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Spying Module for Military Applications (Robot)

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ABSTRACT: The intention of this system is to reduce human victims in terrorist attacks. This problem can be overcome by designing the RF based spy robot which involves various sensors and Bluetooth. From this it will be easy to examine the enemies when it is required. The robot can quietly enter an enemy area and sends us the information via Bluetooth. Bluetooth technology is used to exchange data wirelessly at a short distance using radio wave transmission be composed of features to create ease, intellect, and governable. Here we have planned and designed a robot that can be controlled using an application running on an android phone. It sends controlling command via Bluetooth which is interfaced to the controller. And hence the required actions can be executed.

KEYWORDS: IoT, Military Application, Spying, Robot, Defence, War filed.

I.INTRODUCTION

Now-a-days tracing and attacking enemies at different areas are very much arduous for the soldiers. There is always a chance for loss of lives of the soldiers during war and emergency scene. We have implemented a solution for the problem of replacing a soldier with a robot completely controlled with wirelessly. The model includes various sensors and Bluetooth to communicate and transmit the data from the sensors to user's android phone. The whole system can be controlled by an Android application. The system sends commands to the receiving circuit mounted on the model through android application. As an addition to the military & modern innovations like IoT are introduced. the novel idea is the network and the Internet of Things with the development Spying Module for Military applications. This system is used in conjunction with sensors that are connected to the robot to transmit data with change in environment & real time.

II.LITERATURE SURVEY

1. **Priyanka Yadav, Leena Chaudhari, Swati Gawhale Bharati Vidyapeeth College of Engineering, Lavale, India. "War Field Spying Robot with Wireless Camera".**

   Currently Wireless controlled Omni-directional monitoring robot with video
   support that can monitor using webcam.
   As per the present scenario, human dependencies on technology and future trends robots are going to be used as a perfect replacement for human being in all aspects of life.
   In this project the methodology we have used is Using night vision camera and monitoring using RFID.

2. **Jignesh Patoliya1, Haard Mehta2, Hitesh Patel, V. T. Patel Charotar University of Science and Technology, Changa, Anand, Gujarat, India. "Arduino Controlled War Field Spy Robot using Night Vision Wireless Camera and Android Application".**

   The model of robot can be described to build a robot using night vision wireless camera run by android application and the people can learn about developing android application in order to control the robot through wireless.
   The methodology used is Architecture of Bluetooth module HC-05 along with L293D motor driver IC

III. PROPOSED METHODOLOGY

A Spying Module is Equipped with different internal sensors and external sensors which will sense the input by using the designed working approach of sensor and the information from all these sensors is transferred using a connectivity. Bluetooth is the medium of communication here. The information/Data is then transferred & monitored from time to time. And take immediate actions responding to the signals received by the sensors. The focused feature was to design a module for military application which can detect metal, measure distance, detect gases accordingly and communicate with authenticate users wirelessly using Bluetooth.

