JIMMA UNIVERSITY

JIMMA INSTITUTE OF TECHNOLOGY

FACULTY OF COMPUTING AND INFORMATICS

DEPARTMENT OF SOFTWARE ENGINEERING

DOCUMENT-1: REQUIREMENT ENGINEERING

TITLE: ROAD TRAFFIC ACCIDENT RECORDING SYSTEM

GROUP NAME	ID NO
1. HAILU GUDATA…………………………………………………….RU 5717/11	
2. MIRETU JALETA………………………………………..……...RU 1414/12	
3. SAMUEL MOKONNON…………………………………….………RU 1417/12	
4. KIBRU G/MEDIN………………………………………..……...RU 1913/12	

Submission Date: 15/04/2022

Submitted To: Mr.Balew A.

Table of Contents

CHAPTER ONE

INTRODUCTION

1.1. Background Information

Traffic accident is happened when a road vehicles collides with another vehicle, Pedestrian (people walk on foot), Animal, Geographical obstacles or some technical problem in the parts of vehicles or due to the matter of driver which can result in death,injury,property damage.

Traffic accident is global problem that affect all sectors of society.According to the World Health Organization (WHO) approximately 1.3 million die each year due to the traffic accident.Between 20 and 50 million people suffer non-fatal injuries,with many incurring a disability as a result of their injury. It costs most countries 3% of their gross domestic product.

Traffic accident in Ethiopia is one of the worst accident records in the world.At least 13 people die in traffic accident. In regional level 85% of traffic accident is occur in Oromia, Amhara and SNNP region. Most of people died due to absence of report of an accident at the real time because they cannot get help.

Traffic accident reporting system is a system that enable employee of concerning body to report accident automatically and also every body who has the website of the minister of transport to which he or she report.

Until now the government give some education for society specially for students in primary and secondary school to make awareness about traffic accident,to educate students how they have to use the road like walk in the left side of the road,to use zebra line to cross the road in the form of train and also policeman tell people to walk in left side of the road but there is no well established system to enable the individuals to report occurrence of an accident or system that notifies driver about accident, system that enable the minister of transportation to get information timely

1.2. Motivation

The idea of developing this system is come to us because in our country as we try to explain above many people are died due to traffic accident. Therefore it is necessary to make real time report of accident to identify the location where accident happened to tell driver to be careful at that location because accident can be caused by geographical obstacles or number of pedestrian use the road or to report for concerning body that notify them to identify accident and send ambulance, policeman or other aid to rescue life of people who injured by accident and to reduce accident by making awareness of society by reporting daily accident.Another reason is that according to Constitution of Federal Republic Democratic Ethiopia article 51 the proclamation called proclamation No.799/2013 declare that insurance have to paid for third part risk by vehicle accordance with the relevant law but some people are not paid insurance for the accident happened to their property, death of their relative by traffic accident due to absence of report on time for concerning body or agent.

1.3. Statement Of The Problem

Traffic congestion has been one of the fundamental problems faced by modern cities since the wide usage of automobiles. Just a normal few minutes trip to the convenience store may take up to half an hour due to traffic jam or slowdown. According to the police, congestion's are actually the causes of some issues like road rage, road bullies and major accidents. The small road capacity is also one of the contributing factors. As the number of private cars increases greatly over the years, traffic congestion occurs when the needed road capacity is not fulfilled. Simple improvements of the road infrastructure can easily solved this problem. Since congestion occurs frequently in the cities, local government municipal can consider passing laws on restricting the number of car owned in a family. This method is in fact, workable and effective.

✓ **Data Loss:-**those already existing manual records could get lost for some reason .For example because of natural disaster like earthquake and lightening, and as well as man-made disasters like fire.

✓ **Time consuming:** - Data record is manually and it is very time consuming when wanting to find a specific data for example if data is needed like insurance. So giving service in short amount of time will be difficult.

✓ **Wastage of resources:** -papers were wasted because of everything were written manually.

1.4. General And Specific Objectives

1.4.1. General Objective

The main objective of this project is to provide convenience to the management team by developing a website app to make processes regarding Traffic Record Management easier.

1.4.2. Specific Objectives

These are the specific objective identified in order to implement the general objective

❖ To enable everyone to report traffic accident to this website.
❖ To enable searching for any relevant accident record quickly that is registered from any corner of the country.
❖ To facilitate various standard report and statistics generations at different levels quickly.
❖ To facilitate the way of insurance payment.

1.5. Methodology

1.5.1. Data Collection

Our requirement gathering is mainly focused on observation. We have also visited some website concerning our project.

Traffic accident reporting systems designed and implemented in other countries have been also consulted for incorporating key and useful design and implementation features with the current system.

1.5.2. Tools

We have intended to use different tools in the analysis, design and implementation of our project . Among these tools: vs code, Adobe xd for developing the web applications, E-draw for design UML, SQL Server data base designer for developing the back end data base.

1.6. Significance Of The Project

Accident data can be used at different levels by several groups of people with different road safety interests. These include road safety officers, vehicle design engineers, police, lawyers, road safety researchers, politicians, teachers, statisticians, insurance companies, emergency services (ambulance), public drivers, education services and members of the public etc.

The project's result could be applicable in different areas benefiting different target groups. The main beneficiaries could be the following.

❖ Traffic police officers are the main users of the system in registering traffic accidents, submitting or communicating it, initiating report generation and using the reports to take appropriate actions.

❖ Citizens, NGO(Non-governmental Organization) and media can get access to accident statistics and take necessary action with the help of local government.

❖ Insurance Companies whose insured was involved in an accident can also use the system to get current and up-to-date information about their client and take measure.

❖ Ethiopian Road Authority for identifying those roads which might have caused repeated traffic accidents and improve these road standards.

❖ Ministry of Transport and Communication to identify and monitor which of those licensed drivers and registered vehicles by the ministry are causing repeated accident.

❖ Quick and Accurate flow of information about the accident.

❖ Emergency management on the accident for quick arrival of the caregivers. These systems respond to emergencies and direct the various departments to the incident location through the obtained information in order to clear the incident or save a life.

❖ Identification of the crash location for immediate response to deal with life of the rescue and property.

❖ Enables the lawyers to gain clear and justified information on decision making for verdict.