IoT Based Traffic Management System

A Project report submitted in partial fulfilment of the requirements for the degree of B.E in Computer Science and Engineering.

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TRAFFIC MANAGEMENT

PROBLEM STATEMENT

- Define the problem of traffic management that your project aims to address
- Provide relevant statistics and data to emphasize the significance of this issue
- Explain the current changelings and shortcomings in existing traffic management systems
- Traffic congestion problems consists of incremental delay, vehicle operating costs such as fuel consumption, pollution emissions.
- The result form interference among vehicles in traffic stream, particularly as traffic volumes approach a roads capacity.

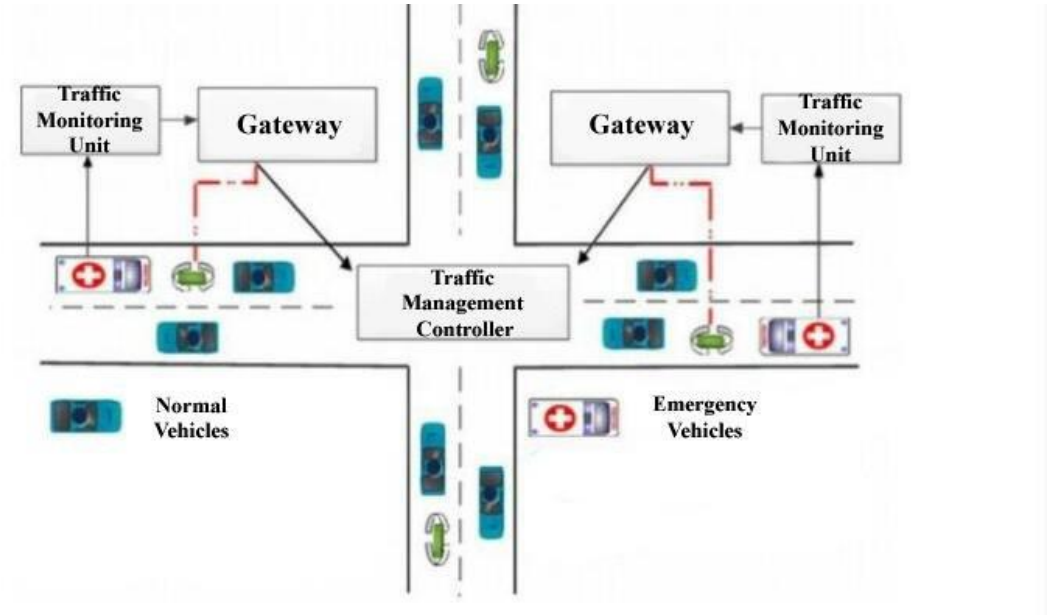
Figure 3(a): breaking of signals

Figure 3(b): traffic congestion

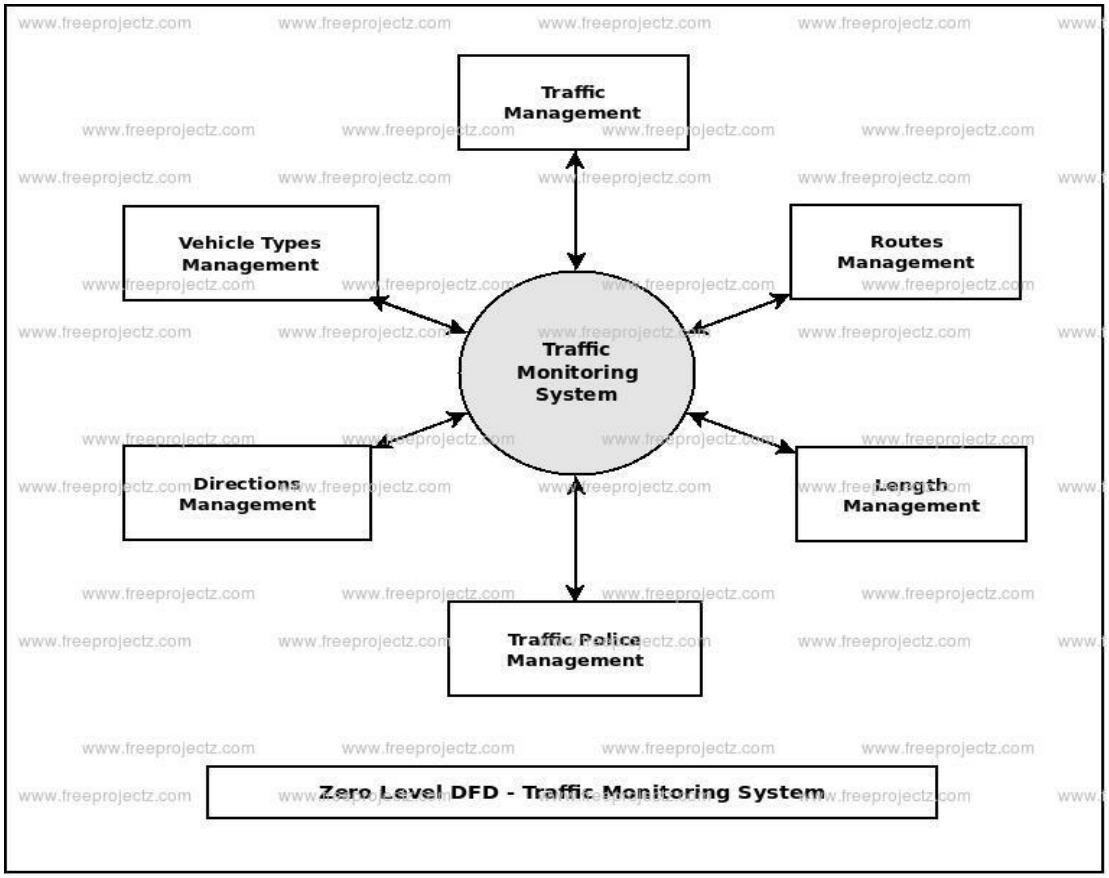
Figure 3(c): disobeying of traffic rules

DESIGN THINKING

- define the specific traffic-related problems or challenges based on the insights gained during the empathy stage.
- Create personas or user profiles to represent the different types of users and their needs.
- Frame the problem as a user-centred design challenge.
- Empathize
- Understand the needs, behaviours, and pain points of various stakeholders, including drivers, pedestrians, cyclists, public transport users, and local residents.
- Ideate
- Generate a wide range of creative ideas and potential solutions to address the defined problems. Encourage brainstorming and ideation sessions involving diverse stakeholders.
- When applying design thinking to traffic management, the focus is on understanding and addressing the needs and challenges of both road users and the community as a whole.


Traffic Monitoring Unit
Gateway
Gateway
Traffic Monitoring Unit
Traffic Management Controller
Normal Vehicles
Emergency Vehicles

FLOW CHART


Traffic Management
Vehicle Types Management
Routes Management
Traffic Monitoring System
Directions Management
Length Management
Traffic Police Management
Zero Level DFD - Traffic Monitoring System