

Ahsanullah University of Science & Technology  
Department of Computer Science & Engineering  
Semester Fall 2019



**CSE 3216**  
**Microcontroller Based System Design Lab**

**Project Proposal**

**Project Name:** *Automated Attendance System*

**Submitted To**

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# Objective

Automated Attendance System are commonly used systems to mark the presence in offices and schools. This project has a wide application in schools, colleges, business organizations, offices where marking of attendance is required accurately with time. By using the password input, the system will become more secure for the users.

# Social Values

This system will be very helpful as it saves time to take attendance and it will be more secure and no one can give other's attendance. As it is a very cheap device, every institution can easily use it. This device will save all data inside a memory and it will help to track every students

# Required Components

These following parts and tools are required for building this project

- Arduino Mega 2560R3
- RTC Module (DS3231 or DS1307)
- 20 X 4 LCD
- Hex Keypad
- Push Buttons Switch
- Buzzer
- LED
- Connecting Wires
- Breadboard
- SD Card Reader
- External MicroSD Card
- 9 Volt Battery
- 10K Potentiometer

# Working Procedure

The working of the Password Based Automated Attendance System. In this project, we have used a DS3231 RTC Module for time and date display. We used 1 LED for power indication, 1 buzzer for different function indication. We have interfaced 20\*4 LCD which displays everything whenever the password is entered as star, or registering attendance or downloading data to SD Card.

The components that take password input from the environment is

- HEX Keypad

The components that will show output

- 20x4 LCD Display

There are some letter command that we will take input using HEX keypad and will do basic control.

- At the beginning we will show the date and time using LCD display and there will be a Menu display that a teacher will set some basic feature
- In menu section, a course teacher can start attendance system pressing a certain button from keypad, register a new password, delete a existing a password.
- In Start Attendance, a teacher will give a class code and a pin code for starting the attendance.
- After starting the class, a student can give his/her password. After verifying from system, password co-responding to ID and time will save in the SD card.
- To finish a class attendance, a teacher must be given the class code and PIN number and the whole data will be stored in the SD card so that a teacher can see the records easily

## Estimated budget

Equipment	Quantity	Budget(TK)
Arduino Mega 2560	1	750
RTC Module(DS3231 or DS1307)	1	30
20X4 LCD display	1	300
SD card Reader	1	80
Hex keypad	1	74
Buzzer	1	15
LED	1	5
Breadboard	1	70
Connecting wires	1	65
Push button switch	2	10
10K potentiometer(variable resistance)	1	20
9 Volt Battery	1	50
Micro SD Card	1	250
<b>Total</b>		<b>1729</b>

## Conclusion

The purpose of making this device to help teacher to save their time of taking attendance. The activity of this system cannot be manipulated by non-admin. So the data in this system will accurate which will help teachers or employer to keep track of their active system user.