

# **GUJARAT TECHNOLOGICAL UNIVERSITY**



## **SAFFRONY INSTITUTE OF TECHNOLOGY**

A

PROJECT REPORT

ON

### **SMART TRAFFIC MANAGEMENT SYSTEM**

UNDER SUBJECT OF

**DESIGN ENGINEERING – I**

**B.E – II SEMESTER – III**

**(CSE BRANCH)**

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**CERTIFICATE**

This is to certify that the project report “SMART TRAFFIC MANAGEMENT SYSTEM” prepared and presented by, **BHAVSAR RAJVI, JETHLOJA SHIVANGI, THAKKAR SANJANA, PATHAK TANVI**, 2<sup>nd</sup> Year of B.E (Computer Science and Engineering) and their work is satisfactory.

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## **ACKNOWLEDGMENT**

We would like to express our special thanks of gratitude to our teacher ASST-PROF. **HIRAL PARMAR** who gave us the golden opportunity to do this wonderful project on the topic **smart traffic management system** which also helped us in doing a lot of research and we came to know about so many new things.

We are really thankful to them.

Secondly, we would also like to thank our parents and friends who helped us a lot in finishing this project within limited time.

We have also used internet for better understanding of our subject.

With regards,

**BHAVSAR RAJVI,**

**JETHLOJA SHIVANGI,**

**THAKKAR SANJANA,**

**PATHAK TANVI**

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## **Introduction of project**

- Due to rapid urbanization there is a need for implementing smart traffic management system to avoid heavy congestion. And also to make a better solution for ambulance clearance helps to protect the human life.
- so our team will work for this project under design engineering.
- It is also used for finding the stolen vehicle by the use of rfid card.
- It 's main goal to save someone's life whenever there is any accident than we are easily manage traffic by this system and we can reach hospital at time.
- By the use of rfid card ,GPS and GSM we can easily manage the heavy traffic.

