way users would understand. This software just keeps the users aware of the recent accidents that have occurred.

There are many inventories in in automobile industries to design and build safety measures for automobiles, but traffic accidents are unavoidable. There is a huge number of accidents prevailing in all urban and rural areas. There is a huge impact on the society due to traffic accidents where there is a great cost of fatalities and injuries. In recent years, there is a increase in the researches attention to determine the significantly affect the severity of the drivers injuries which is caused due to the road accidents. Accurate and comprehensive accident records are the basis of accident analysis. the effective use of accident records depends on some factors, like the accuracy of the data, record retention, and data analysis. There are many approaches applied to this scenario to study this problem. A recent study illustrated that the residential and shopping sites are more hazardous than village areas.as might have been predicted, the frequencies of the casualties were higher near the zones of residence possibly because of the higher exposure. A study revealed that the casualty rates among the residential areas are classified as relatively deprived and significantly higher than those from relatively affluent areas.

ACKNOWLEDGEMENT
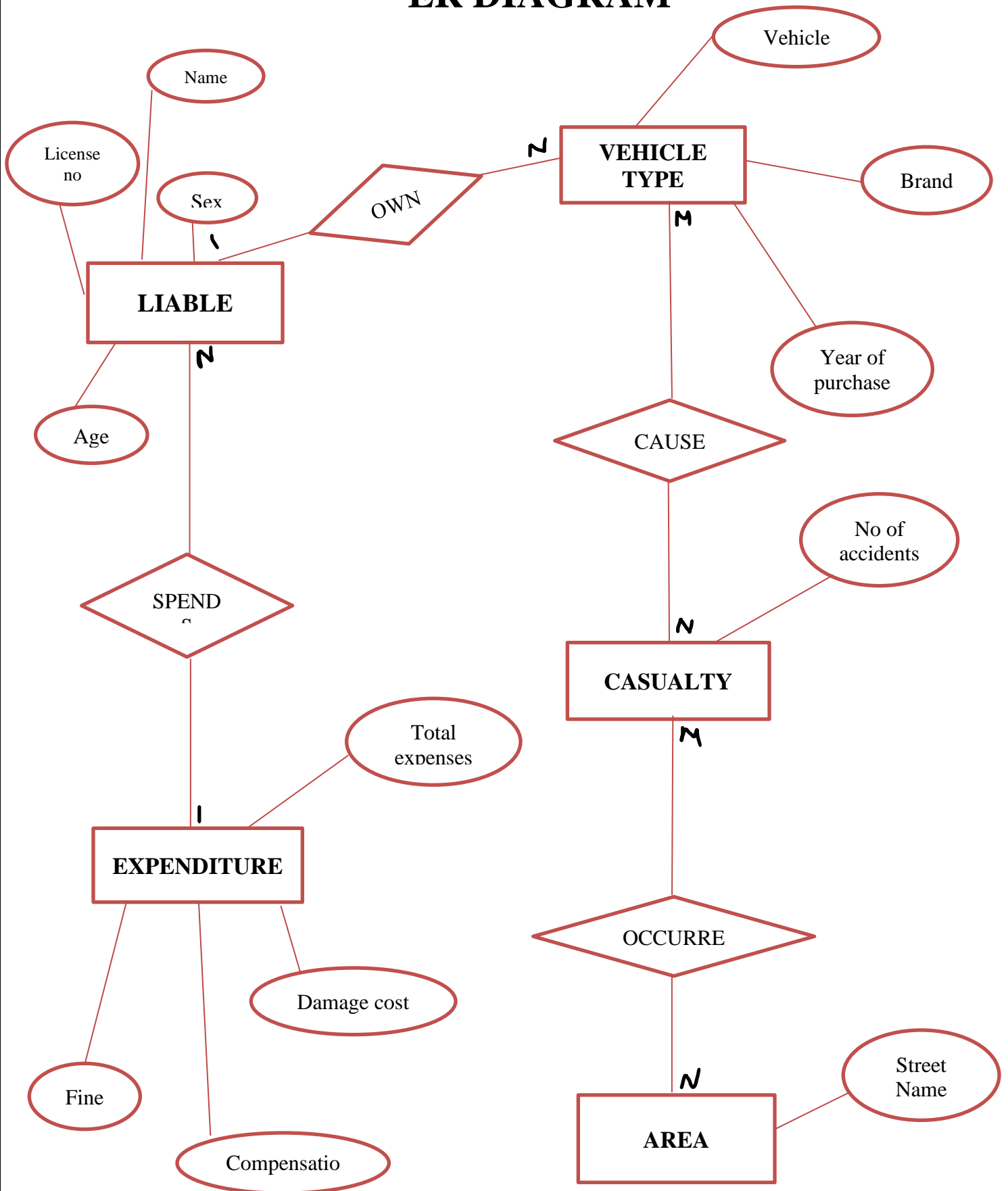
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INTRODUCTION

