

2016

Automatic Railway Gate Control System



Automatic Railway Gate Control System

Final Year Project Report

School Of Engineering

University Of Management and Technology

FINAL YEAR PROJECT REPORT

Submitted to:

SCHOOL OF ENGINEERING

UNIVERSITY OF MANAGEMENT AND TECHNOLOGY

UMT Road – C2 Johar Town Lahore, Pakistan



Submitted By:

Muhammad Awais Akhtar

091420-285

Advisor/Supervisor:

Sir Muhammad Asim Butt Sb

Project Director

Project Advisor

Sir Jameel Ahmad Sahib

Sir Muhammad Asim Butt Sahib

Sign: _____ Sign: _____ :

Table of Contents

Chapter	Description	Page#
Chapter#1	Introduction	1
Chapter#1	Project Background	1
Chapter#1	How Automatic Railway gate control use	2

Chapter#1	Problem Statement	3
Chapter#1	Objectives & Applications	4
Chapter#2	Components for Kit	5
Chapter#2	Arduino Microcontroller	5
Chapter#2	Technical Specification	7
Chapter#2	Summary	7
Chapter#2	Power Supply	7
Chapter#2	Input and Output	8
Chapter#2	GSM900	9
Chapter#2	GSM Introduction	9
Chapter#2	Features of GSM900	9
Chapter#2	Pin Specification	10
Chapter#2	Infrared Transmitter & Receiver	10
Chapter#2	Introduction	10
Chapter#2	LCD	11
Chapter#2	Introduction	11
Chapter#2	Pin Specification	11
Chapter#2	Servo Motor	12
Chapter	Description	Page#
Chapter#3	Proteus Schematic	13
Chapter#3	Proteus Schematic Gate Open Position	13
Chapter#3	Proteus Schematic Gate Close Position	15

Chapter#3	Source Code for Proteus Schematic	17
Chapter#4	Automatic Railway Gate Control Working & Designing	27
Chapter#4	Project Connection	29
Chapter#4	Project Working	30
Chapter#4	Arduino Microcontroller Source Code	30
Conclusion		41
References		41

Chapter 1

Introduction

1.1 Project Background:

Early level crossing had a flagman near a railway crossing when the train approach the flagman wave a red flag or close the gate to stop the road vehicles. This is the old method to stop the road vehicles sometime the flagman not available on the approaching of the train and many accidents occur due to railway gate open.

In our country we use this old method or we use red lights or warning bells to stop road vehicles sometimes people do not follow the rule and many accidents occur people lose their lives and waste their times because flagman close the gate 5 min before train arriving. Now I introduce the new method for railway gate opening and closing using this method we control railway gate automatically on the approaching and leaving the train. We place infrared receiver and transmitter before the gate and after the gate when train arrives infrared detect and gate close automatically and when whole train pass the gate will be open automatically. Using this method we can save our time and save many lives.