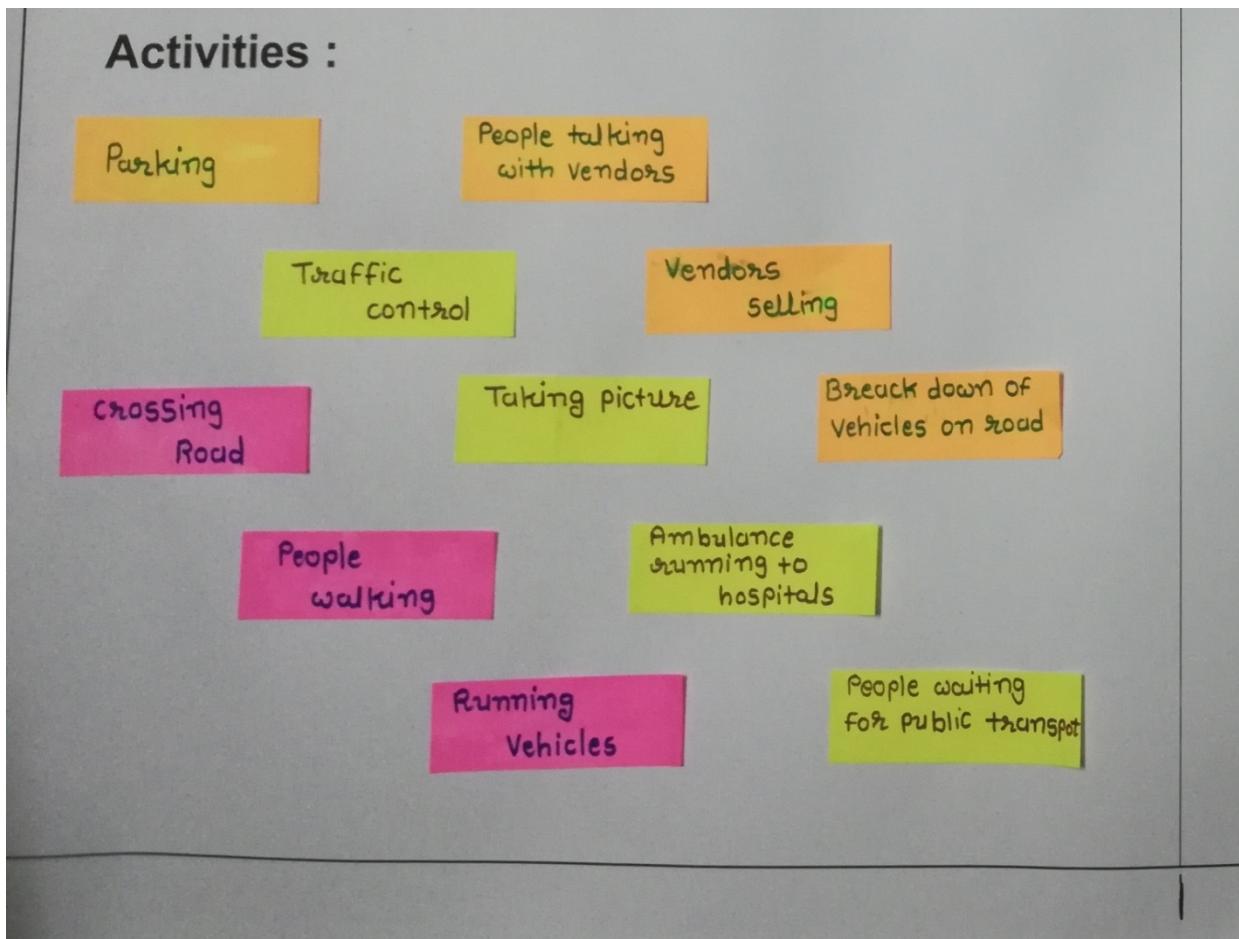
# AEIOU SHEET

AEIOU Summary :		Group ID : Domain Name :	Date :	Version :
Environment :	Interactions :	Objects :		
Activities :	Users :			
Noisy Pollution Bad Road condition Crowdy Traffic	Student goes to School Beggars begging People shouting for Buses People gossiping People talking with each other	Street lights Traffic signal	Bridge Food stalls Dividers	
Parking Traffic control crossing Road People walking Running Vehicles	People talking with vendors Vendors selling Taking picture Break down of Vehicles on road Ambulance running to hospitals People waiting for public transport	old people Police	Beggars Animals Road side sellers	

## ACTIVITY SHEET:

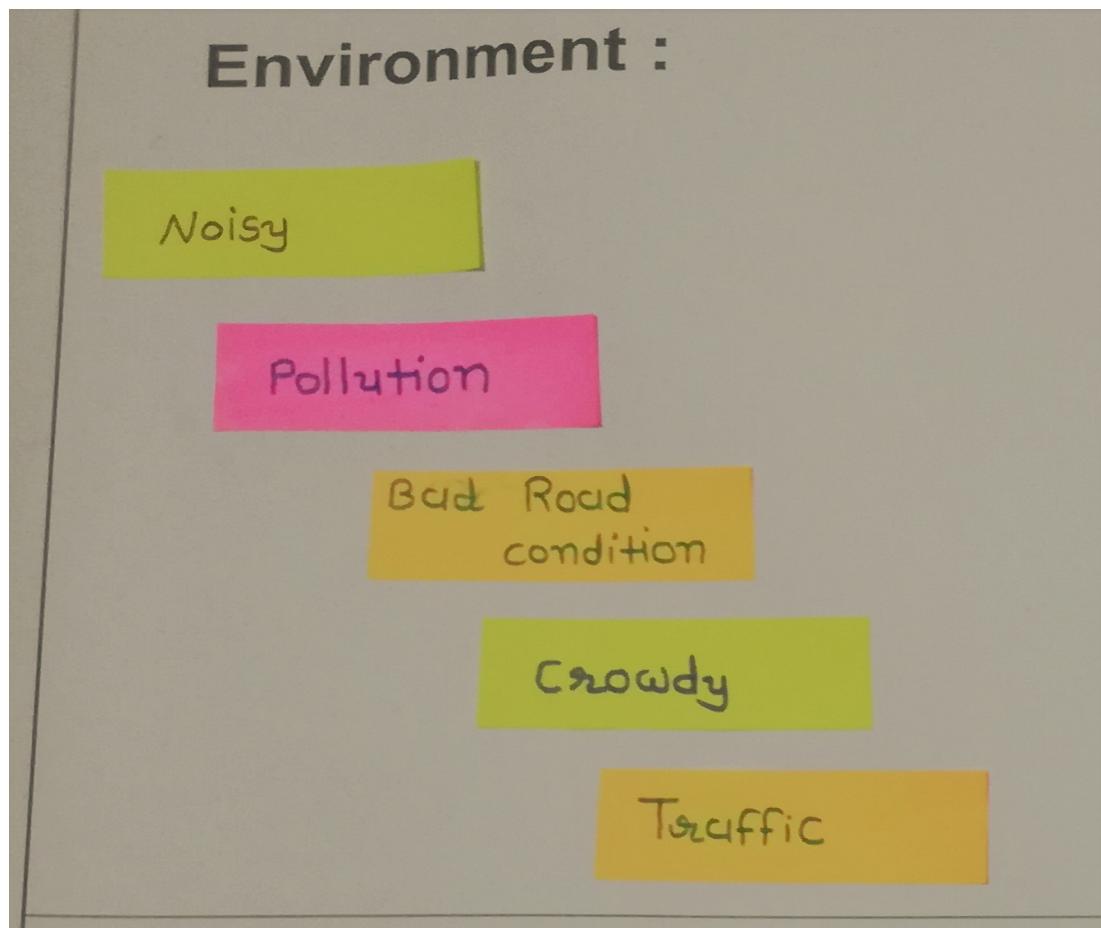
- First we visit the road where there is a problem of traffic
- We also meet the person who suffer from this problem and we discusses about it.
- The general observation is:

There are activities like location, traffic, time of travel, share location.



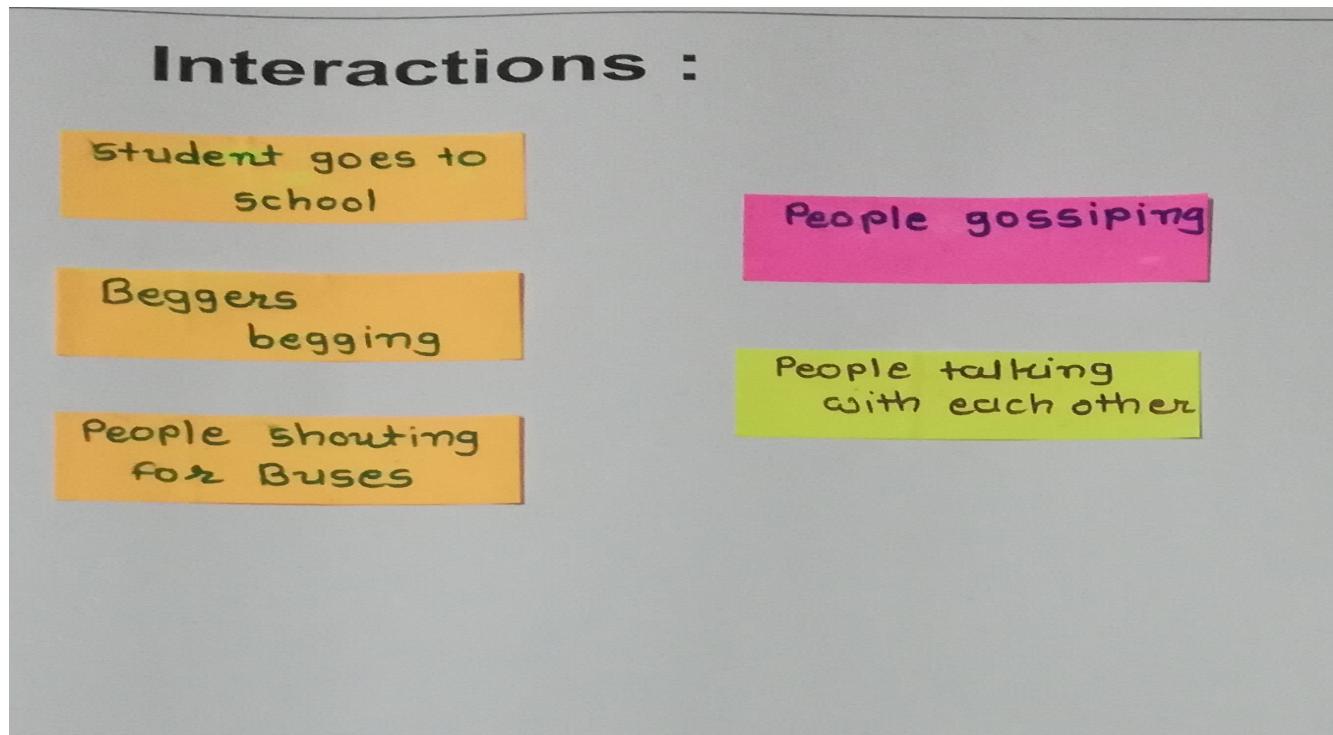
## **ENVIRONMENT SHEET:**

- This sheet is about the environment of the particular place that we visited.
- We visited the road where people go to their work .
- Side venders are shouting for their food.
- Some people are walk beside the road .
- The atmosphere is:
  - Noisy
  - Bad road condition
  - Irritated
  - Pollution



