RFID ATTENDANCE SYSTEM

A MINI PROJECT REPORT

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BONAFIDE CERTIFICATE

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TABLE OF CONTENTS

ABSTRACT

RFID means Radio Frequency Identification. It is a wireless identification technique which has become very popular these days. It is used for smart system that can be used to identify, monitor secure and do object inventory by the use of radio frequency. This technology is also used in Bank locker security system, Library Management System etc. This technique is safe, secure, faster and easy to use with lower overheads in contrast with the other conventional techniques such as bar code, biometrics etc. It has two components i.e. RFID tag and RFID reader. RFID reader is the device capable of reading and recalling information stored inside the RFID tags. This paper presents a design of an Automatic Attendance System for both students and professor with parent notification sent via GSM and it also gives report about their test marks through SMS process. This project is to simplify attendance recorder system by using RFID. This paper reviews some of these monitoring systems and proposes an RFID based student attendance system.

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

Today in most institution professors take attendance by calling out names or passing a sheet of paper. Both way have respective drawbacks. For this reason college needs to create a system to monitor students attendance and report it to their parents automatically and it also gives report about their test marks through SMS process. This project is to simplify attendance recorder system by using RFID. Radio frequency identification (RFID) refers to the use of radio frequency wave to identify and track the tag apply into an object or a living thing. It is a wireless means of communication that use electromagnetic and electrostatic coupling in radio frequency portion of the spectrum to communicate between reader and tag through a variety of modulation and encoding scheme. Radio Frequency Identification (RFID) is the combination of radio frequency and microchip technologies to create a smart system that can be used to identify, secure ,monitor and do object inventory. At their simplest, RFID systems use tiny chips called tags that contain and transmit some piece of identifying information to an RFID reader, a device that in turn can interface with computers.

CHAPTER 2
LITERATURE SURVEY

2.1 EXISTING PRODUCT

Existing product has RFID system which is capable of only storing
the databse in SD card module. We can access it whenever we want the data.

2.2 PROBLEM STATEMENT

It is mandatory to note the attendance of employee / student. In existing biometric attendance system , there is a physical contact between device and one person to another. This solution is to help companies to minimise physical contact to reduce spread of Coronavirus.

CHAPTER 3

PROPOSED SOLUTION

3.1 OVERVIEW

The solution uses a very simple logic of updating the database once the staff scans his/her RFID badge/Card.This update in database is done only when it receives a valid employee id and employee name.Once the database like Employee Id, Name ,In time and Out time is received , it send it to cloud server and we can able to send SMS using it.