Road accidents are increasing at alarming rate in the world. According to the latest report of road accidents, the number of deaths because of road accidents in India reached 151,000 in 2018 alone. The report also said that the reasons for road fatalities were speeding, driving on the wrong side of the road, use of mobile phones, drunken driving, non-use of helmets, non-use of seat belts and overloaded vehicles. National Highways and State Highways accounted for 30.2% and 25.2% of the total road accidents, while the total number of deaths were 35.7% and 26.7% respectively. World Health Organization announced that almost 11% of deaths due to accidents were reported by India in 2018. Road accidents are a leading cause of death in India. According to the Global status report on road safety outlined by World Health Organization in 2018, over 1.35 million people are killed each year and almost 3,700 people are killed every day globally in road-accidents involving cars, motorcycles, bicycles, buses, pedestrians, or tucks. Amongst 199 countries, India ranked number one in the number of deaths due to accidents. In recent years, road accident analysis drew substantial attention to the researchers to identify the accident-prone factors. The goal here is to analyze the data and give us insights using visual representation.

Objectives: The main objectives of accident analysis system are:

• The brand which has caused the highest number of accidents

• Classification of the number of accidents based on gender

• Classification of the number of accidents based on age

• The area which has witnessed the highest number of accidents

This information will help the RTO to impose strict actions such as checking the license of the driver, conducting alcohol check, or always placing a traffic police in such areas.

ER DIAGRAM

Vehicle

Name

License no

VEHICLE TYPE

N

Sex

OWN

Brand

LIABLE

I

N

Year of purchase

M

CAUSE

Age

No of accidents

SPENDS

N

CASUALTY

Total expenses

M

I

EXPENDITURE

OCCURRE

Damage cost

N

Fine

Street Name

AREA

Compensatio

SCHEMA DIAGRAM

LIABLE

licenseno	name	sex	age

VEHICLE TYPE

vehicleno	licenseno	brand	yearofpurchase

AREA

vehicleno	streetname

CASUALTY

vehicleno	noofaccidents

EXPENDITURE

licenseno	fine	compensation	damagecost	totalexpenses
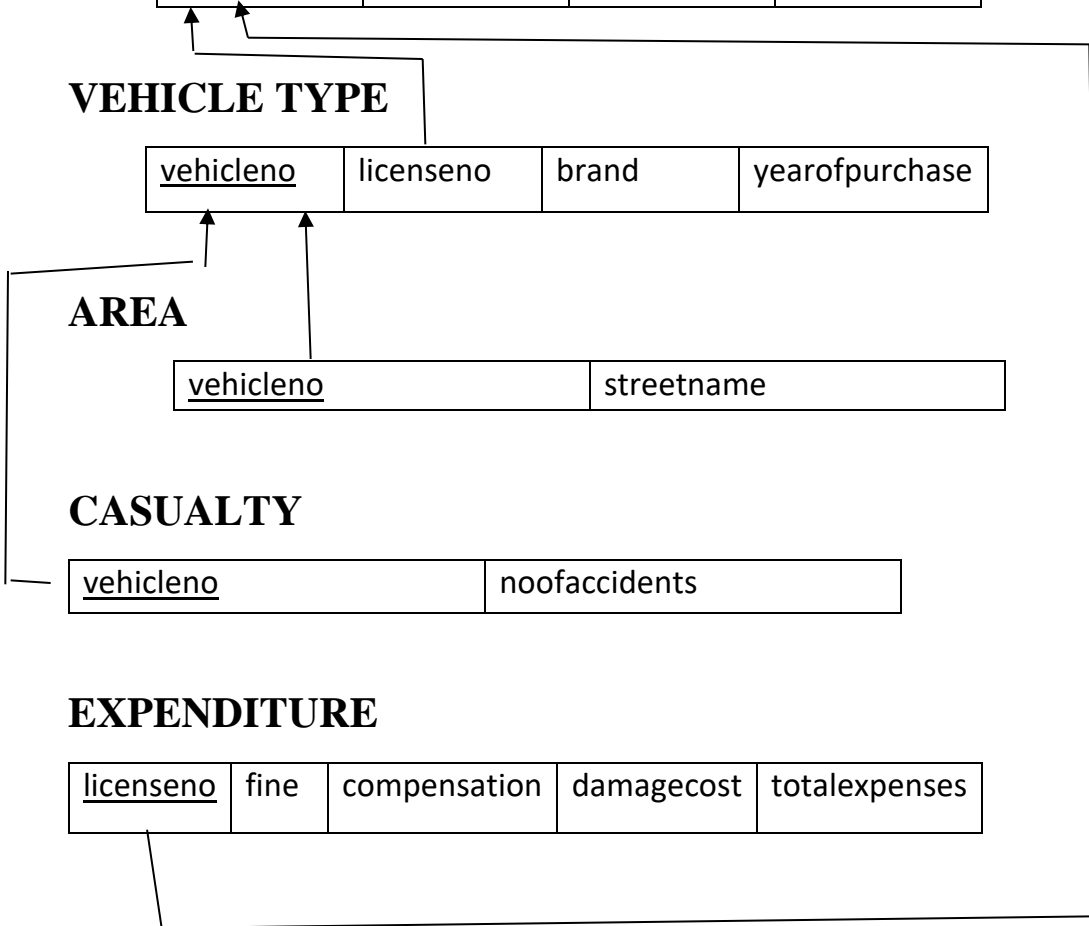
FUNCTIONAL REQUIREMENTS

