Rajiv Gandhi University of Knowledge Technologies

Catering to the Educational Needs of Gifted Rural Youth of AP

Safety device

A mini project report by,

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PROJECT GUIDE:- M.DINESH REDDY

index

ABSTRACT :

The main moto of this project is to send emergency messages and trace the current location using Bluetooth. Our proposed device is like wearable one which is connected to the user phone app via Bluetooth.For this process of sending automatic messages and location we need to develop an app in which we can save contacts and messages and tracing the current location. When we press the alert button the app which was connected with the Bluetooth module or device observes the alert and send the emergency messages and current location to saved contacts in our app.

INTRODUCTION:

our proposed device is a wearable one,it's look like a wrist watch that send an logic high alert through bluetooth low energy signal to android app in mobile,taht app contains saved contacts and message, along with location link.

What is bluetooth:

Bluetooth is a wireless technology, which is a low energy signal used to transfer data between electronic devices.
The distance of data transmission is small in comparision to other modes of wireless communication. Limited data transfer range 50m-100m

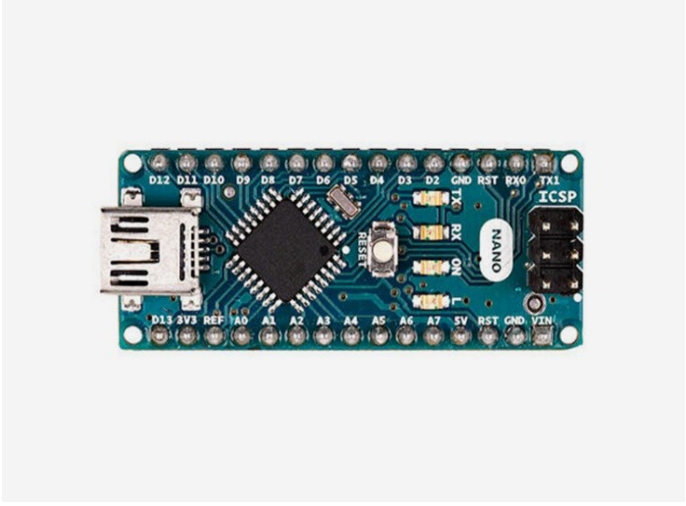
Device components

our device required the below components :