3.2 BLOCK DIAGRAM

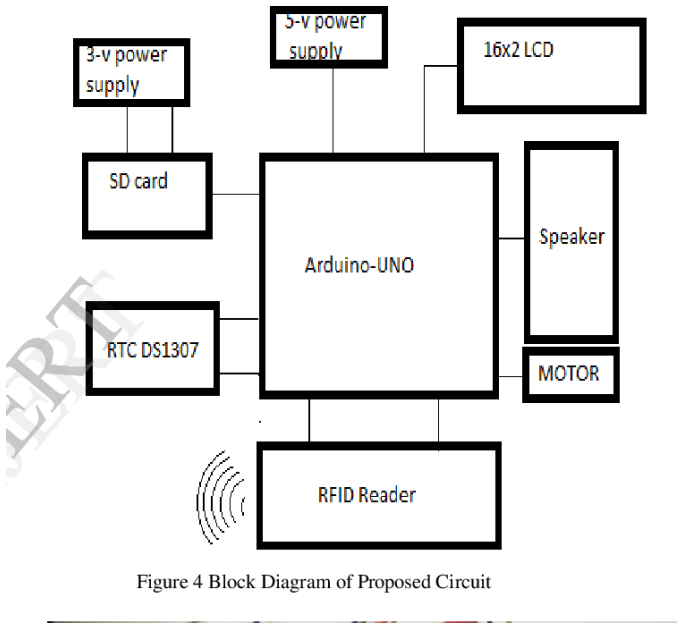


Figure 4 Block Diagram of Proposed Circuit

Figure 1.1

3.3 CIRCUIT DIAGRAM

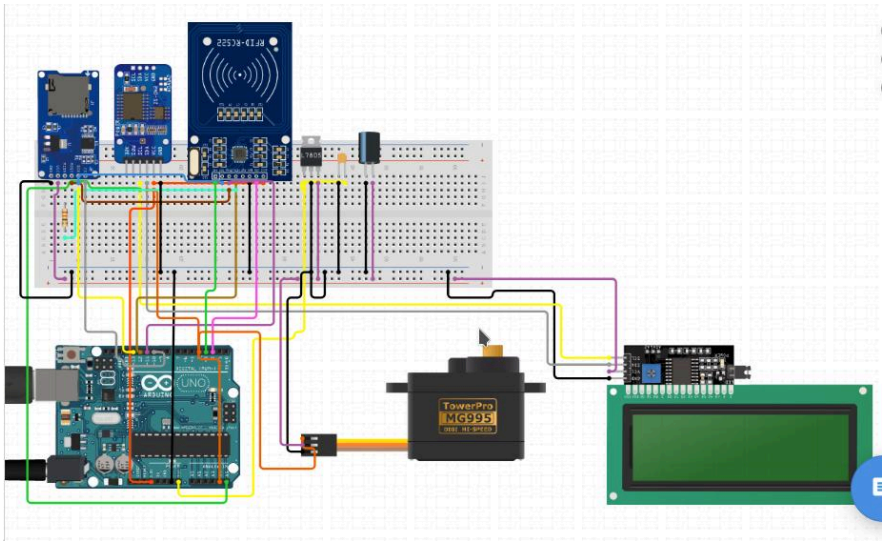


Figure 1.2

CHAPTER 4

HARDWAE DESCRIPTION

4.1 OVERVIEW

RFID MFRC522 Module

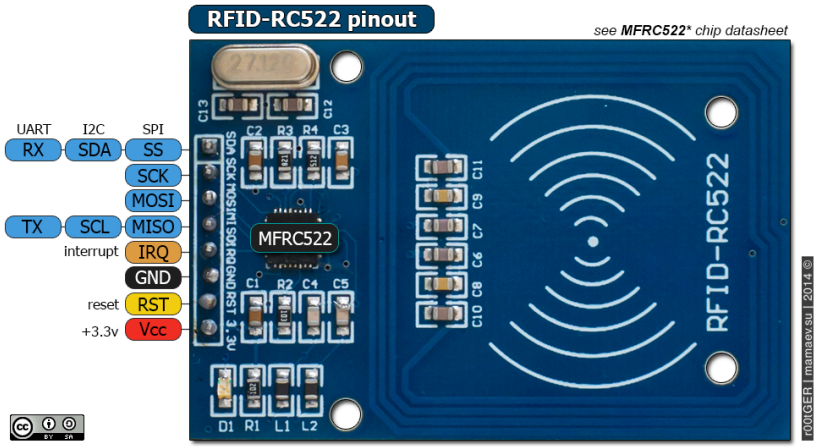


Figure 4.1 RFID Tag Reader

SD Card Module

The micro- SD Card Module is a simple solution for transferring data to and from a standard SD card. The pin out is directly compatible with Arduino, but can also be used with other microcontrollers. It allows you to add mass storage and data logging to your project.

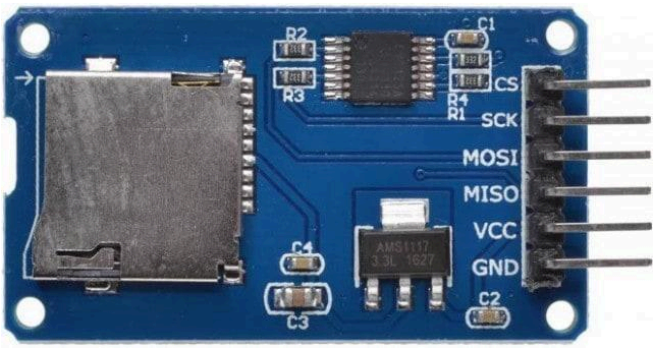


Figure 4.2 SD card module

DS3231 RTC Module

RTC means Real-Time Clock. RTC modules are simply TIME and DATE remembering systems that have battery setup which in the absence of external power keeps the module running. This keeps the TIME and DATE up to date. So we can have accurate TIME and DATE from the RTC module whenever we want.

