**RAILWAY LEVEL CROSSING GATE CONTROL BY ANDROID APPLICATION**

**Abstract:**

In everywhere at level crossing between railroad and highway there are many railway accidents happening due to the laziness and carelessness in manual operations or lack of workers. So, this paper describes the automatic railway gate control system using android app and Bluetooth module for saving human lives and avoiding major disasters in railway track. Railway gatemay be saved for the road users to prevent accidents in terms of train at level crossing. This system uses Bluetooth module with the help of microcontroller. The microcontroller forms the main unit of the system. It receives input signal from the APP and sends information to the gate motor driver for opening and closing the gate. Besides, the input signal will active LCD display which shows the status of the railway gate was provided as additional part of this system. The gate is closed, when the train enters in the specified range and the gate is opened, when the train gone to the specified range. This system deals about one of theefficient methods to avoid train accidents. It is based on software programming to operate the hardware structure.

**Existing System:**

The opening and closing of railway gate istraditionally operated through manual lever pulling method.This method leads to a lot of accidents due to the rationaltechnique and lever jamming. Railway is a lifeline of Indiaand it is being the cheapest modes of transportation areprepared over all other means of transportation. When we gothrough the daily newspapers we come across manyaccidents in rail road railings. Rail road related accidents aremore dangerous than other transportation accidents in termsof severity and death rate etc. Therefore more effort arenecessary for improving safety.

**Proposed System:**

In this project a smartphone mobile is used which containAndroid app connect to railway. This Bluetooth module sends data tomicrocontroller.Due to APP, Now thissignal goes to motor driver IC LM293D which has twoinput pins and two output pins and four ground pins. Itrequire 12V supply. It drives the signal in specific direction. This signal goes to DC motor . DC Motor isused to open or close the gate. It works according tomicrocontroller. Whenever pin is set gate remains close and when pinreset becomes active, gate remains open.SO, Firstly gateremains open at railway gate as there is no any train passesfrom railway gate. Controller access signal from module andfollows condition of set according to incoming signal andpasses to DC motor through motor driver. Then DC motorclose the gate .In this way DC motor rotates in clockwiseand anticlockwise direction to open or close the gate.Whenever gate open or close , the status of gate candisplayon LCD and Alert through Buzzer.

**Block Diagram:**

**Micro**

**Controller**

**MOTOR**

**Power Supply**

**Reset**

**L293D**

**LCD**

**BLUETOOTH**

**Crystal**

**Buzzer**

**Hardware Requirements:**

* AT89S52 Microcontroller
* Power Supply
* Bluetooth
* LCD
* L293D
* Motor
* Buzzer

**Software Requirements:**

* Keil Compiler
* Embedded C.