ADMIN:
- Responsible for ensuring the website remains open to use
- Data Visualization
- Obtain Main Factors of the Road Accidents
- Ability to upload new Datasets
- Predict the future Accidents

USER:
- Loads the webpage
- Four options available
- Keeps the user updated on the current accident scenario
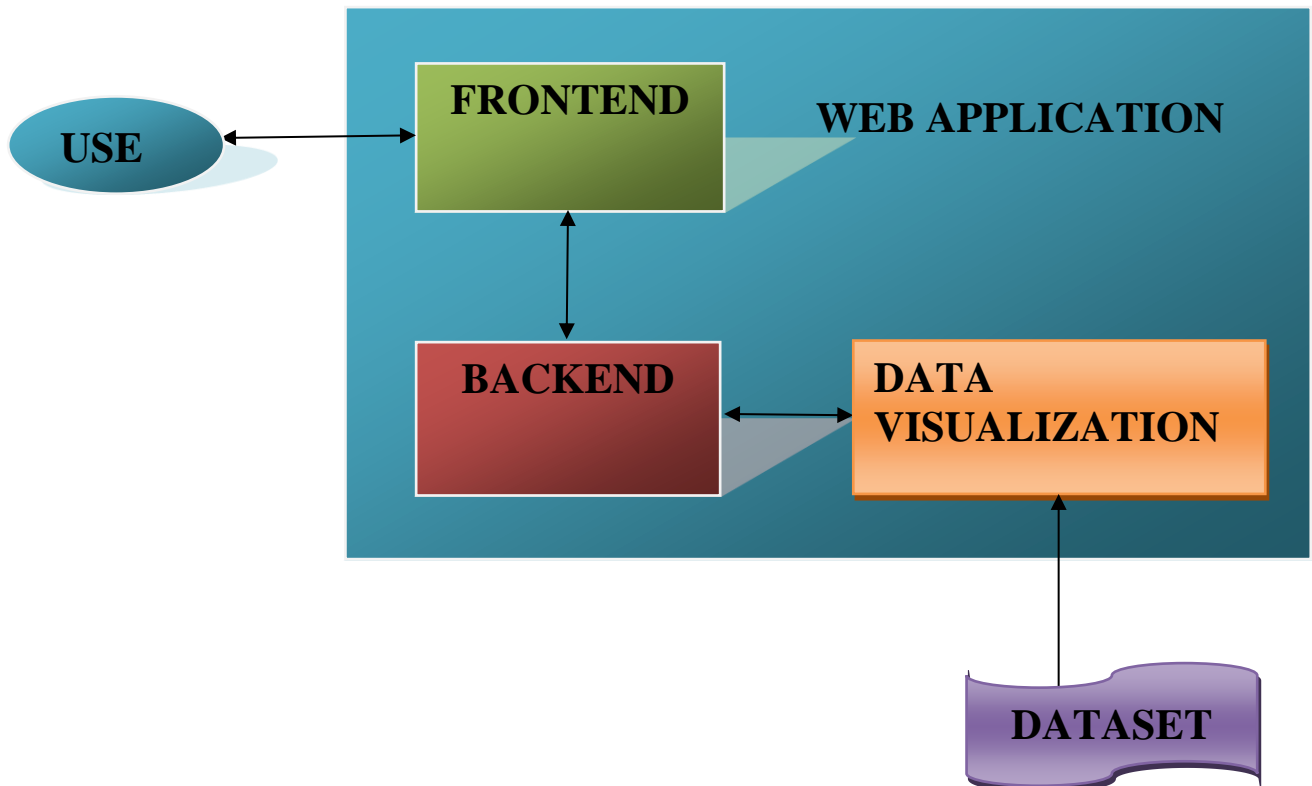
NON-FUNCTIONAL REQUIREMENTS

