



Smart Glasses using Arduino

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Abstract: There is a major development in the domain of wireless communication and this one of the project which is used to increase the ease of communication between the mobile and the user. There are many types of models have been developed to achieve the goal of the smart glasses and one the model is using Arduino and by using the Bluetooth module to establish connection with the mobile and oled display is to display the content

Keywords-Wireless Communication, Arduino.

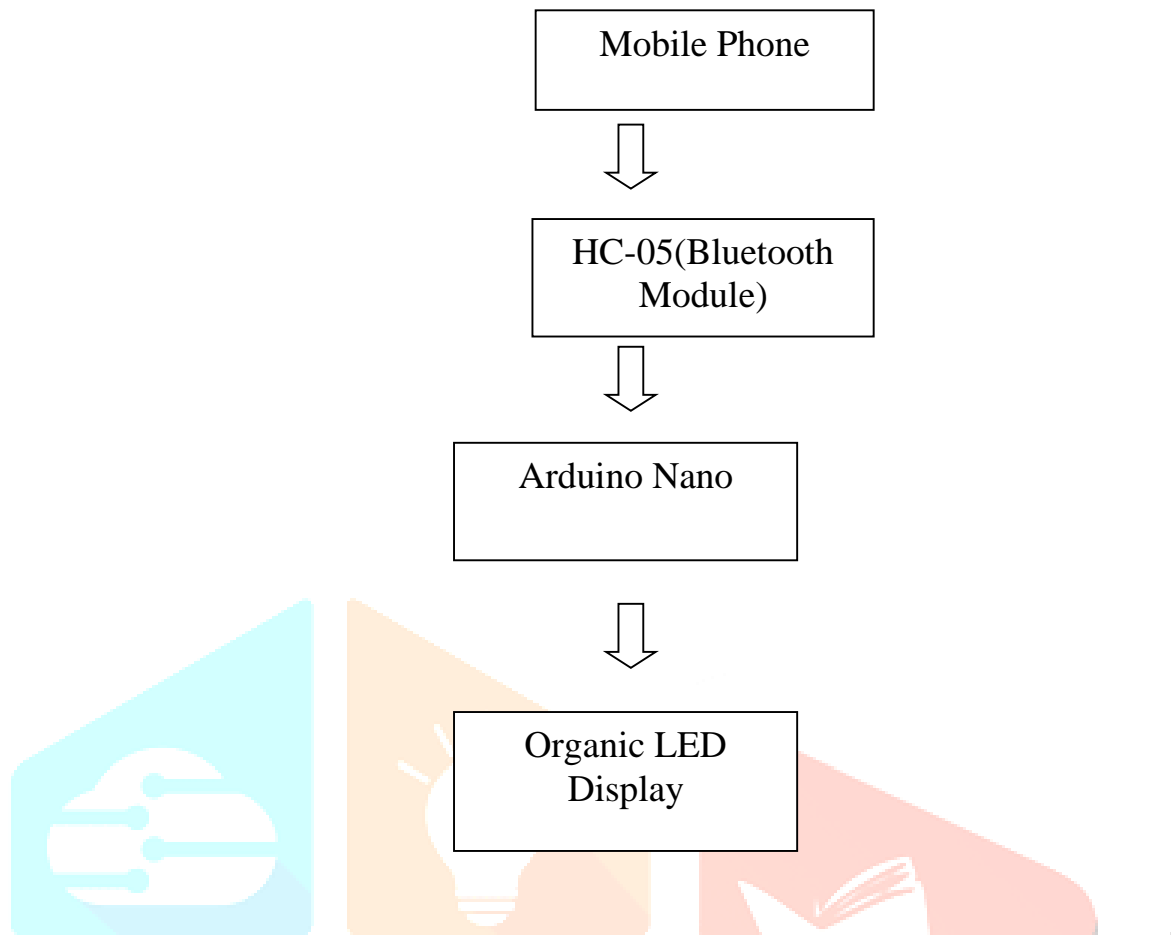
I. INTRODUCTION

Now a days, the usage of wireless communication has been developed and the gadgets involves in the usage of the wireless communication are being released and selling like a hot cake and this is the prototype which comes under the wireless communication which is used as a device by which the notifications that we receive in the mobile for example calls, messages and other type of notifications can be viewed in front of our eye. This will help the people to get the know their notifications even if they are their work and for people who are driving and there will be no disturbance for drivers even because we will project the display on the transparent material and the letters which we project are not dark so it will not create any disturbance and also helps bikers to know about their notifications even in driving in the heavy traffic and in the cities whether it is important and it will help the user to not to miss their notifications

II. PROBLEM FORMULATION

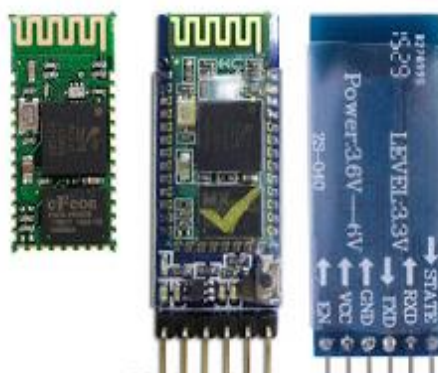
The main problem that we identified to get this idea is that many people are facing some issues to check their phone notifications while they are working especially some people who need to sit and work for long time and also for the people who are driving in the heavy traffic which has been the common issue all over the world and the people are searching for the device that can resolve their issue that to make the easy way to get to know their notification which helps the people and the solution to get to use the smart glasses by which the user can connect the mobile to the device and check the notification which he got while they are working and also driving in heavy traffic

