A Report on

Traffic Signal Control using ATMega32

for

Microcontroller (REV- 2019 'C' Scheme) of Second Year, (SE Sem-IV)

in

Electronics & Telecommunication Engineering
by

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Under the guidance of

Prof.Shubhangi Verulkar

UNIVERSITY OF MUMBAI

SY 2021-2022

CERTIFICATE

This is to certify that the project entitled is a **Traffic Signal Control using ATMega32**
Bonafede work of

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submitted to the University of Mumbai in partial fulfillment of the requirement for the award of **Microcontroller Mini Project of Second Year, (SE Sem-IV)** in **Electronics & Telecommunication Engineering** as laid down by **University of Mumbai** during academic year **2021-22**

(_____)
Examiner/Reviewer-1

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Examiner/ Reviewer -2

Prof.Shubhangi Verulekar
Name of Guide

Head of Department

Principal

Report of Mini Project

"Traffic Signal Control using ATMega32"

Abstract:- The name of our project is **"Traffic Signal Control using ATMega32".** In this project we have used 3 main components that are ATmega32 Microcontroller, LED's, seven segment display. In this you will come to know about how actually the Traffic signals works which we observe daily.

Problem Statement :

The purpose of this project is to develop a series of systems model for traffic passing through a 4-way intersection, controlled by traffic light. After reading our project ppt you will be able to make the mini project using ATmega32 and can control traffic lights. Also you will be able to understand the concept of Seven Segments display.

Introduction:-

As we all know there is traffic problem in cities, and because of which there is high risk of accidents. So, for avoiding the traffic jams and the risk of accidents, their are traffic signals at the intersections. The traffic signals are located at the 4 way intersection where the 2 roads intersect each other or at the junction where there is lot of vehicles. In this demonstration we are going to make the working model of traffic light signal using ATmega32 and also we are going to display the count down on 7 segment display. The interfacing between 7 segment display and ATmega32 is been demonstrated through our project.

The main objective of this traffic light controller is to provide sophisticated control and coordination to confirm that traffic moves as smoothly and safely as possible. This project makes use of LED lights for indication purpose and a microcontroller is used for auto changing of signal at specified range of time interval. LED lights gets automatically turns on and off by making corresponding port pin of the microcontroller "HIGH".

Conclusion:

This demonstration of Traffic light signal using ATmega32 will be very useful. The system works on traffic related problems such as traffic jam; un reasonable latency time of stoppage of vehicle, emergency vehicles, etc can be solved. • By using this system configuration we try to reduce the possibilities of traffic jams, caused by traffic lights. The reader will get in brief idea about the working of ATmega32 and also the working of 7 segment display.