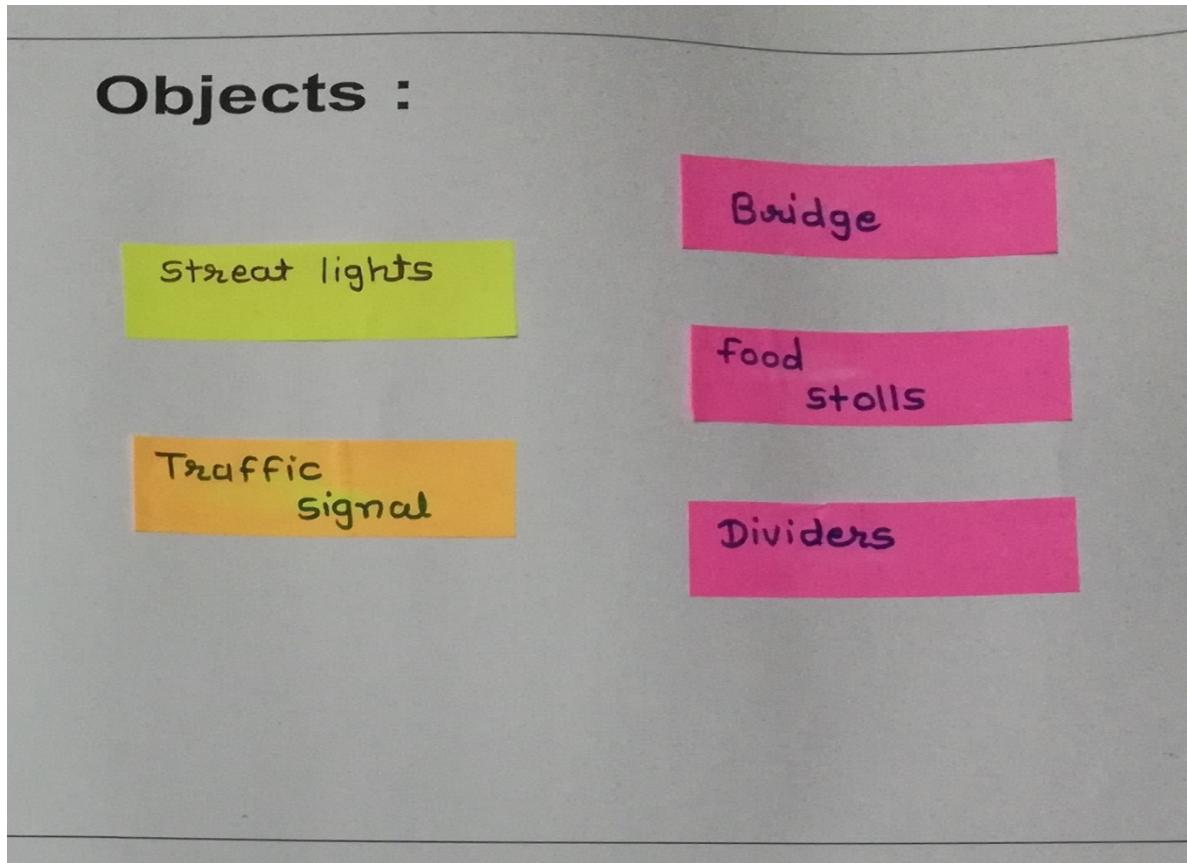
## INTERACTION SHEET:

- This sheet was asked to mention the interactions that took place between us and the people are at traffic road.
- The Interactions between satellite to website , website to user, website to traffic police.



## OBJECT SHEET:

- This sheet is about all the objects that were involved to design the effective traffic management system for ambulance.
- The object needed in this project is RFID, GPS ,GSM and computers, mobile phone, laptop, tablet, I pad, PC.