SOFTWARE REQUIREMENTS
- Operating System: Windows, Mac, Linux

- PC Web: Chrome, Edge

- Jupyter Notebook

- Python Libraries: Numpy, Pandas, Matplotlib, Plotly, Tkinter, mysqlconnector

- MySQL

- Anaconda Terminal

HARDWARE REQUIREMENTS

- Processor: Core i5 or above, AMD Ryzen 5 or above

- RAM: Minimum 8GB

- System Storage: Minimum 512GB

- Clock Speed: Minimum 2GHz

TECHNOLOGIES USED

- Python

- Jupyter Notebook

- Pandas, Numpy, Matplotlib, Plotly

- Tkinter: Python GUI

- MySQL
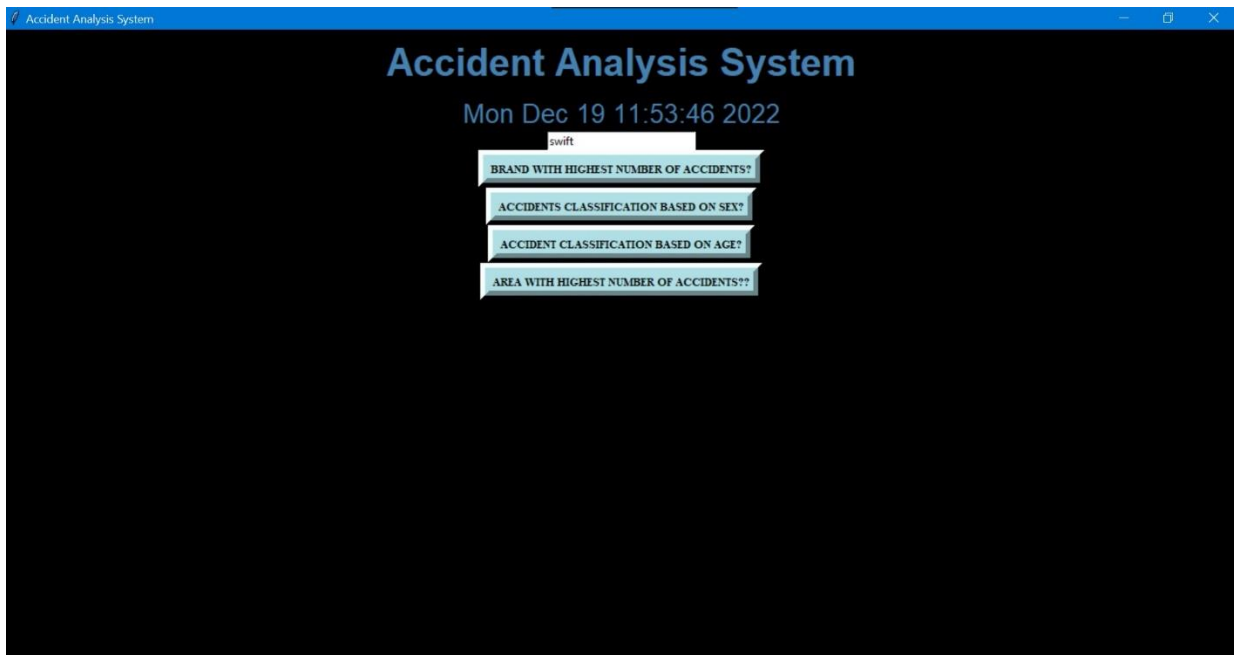
RESULT SNAPSHOTS
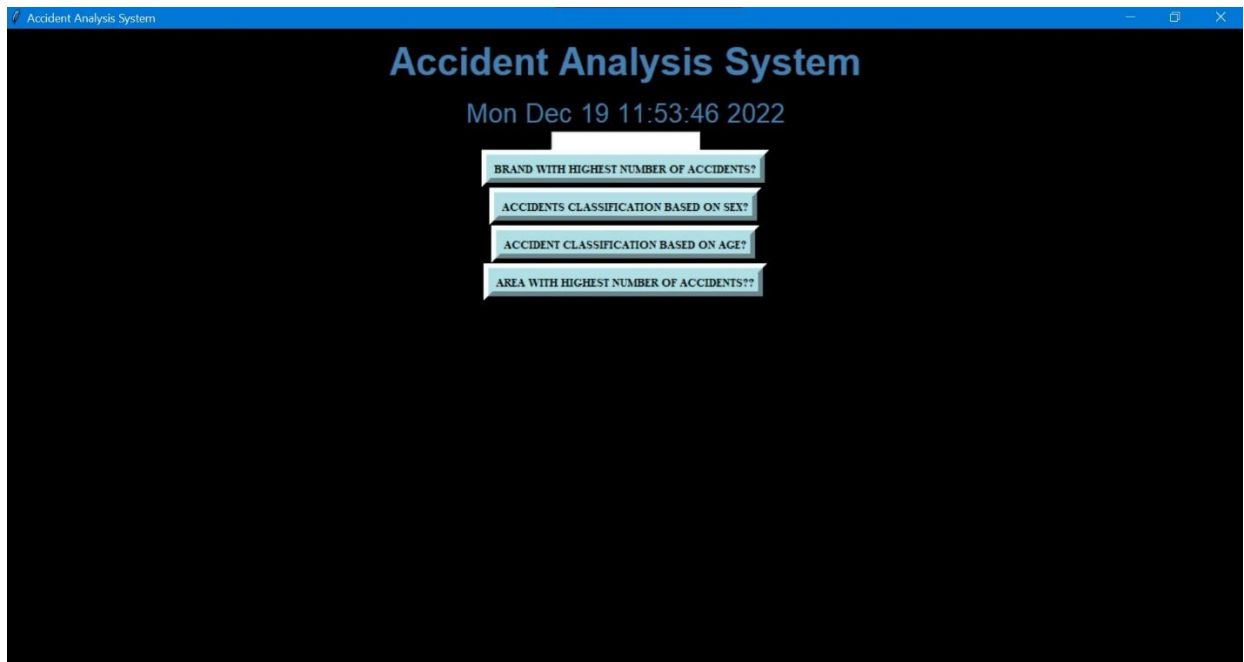
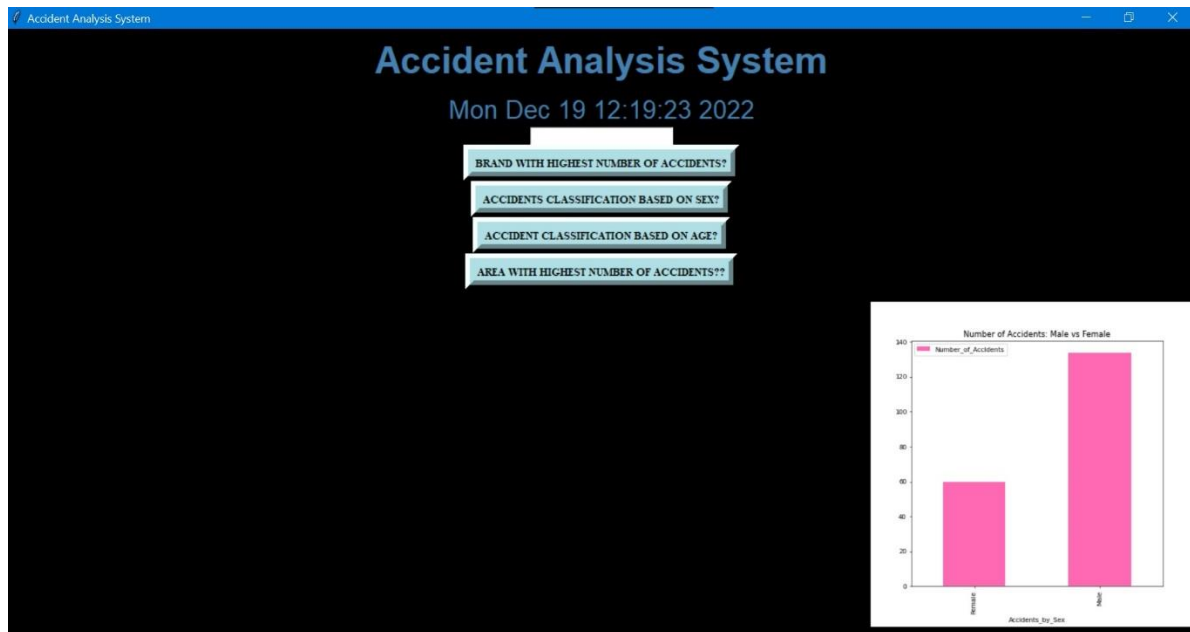*Fig: Newly loaded webpage*
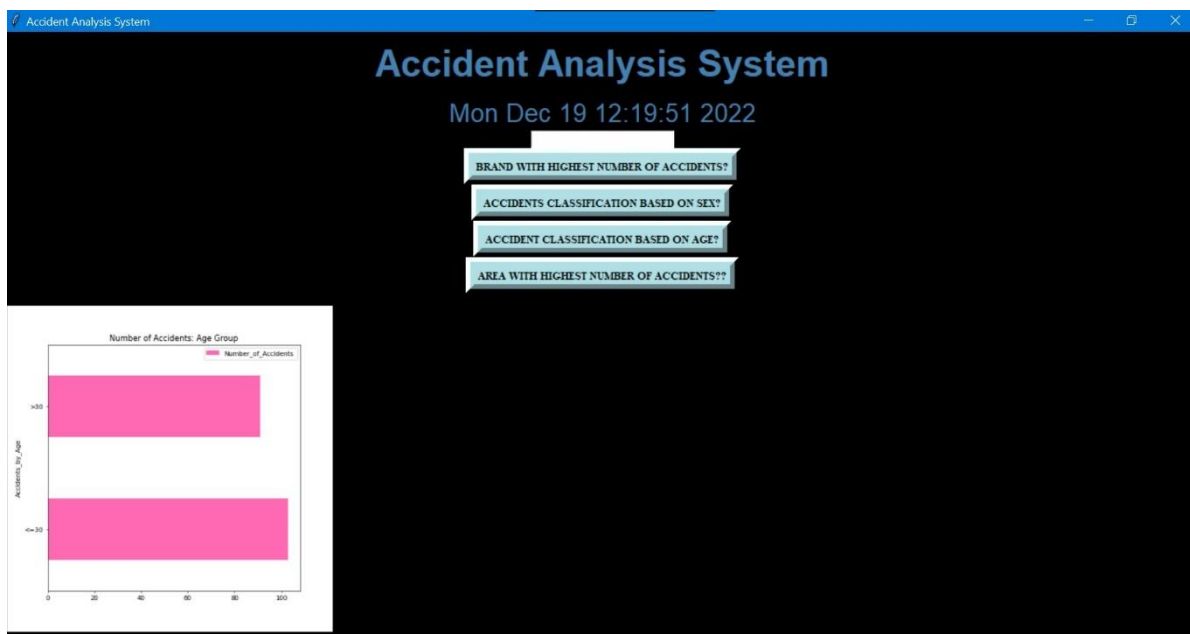