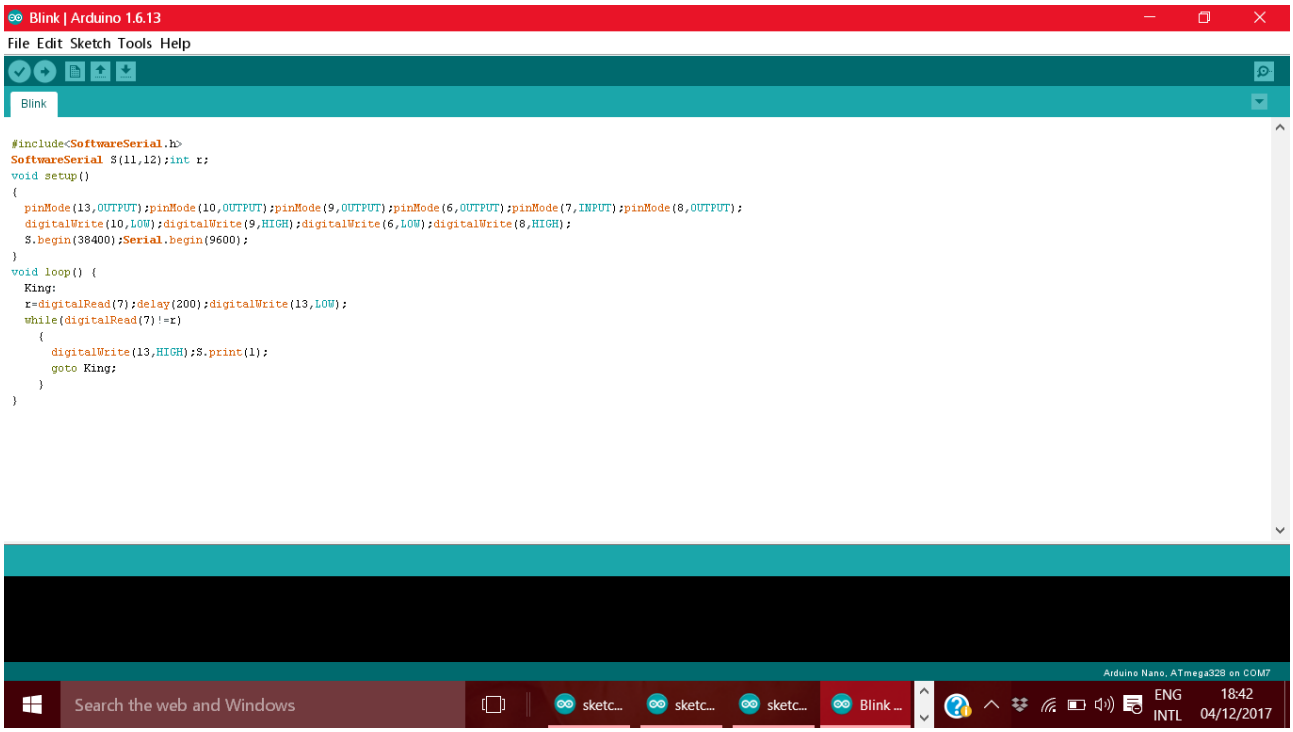
1) Arduino nano
2) Bluetooth module (HC-05)
3) SPST&SPDT Switches

1)Arduino nano:

There are different types of arduino boards are available, like arduino uno, mega, and nano.arduino nano contains both analog and digital pins,which has a commain pin sets of all arduino includes vcc and ground.
We are using the both rx and tx of nano.



program for arduino nano:



2)Bluetooth module (HC-05):

bluetooth modules are two types based on their working properties those are hc-05,hc-06. Hc-05 act as master slave and hc-06 act like slave operation.

Specifications:# PIO(programmable input output control)

3.3 to 5 v supply

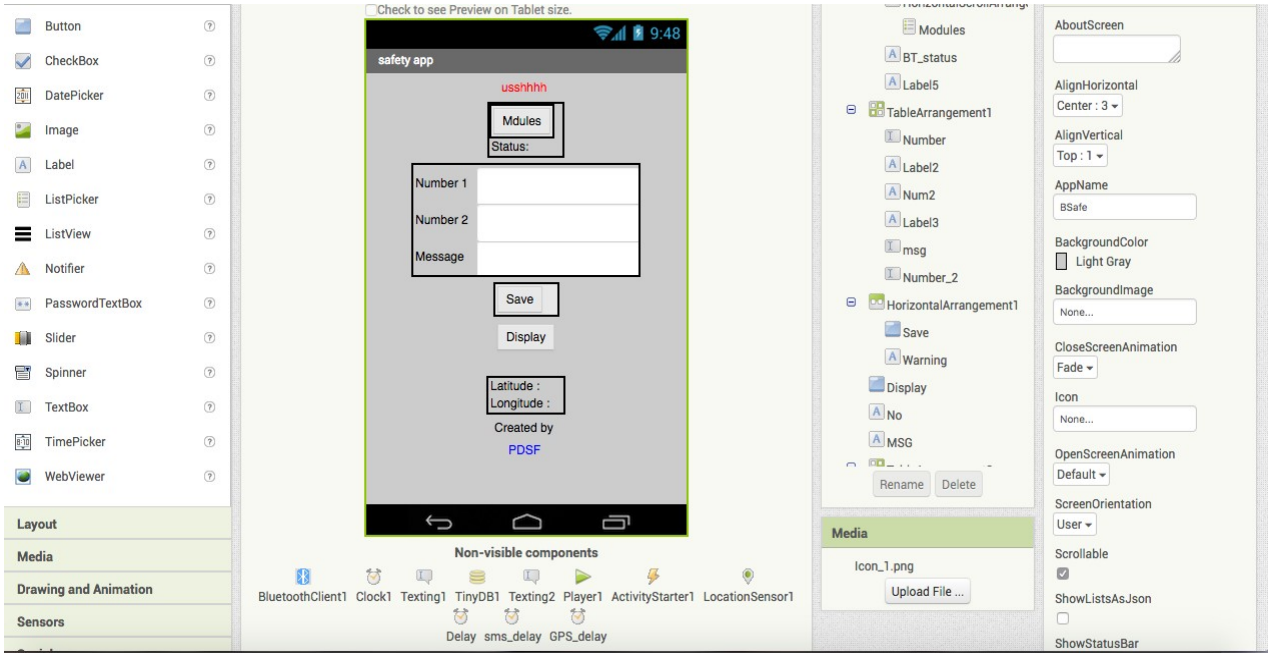
UART interface with programmable baud rate