Block Diagram:
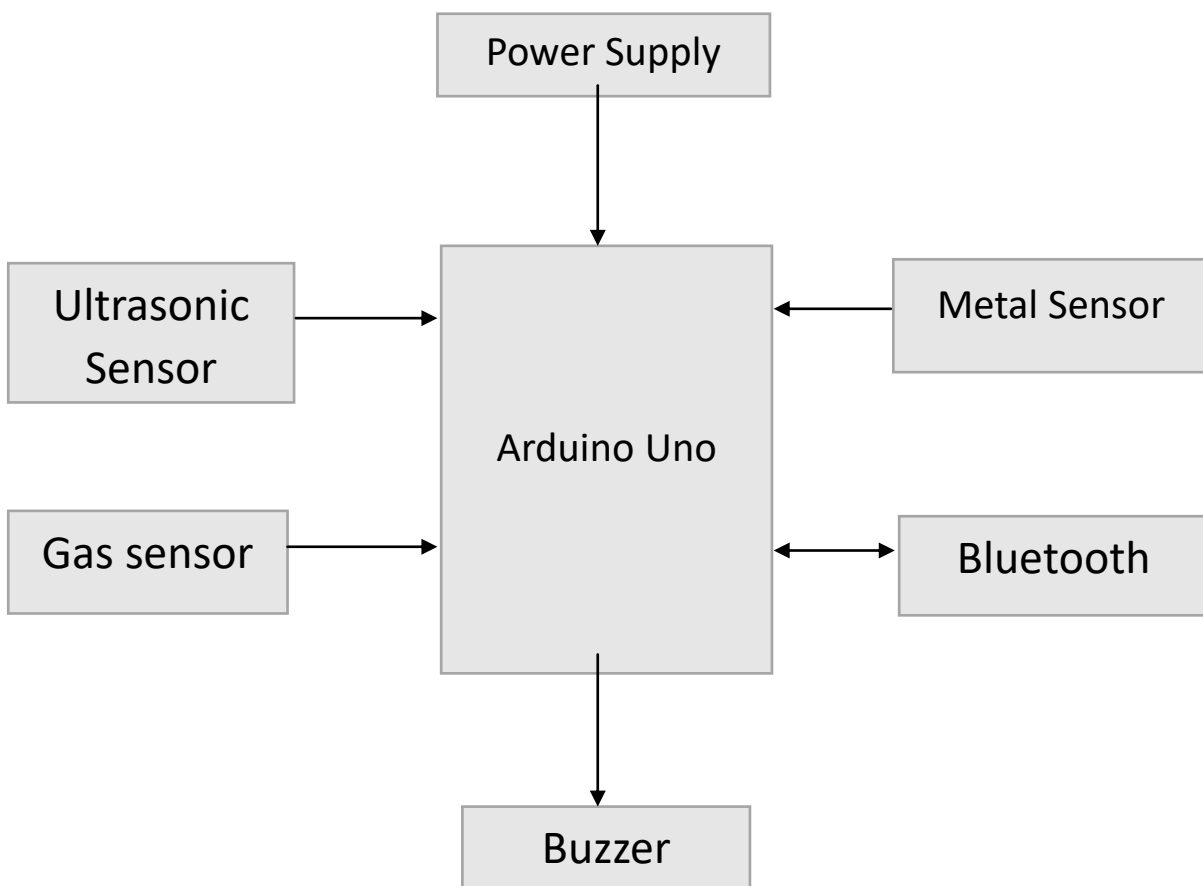
The Power supply is given to Arduino uno and all the other sensors are connected to it. The sensors sense the change in environment and transmit calculated data to the user. Ultrasonic sensor uses sound waves to measure the distance of the object. Measure distance by sending out a sound wave of a specific frequency and noting that sound wave bounces back. A gas sensor is a device that detects gas or smoke. It detects the presence of gas in an area & also it is connected to a buzzer so that the user gets notified. A metal sensor senses the metal in the environment and sends the data to user via Bluetooth & also is connect to a buzzer. The buzzer is the output device here to notify the user. Bluetooth is the medium of communication as the robot can be controlled by giving command through Bluetooth.