Fig: Button1 is selected
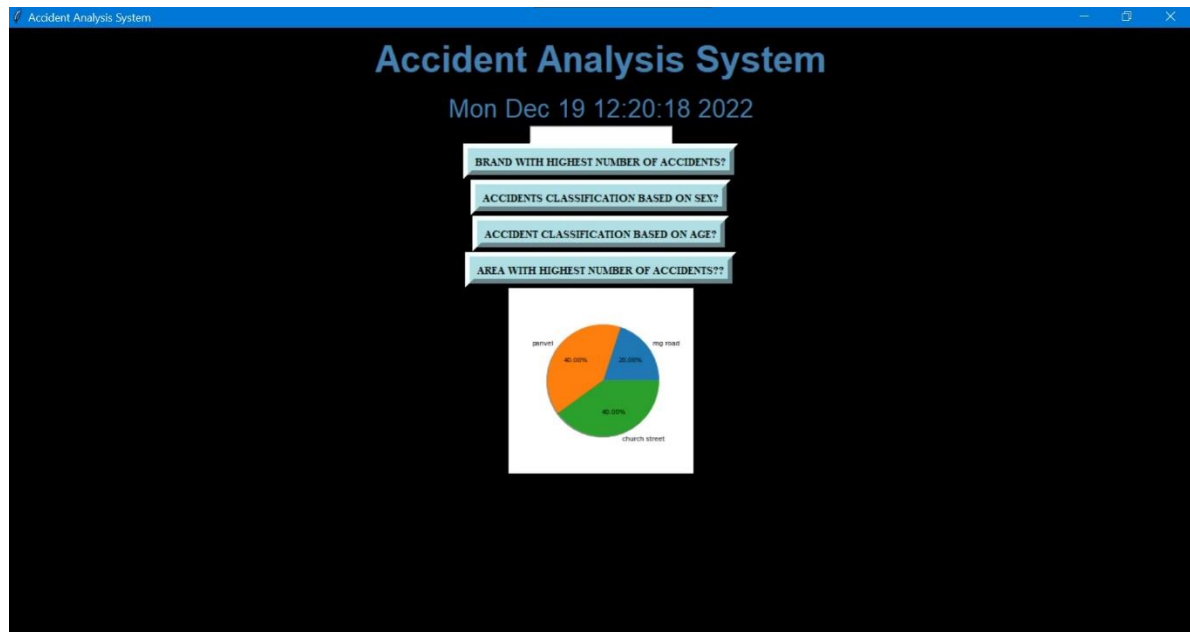
Fig: Button2 is selected