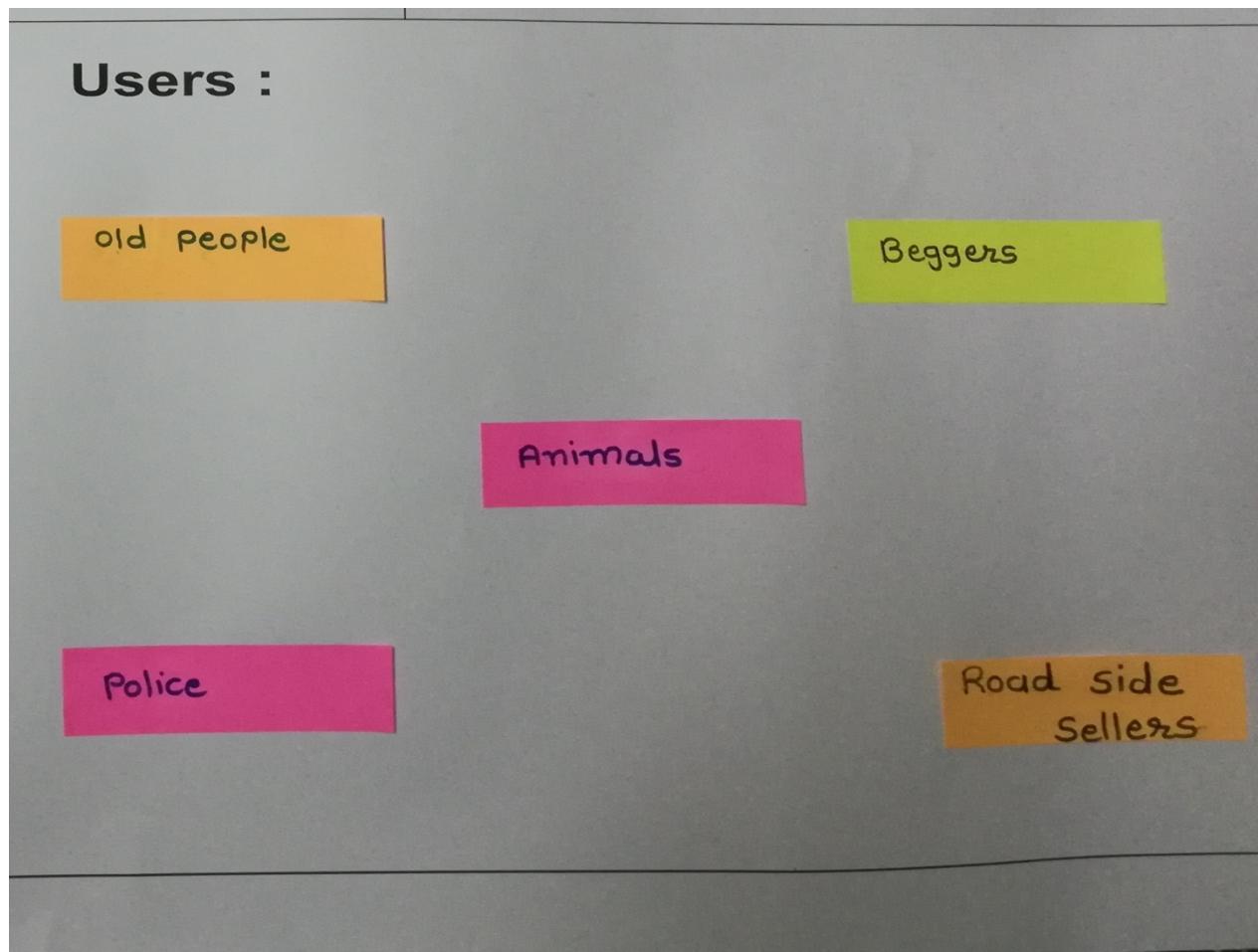


## **USER SHEET:**

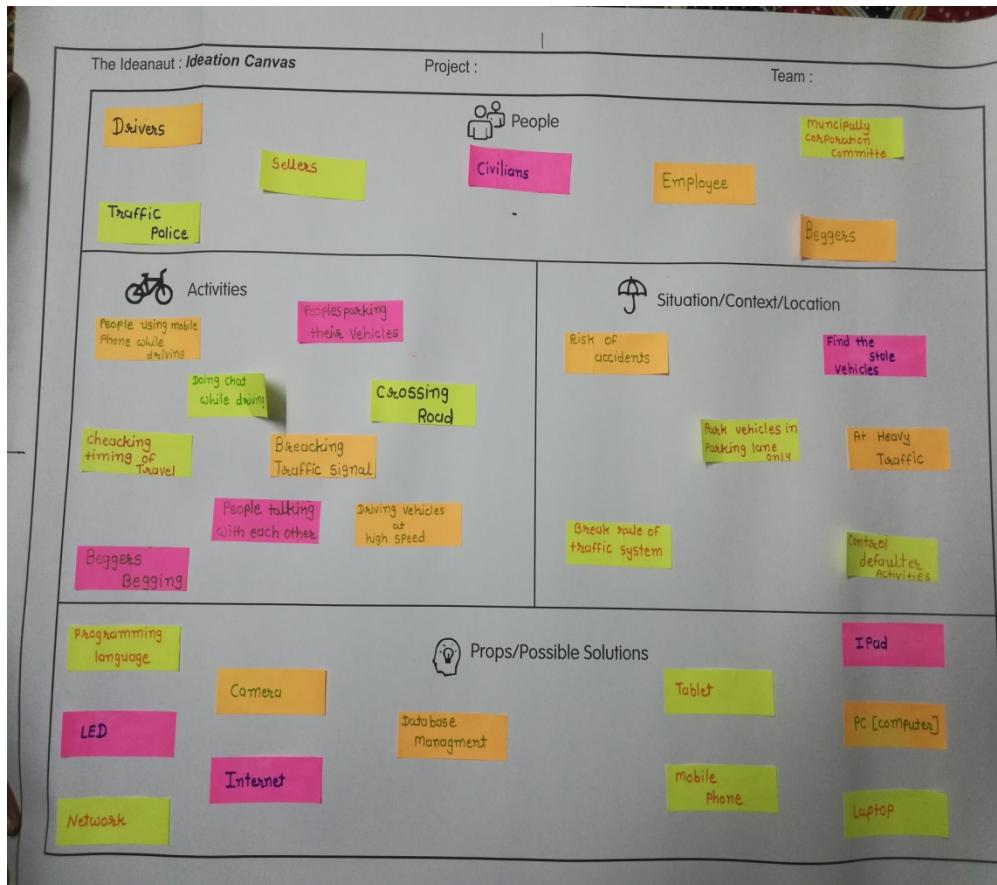
➤ This sheet is all about the people who are at the traffic road.

➤ Observation is:

Students, employees, workers, civilians, Employees, Traffic police.



# IDEATION CANVAS:



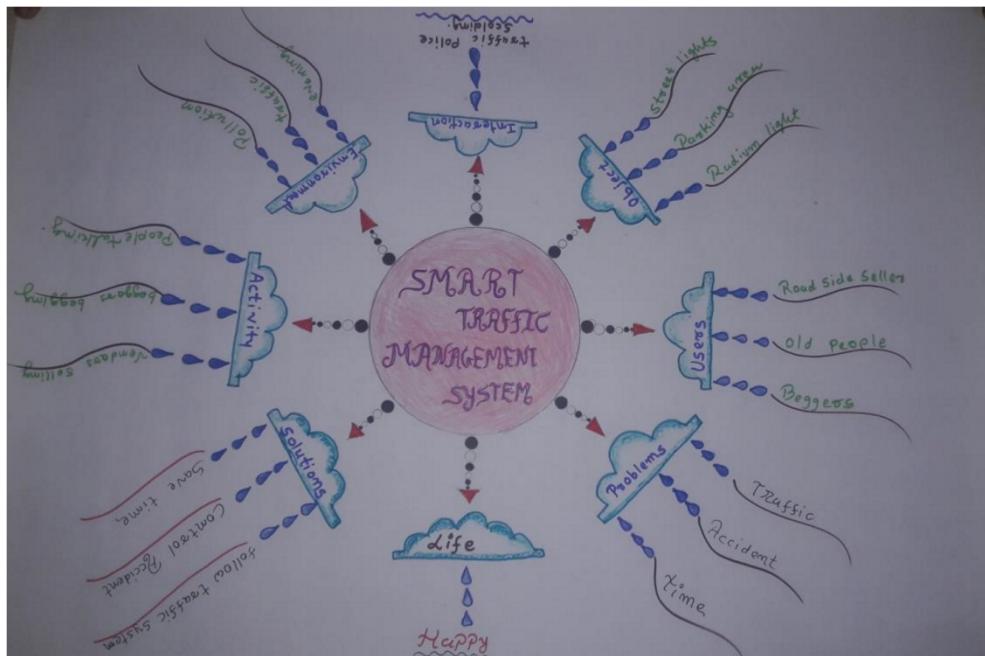
- This ideation canvas is specially designed for providing people/users with possible solutions for the problems which are faced in current situation or context by providing with our product making it easy for them.

## Possible solutions would be:

- Use of RFID card in each vehicle and also use of GPS and GSM system.
- Computer based traffic signal

## MIND MAPPING CANVAS:

- This sheet describes the core idea of our project representing it as a form of chart.
- All AEIOU sheets can be described with this one sheet.



