Ahsanullah University of Science & Technology
Department of Computer Science & Engineering
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CSE 3216
Microcontroller Based System Design Lab

Project Proposal

Project Name: *Smart Voting Booth*

Submitted To

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Objective

Voting is one of the most important civil rights in any democratic country.As an independent country each and every citizen in our country has the right to vote. In our country we can see that in every election we use voting booths where the voters have to go to give the vote. But the voting booths are not so much secured to give the vote securely. That's why we are proposing a smart voting booth where each and every citizen can give the vote securely and comfortably. Our main goal is to build an automated smart voting booth system where voters can give the votes securely and cost for security can be minimized. Besides, the person who is in charge of securities can easily detect the person who wants to give the vote twice and identify the voters who gave it already.

Social Values

The system will reduce the extra cost for the security and can easily and correctly detect the person who wants to vote more than one time. In our country it is seen that the person who gave the vote has given a sign in their fingers to mark that he had given the vote. But it is not so secure and modern way to mark a voter.In our system we can easily mark the voter. On the other hand the number of false voters will decrease. Election will be much more secure. If any firing incident occurs, a sensor will detect it and alarm the security. It has also a huge social and national impact.

Required Components

These following parts and tools are required for building this project

- Arduino mega 2650
- Servo motor
- Buzzer
- LDR sensor
- Fingerprint sensor
- MQ2 Gas sensor

- LCD
- Male and Female wire
- 12 volt battery
- On /Off switch

Working Procedure

The basic components that react to the input are

- Servo motor
- Buzzer
- LCD

The components that take stimuli from the environment is

- LDR sensor
- Fingerprint sensor
- Gas sensor

Our system will perform following action

- Our door of the booth will be locked all the time.The door will open if a valid fingerprint is given to the fingerprint sensor and LDR output is low. That means that there is no one in the booth and the LCD display will show that there is no one in the room. When the valid fingerprint is given that voter will be marked in the system that he had given the vote.
- When a user enters into the booth the LDR will detect the presence of the user and output becomes high and the door will automatically lock.And the LCD will display that there is someone inside the booth.
- If a invalid fingerprint is given into the fingerprint sensor it will immediately detect it and the buzzer will alarm the security room.
- After finishing the voting the voter will click the switch from inside and the door will be open
- If any firing incident occurs the gas sensor will detect it and alarm the security.

Estimated budget

Equipment	Quantity	Budget(Tk)
Arduino Mega 2650	1	500
Servo motor	1	175
Buzzer	3	6
LDR Sensor	3	15
Fingerprint sensor	1	1990
12 Volt Battery	2	80
MQ2 Gas sensor	1	960
LCD	1	160
Rubber Wire	1	200
Male to Male, Female to Female and Male to Female wire	As required	100
Male/Female headers	As required	40
Double connection on/off switch	1	100
Card Board	3	250
Cutter	1	50
Total		**4726**

Conclusion

Liberating distress, eradicating tardiness through utilization of technology and machine is sure to bring forth a great upstream of success and revolution Though we propose in a small scale recurrent development upon this small idea is capable of bringing forth a great system that will soon be sustainable and helpful to our election system. Thus we are positively hopeful that the proposed project not only will help our voting system but also have a significant impact for future.