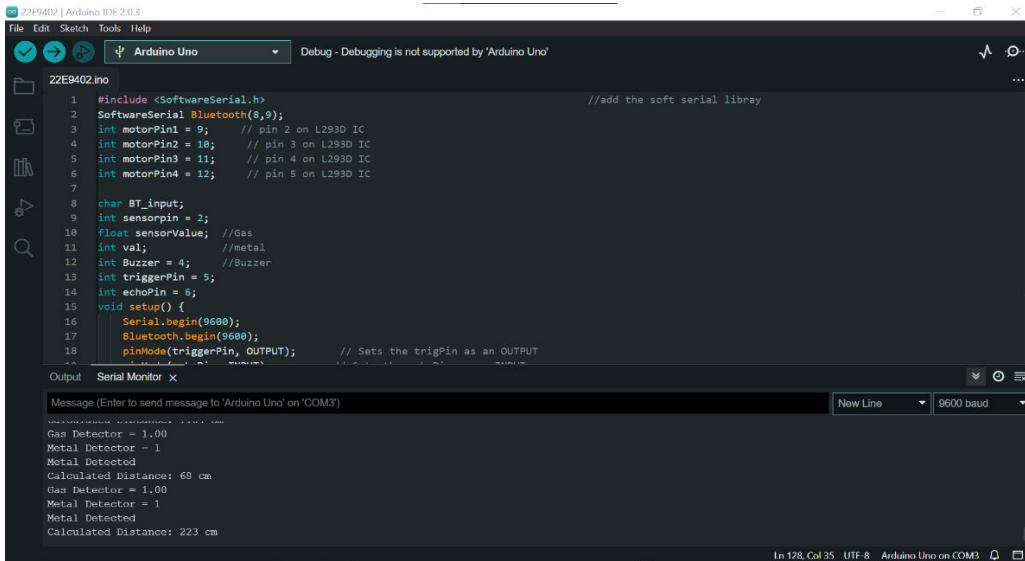
Flow Chart:
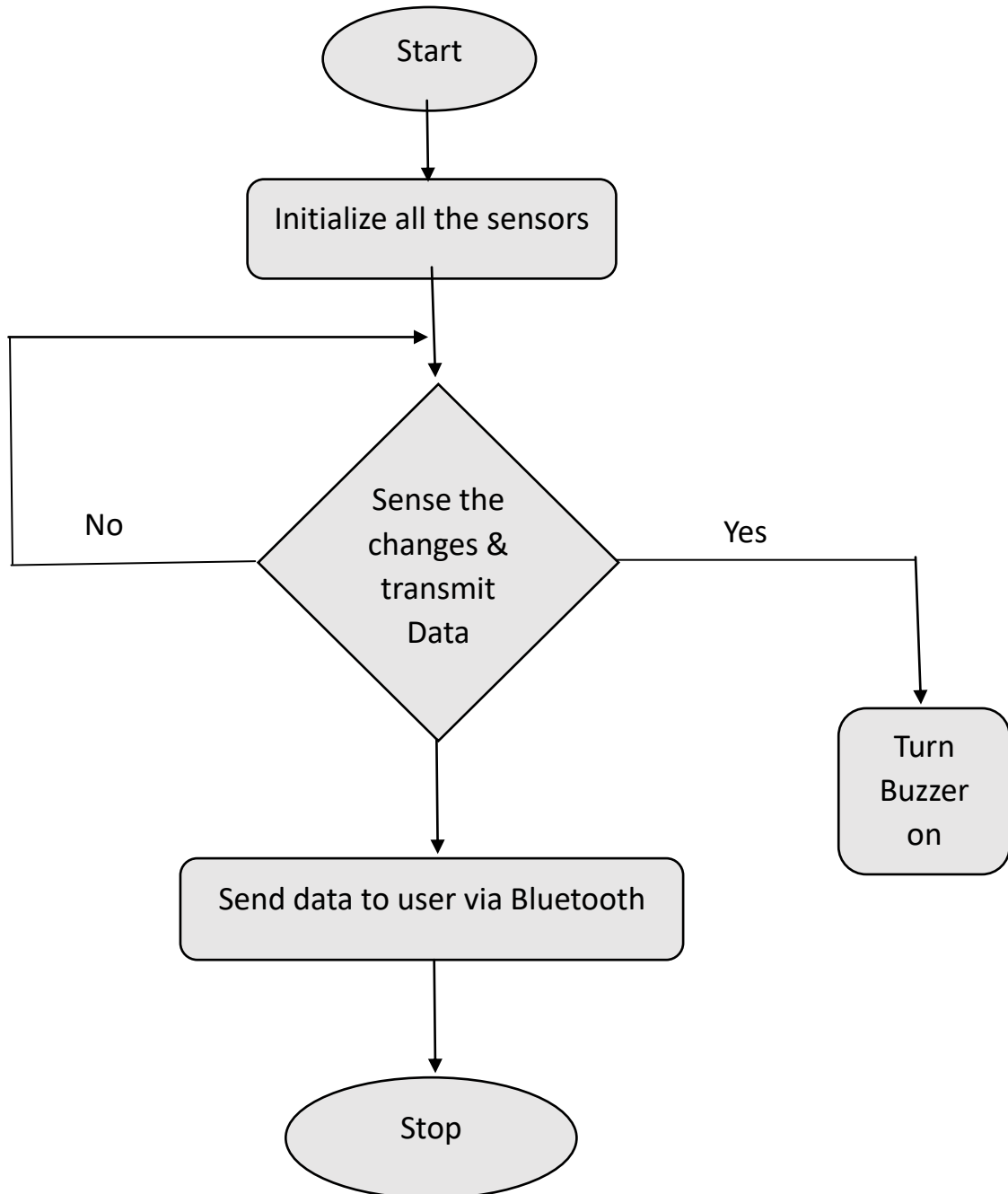
External sensors are sensors connected to the robot. Sensors such as ultrasonic sensors, gas detectors, and metal sensor are used to detect threats in advance. An ultrasonic sensor is a device that uses sound waves to measure the distance to an object. Measure distance by sending out a sound wave of a specific frequency and noting that the sound wave bounces back. By recording the time between the generation of the sound wave and its reflection, the distance between the ultrasonic sensor and the object can be calculated. With the help of ultrasonic sensors, an employee can detect dangerous machines or vehicles and perceive their distance Call from time to time and notify the user. A gas sensor is a

