**FACULTY OF ELECTRICAL ENGINEERING**

**UNIVERSITI TEKNOLOGI MARA TERENGGANU**

**FINAL REPORT OF DIPLOMA PROJECT**

# INTELLIGENT TRAIN SYSTEM

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"I declare that this report entitled "INTELLIGENT TRAIN SYSYTEM" is the result of my own group research except as cited in the references. The report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree."

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## ABSTRACT

There are various types of train such as local, fast, super fast, passenger, goods and others. Although the travelling schedule is perfect it is not possible to maintain it. And that's why the train accidents are becoming more and more common these days. So, to avoid train from accident many future enhancements like using an automatic engine to stop and move the train can be implemented using suitable sensor available in the market.

For this project, infrared sensor has been applied in speed control of a dc motor. Microcontroller is the heart of this project. It is used to control all the system which includes LCD, distance sensor and DC motor. When the sensors detect the obstacle in front of it, it will give the value and instruction that has been converted by analogue-to-digital circuit first to LCD display. In addition, when the sensor detects the obstacle, the electrical relay will be energized. When the electrical relay energized, the motor will get the power based on the output voltage from the voltage regulator used. Consequently, the motor will slowly decrease the speed and stop. The LCD will display the output based on the instruction control by the IC. The LCD display the distance between sensor and the object which the unit for measurement has been set in centimetres.

## TABLE OF CONTENTS