CHAPTER 5

SOFTWARE DESCRIPTION

5.1 PROCEDURE TO CREATE A PROJECT

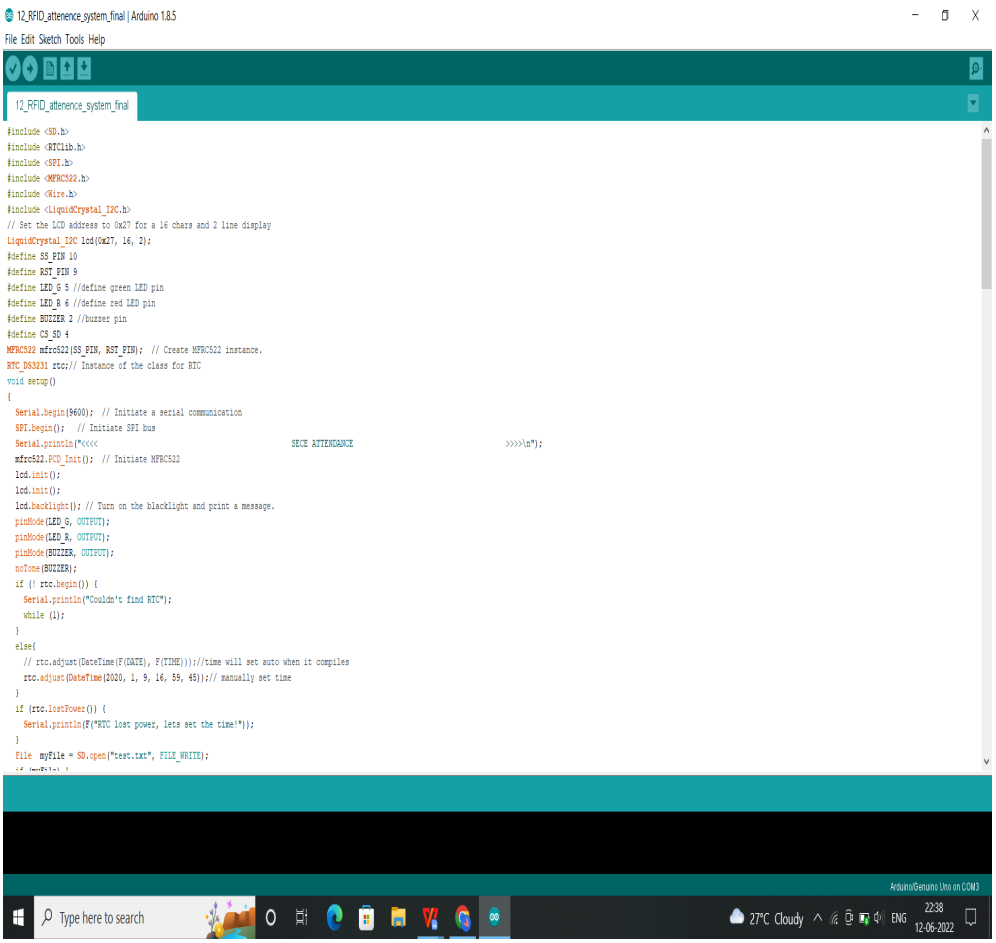
Step 1: RFID receiver, RFID tags, RTC module, SD card module, Arduino, Jumper wires are taken.

Step 2: Connections are made as per the circuit diagram.

Step 3: Code is damped using Arduino IDE software.

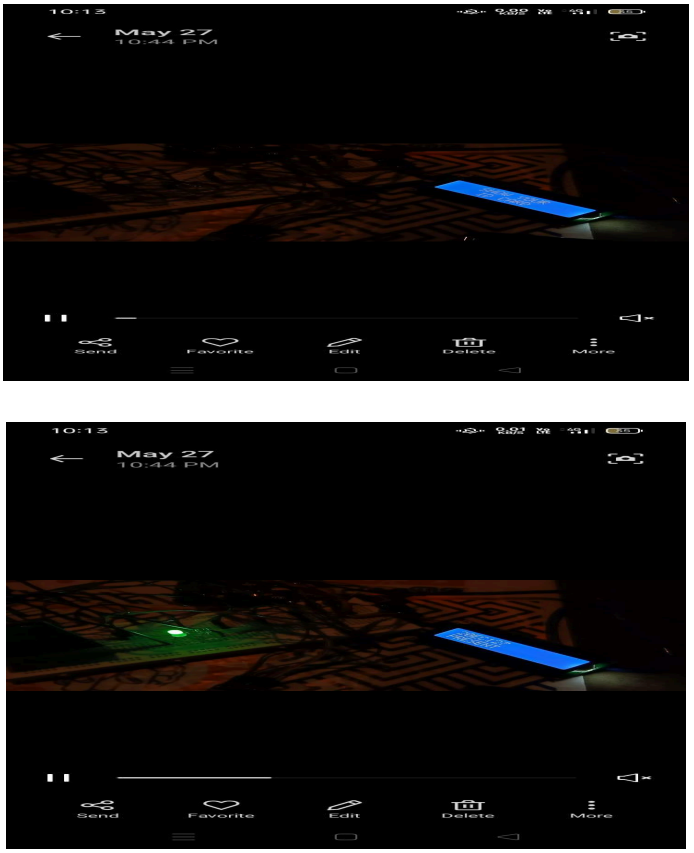
Step 4: If we place the tag nearer to the RFID receiver , it will mark it is present and stores the data in the SD card with date and timer

5.2 CODING STRUCTURE



CHAPTER 6

RESULT AND IMPLEMENTATIONS



The figure 6.1 shows the RFID tag being read by the RFiD reader.

CHAPTER 7

CONCLUSION AND FUTURE SCOPE

In the future these proposed systems will updated using modern technologies. The number of RFID Reader are improved in Realtime to overcome sensor delay issues. And the reading capability ranges also will be improved. With the tremendous software technology, the same software will be updated for smart logging of vehicle traffic violation history, rash driving history, fee payment history and vehicle owner complete details. It will help police officers or authorized official to know the overall history of the vehicle and driver details.

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