## **EMPATHY MAPPING CANVAS:**

### **➤ USERS:**

- students
- Employee
- Traffic police
- Beggars

### **➤ STACKHOLDER:**

- Government
- Rood safety committee
- Civil engineers
- Sweepers

### **➤ ACTIVITY:**

- People waiting for public transport
- People talking
- Crossing road
- Venders selling
- High speed vehicles

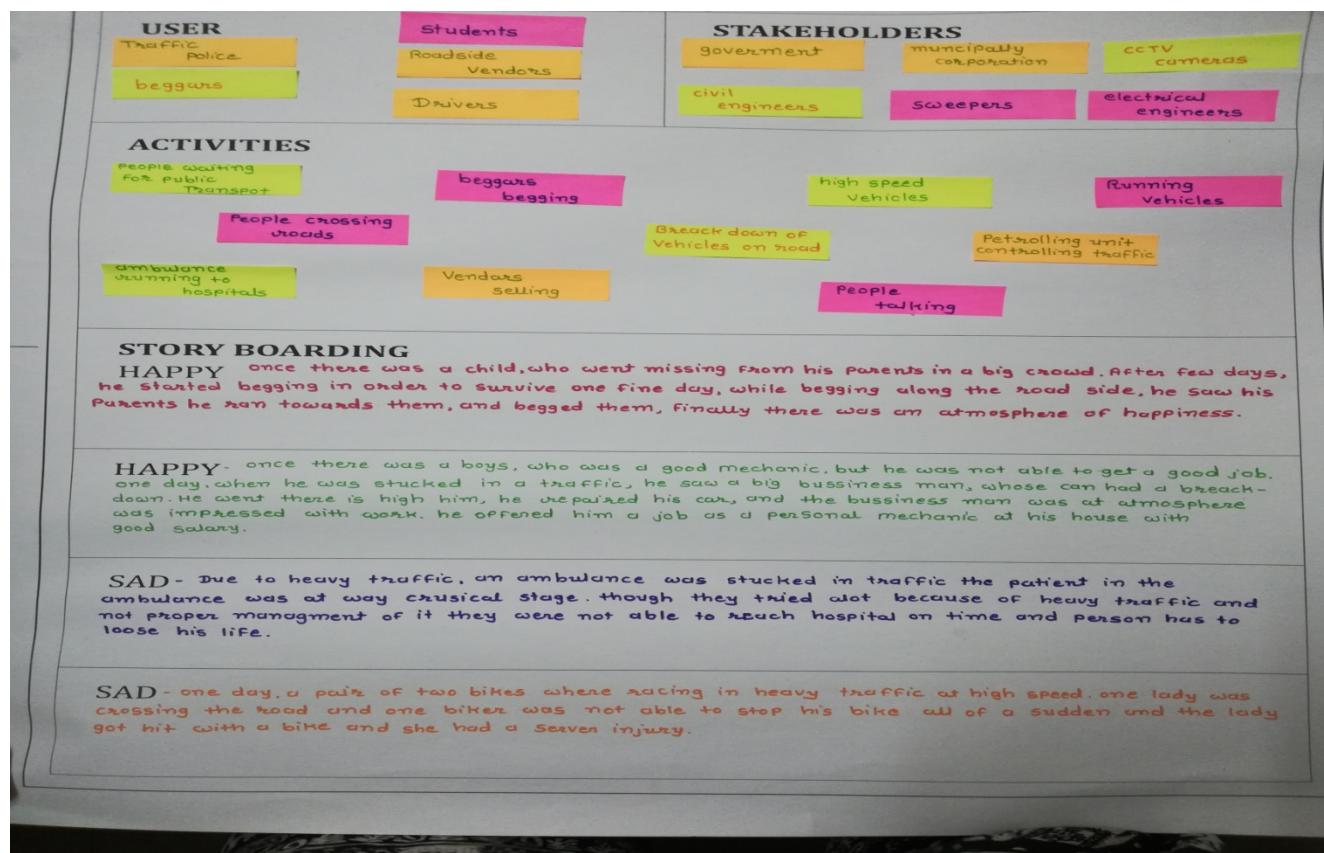
## STORY BOARDING:

**Happy:** Once there was a child, who went missing from his parents in a big crowd. After few days, he started begging in order to survive one fine day, while begging along the road side, he saw his parents he ran towards them, and begged them, and finally there was an atmosphere of happiness.