III .BLOCK DIAGRAM



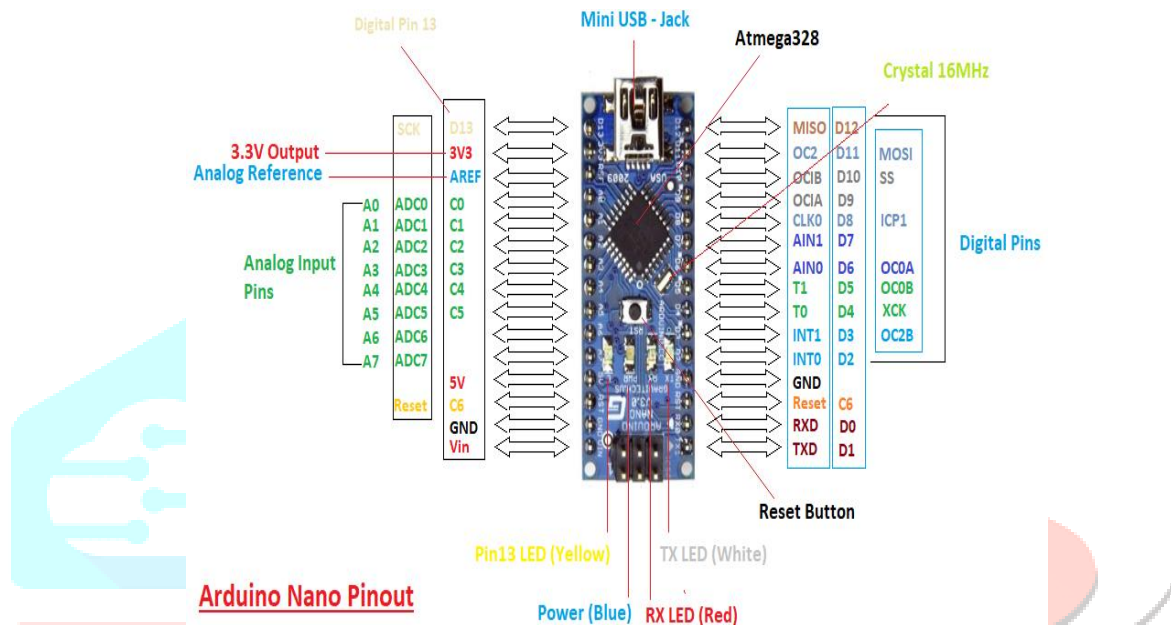
HC-05 Bluetooth Module

Bluetooth module establishes the connection between the mobile and the Arduino and we design it in a way which is to send the serial data to the Arduino Bluetooth module by establishing the connection by connecting the TX pin to the receiver pin in the The Arduino and also able to receive data by the RX pin by connecting it with TX pin in the Arduino and this is also the most important component of the project which connects both devices together



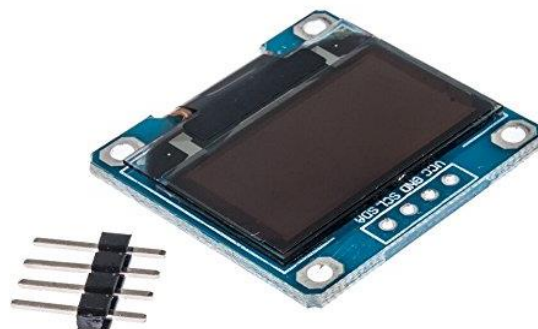
Arduino Nano:

The Arduino Nano is a small, complete and breadboard friendly and it is very small so that it can be attached to the leg of spectacles. Arduino nano is made up with a crystal oscillator of frequency 16 MHz and it will produce a clock of exact frequency using the constant voltage and this Arduino nano has total of 22 pins which there 14 digital pins and 8 analogue pins. This has a number of facilities for establishing connection with the computer or another Arduino or any other device like micro controllers and the main the ATmega328 provides UART TTL serial connection which is of 5 V and in these digital pins the pin 0 is the digital receiver pin and pin1 is the transmission pin. This is coded in the Arduino IDE software



OLED Display

OLED display is nothing but the organic light emitting diode display which are mainly used for the digital displays for the mobiles television screens and also computer monitor, and it is flash light emission technology which is by placing a series of organic thin films which are in between the two conductors when there is the application of electric field the light will be obtained and this oled emits display transparent oled is used in front of display screens such as in airplanes which helps in the display of any notification such as day, time, phone call ,messages etc.



