

## NEXT GENERATION BRAILLE SYSTEM IMPLEMENTATION: MOBILE COMMUNICATION DEVICE FOR THE BLIND

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### ABSTRACT:

Because of the absence of thought, the visually impaired individuals can't without much of a stretch get to the freshest data and the advances which can supply them a sporadic correspondence aptitude. new mechanical improvements can't be effortlessly sensible to the outwardly disabled individuals as a result of their higher cost and the less transportability. That is the reason it has ended up alluring important to grow a minimal effort, transportable and a snappy Braille System for the outwardly disabled individuals. This research project presents another correspondence channel for the hard of hearing visually impaired and outwardly weakened individuals which comprise of three disparate subsystems giving diverse administrations to enhance the correspondence skillfulness of the outwardly debilitated people.

### KEYWORDS:

GSM, Microcontroller, Braille Alphabet .

### INTRODUCTION:

Mobile phone is an exceptionally helpful fanciful innovation. Today every one of the general population are utilized mobile phones for their accommodations The wireless telephone is a decent quality and extremely valuable innovation for correspondence. Utilizing PDA speaking with loved

ones from wherever to all more than on the planet is likely. By calling or sending messages from cell telephone we can basically ready to unite with others. Presently a day's short message administration is the most helpful application. Today 80% of PDA clients are utilize this information office. In any case, the outwardly impeded individuals can't



ready to utilize this office. In this paper the outwardly hindered individuals can read message utilizing wireless telephone, furthermore this framework help the visually impaired individuals to send reaction for the present approaching messages .This will actualized by interfacing the Braille framework with phone. Louise Braille is the father of Braille framework. This framework is a widely utilized framework; with the assistance of this framework, all the visually impaired people groups for perusing and composing like a normal individuals. Braille is composing framework which

empowers blind and sensibly located individuals to peruse and compose completely through touch. It was concocted by Louis Braille (1809-1852), who was visually impaired and turned into an instructor of the visually impaired. It comprises of examples of brought specks masterminded up in cells of up to six spots in a 3 x 2 arrangement. Every cell speaks to a letter, numeral or accentuation mark. Some by and large utilized words and letter blends additionally have their own single cell examples. In this task we are adding to another technique in Braille framework in arrange to peruse messages for Blind individuals.

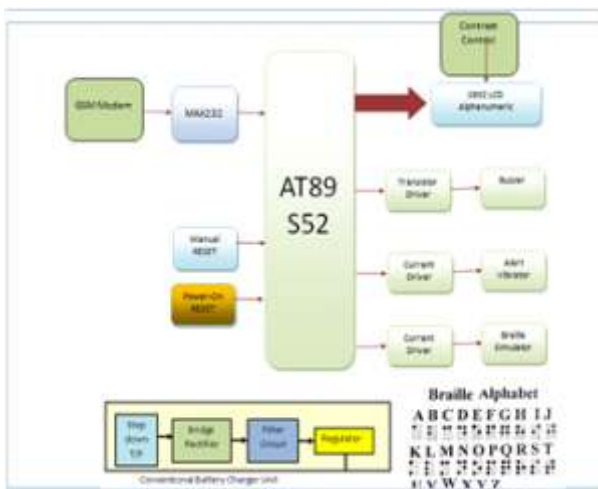
Here we are utilizing GSM modem to get messages the substance/letters of the message can be perused by visually impaired individuals effortlessly just by feeling the vibration of vibrators utilizing as a part of this undertaking and the same we are going to show on LCD also. Ready vibrator is filling in as message alerter and Buzzer is for listening to caution

**II. PROBLEM FORMULATION**

1. The visually impaired individuals can't just right to utilize the most recent data and the advances which can supply them an exchanging correspondence mastery.

2. new mechanical improvements can't be effortlessly viable to the outwardly weakened individuals as a result of their higher rate and the less convenientce.

**III. BLOCK DIAGRAM AND EXPLANATION**



**Hardware description:**

**Microcontroller**

The AT89S52 is an elite CMOS 8-bit microcontroller, low-power, with 8K bytes of EPROM. These are components of AT89S52 microcontroller: 256 bytes of RAM, 8K bytes of Flash, 32 information/yield pines, three 16-bit clock/counters, Watchdog clock, two information pointers, six hinder of two level building design, serial port, oscillator . the AT 89C52 is capable MC which gives an adaptable

and cheap result to numerous installed framework applications.

**LCD (Liquid Crystal Display) -**

LCD which is ordinarily known as Liquid Crystal Display and Alphanumeric Presentation it implies that it can demonstrate Letters, Amounts and additionally diverse codes in this manner LCD is a client sympathetic Show technique which can be utilized for indicating numerous correspondences distinctive seven area show which can demonstrate just amounts and a portion of the letters

**GSM (Global System for Mobile)-**

GSM is an additional gathering cell basic progressed to give sentiment offices and records exchange by arithmetical expression.