device that detects gas. A gas detector is a device that detects the presence of gas in an area & it is connected to a buzzer so that the user gets notified. The metal sensor is used to sense the metal objects in the environment and transmit the data to the user. The user gets all the data via Bluetooth. Using all of the sensors connected, they will track dangerous information from time to time and take immediate action.
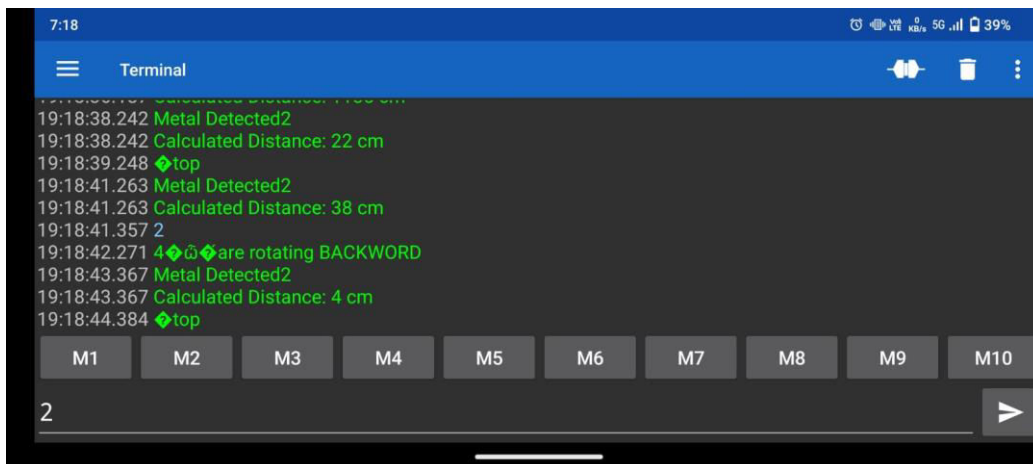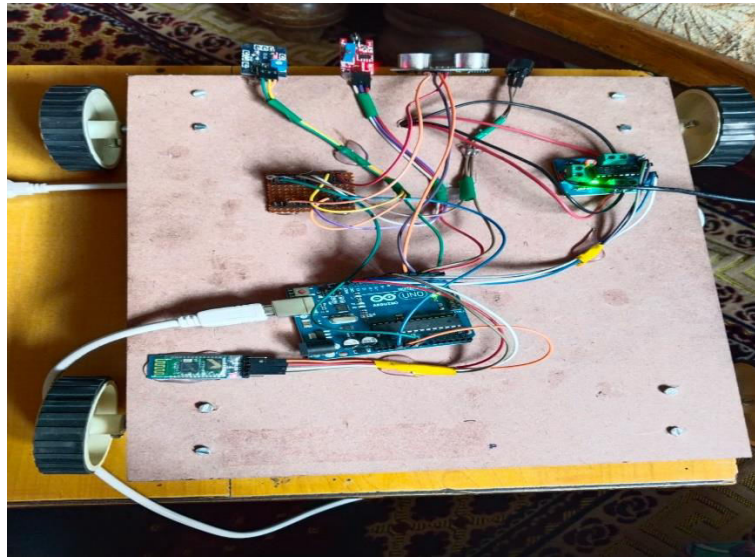
IV. RESULTS

Result on Arduino IDE

Result on Bluetooth Terminal

V. CONCLUSION

The fully executed and completed finished product will be Robot which can be controlled remotely via Bluetooth with an application in android phone. It will transmit the data like distance, metal detected, smoke or gas from the war field to the authenticate user. The Arduino uno is the microcontroller that is to be used.

VI. FUTURE SCOPE

This system can be improved in future by size reduction and better sensors. It can be made more futuristic and versatile. Also, the cost reduction will be a major future improvement for this system. The microcontroller modification can be a futuristic move towards the improvement of the project.

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