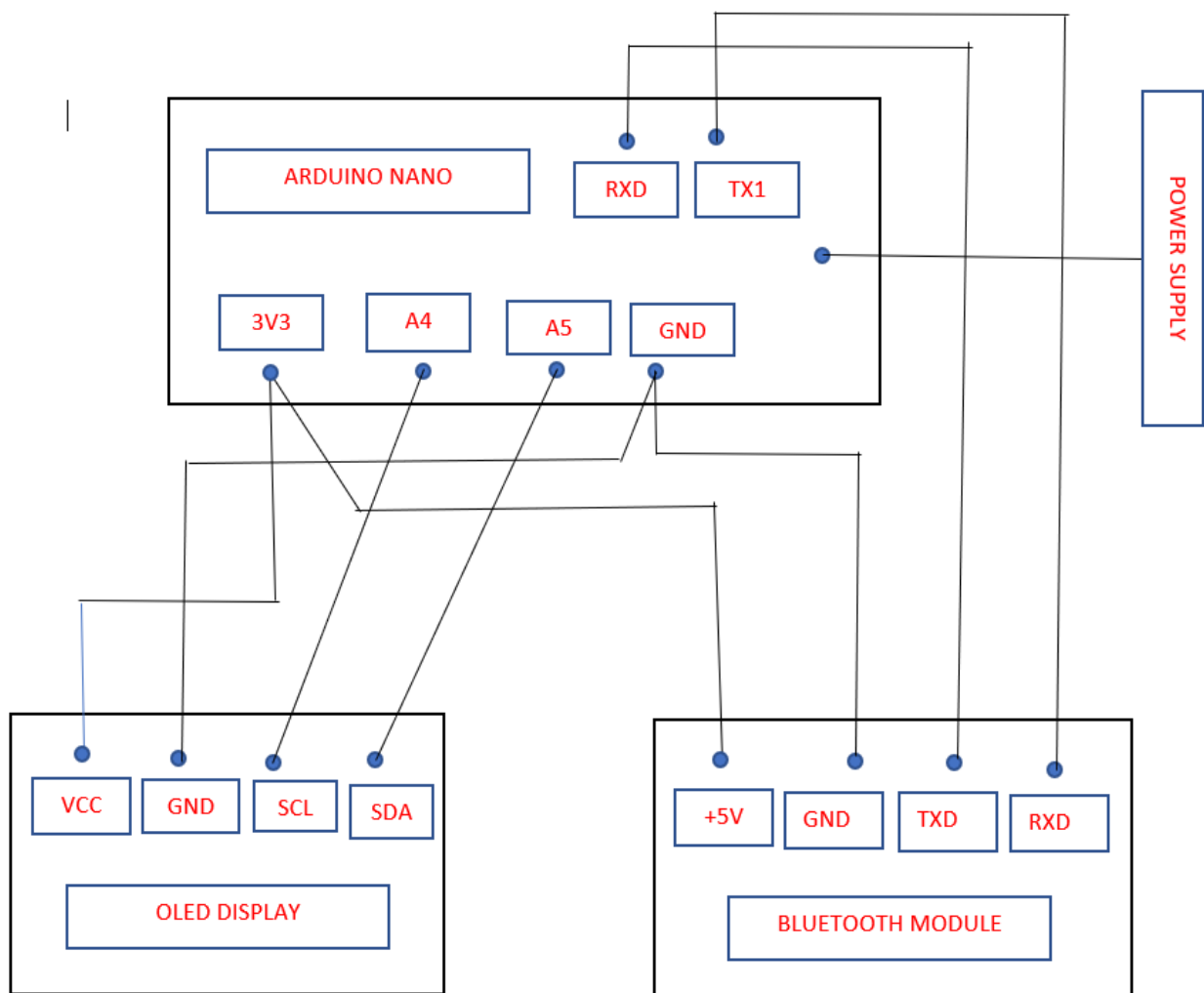
Mirror and Magnification Glasses

Mirror and magnification glass are used in the prototype making that is 3d model which we will place magnification glass in front of the mirror which we will place in front of the oled display with inclination of 45 degrees so that it will project the notification on transparent screen and wires are soldered in the way of circuit diagram

Connecting Wires

connecting wires are used to establish the connection between the OLED display, Bluetooth module and the Arduino which will be soldered, and this will be connected, and the entire module will be kept in the model which will be attached to the glasses

IV.CIRCUIT DIAGRAM



V.WORKING

In this paper, we are discussing about the smart glasses using Arduino which is used for establishing communication with mobile here the mobile is connected with the Bluetooth module and the entire work can be observed through an application. We need to supply power to the Arduino by using a battery After establishing the connection with the HC-05 Bluetooth module then the connection is established as we connected the transmission node of the HC-05 to the receiver node of the Arduino and this Arduino will receive the transferred notification and this

converts the past information to the format which will be displayed in the Organic light emitting diode display which will be displayed there through the reflecting mirror and projected in front of the glass of our normal spectacles and this will gives the notifications which are arrived in our mobile phone this entire model will be placed on the side of one leg of the spectacles

VI.ADVANTAGES

- No need to carry mobiles in hand always
- Easy of operation
- Maintenance will be simple

VII.APPLICATIONS

- It can be used while we are working in offices
- Most useful to operate in the public areas.

VIII.CONCLUSION

As we sorted out the issues of many mobile users who are missing out their notifications due to some external factors which may be like driving, doing their work or it may of their lethargic nature who are sitting and working, it will help most of the people to know their notifications

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