**GSM Specifications-1RF Spectrum**

**GSM 900**

Versatile to BTS (uplink): 890-915 MHZ

BTS to Mobile (downlink): 935-960 MHZ

Transmission capacity : 2\* 25 MHZ

Serial Communication

**RS232 CABLE:**

To permit similarity between information correspondence contraption, an interfacing standard called RS232 is utilized. following the time when the standard was place much sooner than the entry of the TTL rationale family, its information and yield voltage levels are not TTL good.

Therefore, to unite any RS232 to a microcontroller framework, voltage converters, for example, MAX232 are utilized to change the TTL rationale levels to the RS232 voltage levels and the other way around.

**MAX 232:**

Max232 IC is a specific circuit which makes standard voltages as essential by RS232 models. This IC gives best stable dismissal and exceptionally steady against releases and shortcircuits. MAX232 IC chips are typically alluded to as line drivers.

transistor driver circuit:

The transistor utilized as a part of this undertaking to drive the bell is BC547.

### Highlights

Low current (max. 100 mA)

Low voltage (max. 65 V).

### Applications

Broadly useful exchanging and enhancement.

### Vibrator

Vibration mode is a key capacity on late wireless telephones. The capacity is given by a smaller scale vibration engine, which was produced for PDA telephones by none other than Namiki.

Namiki is a pioneer of vibration engines, and our 20 years of learning in this field pulled in solid interest for our items from portable hardware makers everywhere throughout the world. Be that as it may, we are careless to growing new items and raising component levels for the future applications.

### Control supply

The 230A.C info is given to rectifier circuit and Output get from the rectifier is a throbbing D.C voltage. The yield from the rectifier is given to a channel circuit to channel A.C parts present steady later than amendment. Presently, this voltage encouraged to voltage controller to unadulterated consistent D.C voltage get.

### Contrast Control:

To have an unmistakable perspective of the characters on the LCD, difference ought to be balanced. To change the difference, the voltage ought to be shifted. For this, a preset is utilized which can carry on like a variable voltage gadget. As the voltage of this preset is changed, the differentiation of the LCD can be balanced.

### Reset Circuit-

This circuit gives the microcontroller the beginning heartbeat required to begin the operation from the begin. Unless this heartbeat is given, the

microcontroller doesn't begin working.

### Ringer

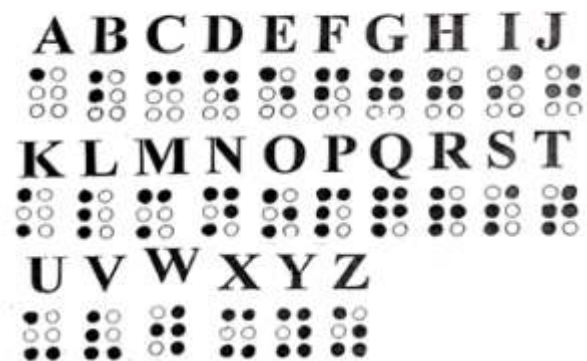
Early gadgets depended on an electromechanical framework indistinguishable to an electric chime without the metal gong.

"Buzzer" originates from the grating commotion that electromechanical signals made.

### Braille Simulator

The essential network of a Braille letter set character comprises of six vibrators, situated like the figure six on a kick the bucket, in two parallel vertical lines of three spots each. From the six vibrators that make up the fundamental matrix, 64 distinct signs can be make.

## Braille Alphabet



### SOFTWARE DESCRIPTION

This task is actualized utilizing taking after software's:

- 1.Express PCB – for planning circuit
- 2.PICC compiler - for accumulation part
- 3.Proteus 7 (Embedded C) – for reenactment part.

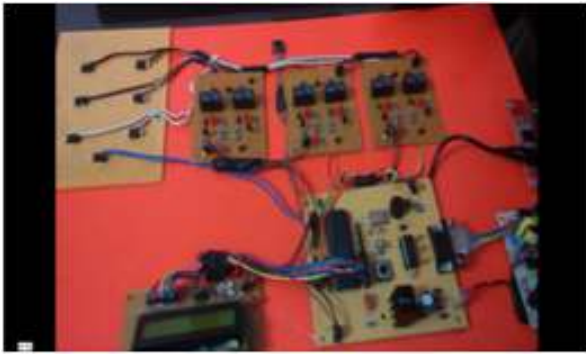
### III. Advantages

- A advantageous and without hands approach to get to your messages.
- Offered in a wide range .
- Acquainted enough to utilize a consistent one.
- Possible point of preference on the off chance that you utilize it to take in the Braille Alphabet.

#### IV. Applications:

- Mobiles
- printers
- Colleges
- Screen

#### II. RESULT



#### III. CONCLUSION

This task presents Next Generation Braille System Implementation: Mobile Communication Device for the Blind Implementation of Experimental work has been done Successfully .

#### I. REFERENCES

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