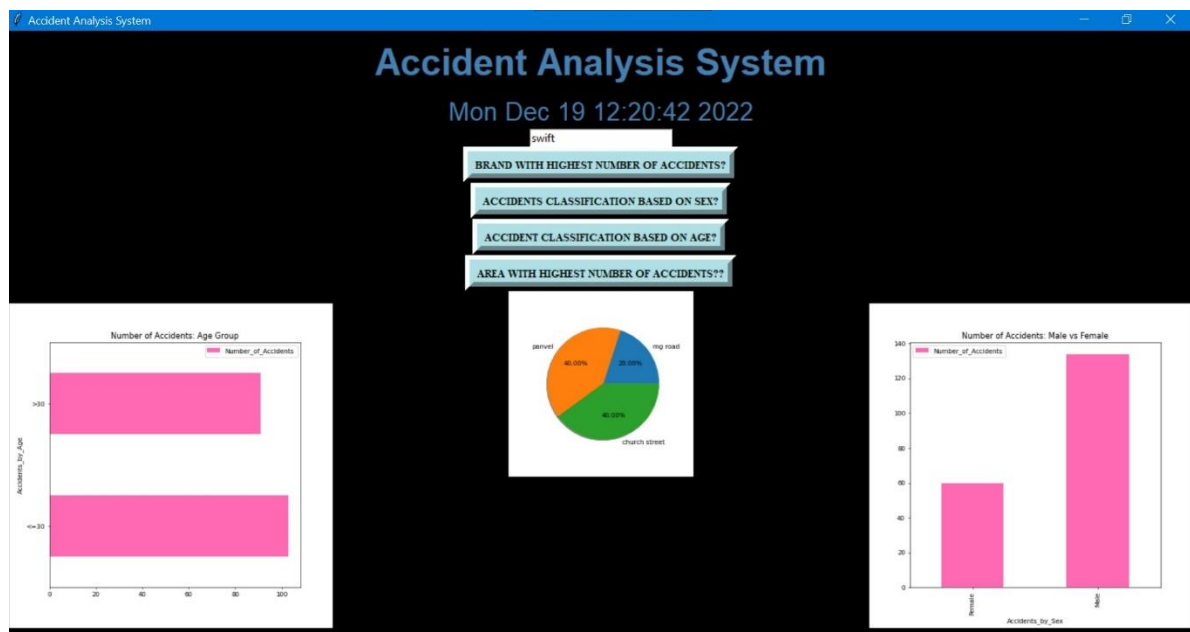*Fig: Button3 is selected*

Fig: Button4 is selected

Fig: All buttons are selected

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