**Happy:** Once there was a boy, who was a good mechanic, but he was not able to get a good job. One day, when he was stuck in a traffic, he saw a big Businessman, whose car had breakdown. He went there to help him, he repaired his car and the Businessman was at the atmosphere was impressed with work. He offered him a job as a personal mechanic at his house with good salary.

**Sad:** Due to heavy traffic, an ambulance was stuck in traffic the patient in the ambulance was at way crucial stage. Through they tried a lot because of heavy traffic and not proper management of it they were not able to reach hospital on time and person has to lose his life.

**Sad:** One day, pair of two bikes where racing in heavy traffic at high speed. Once lady was crossing a road and one biker was not able to stop his bike all of a sudden and the lady got hit with a bike and she had a savory injury.



# PRODUCT DEVELOPMENT CANVAS

- Product development canvas describes the purpose of this project, product experience, various features of product, components used and customer revalidation.

## ➤ PURPOSE:

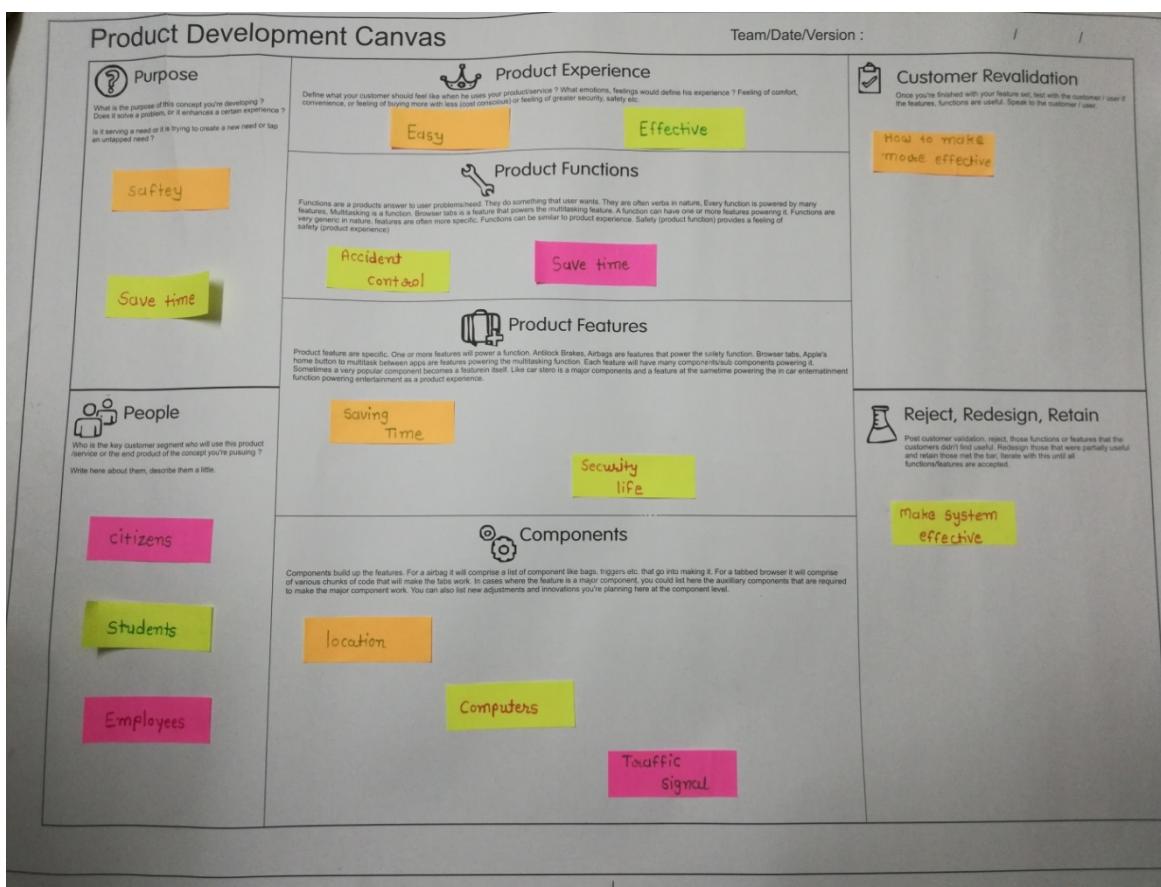
- Safety and save time

## ➤ PEOPLE:

- Citizens, students and employees

## ➤ COMPONENTS:

- RFID (Radio frequency identification), GPS, GSM and computers.



## PROTOTYPE:

- This sheet represents the flow chart of our topic .it describes the whole process of system