MIT APP INVENTOR:

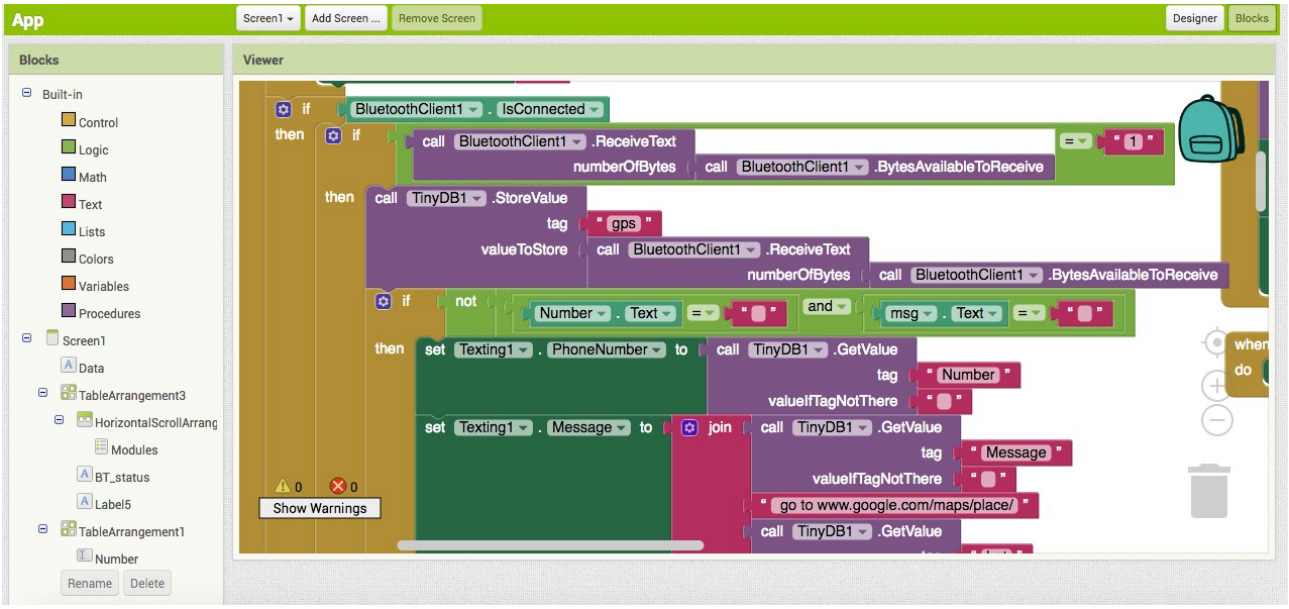
it is an online app devoloping software,we are making to use this software to devolope an app based on our required conditions. This app is works only when android is conneted to bluetooth

module. After that we need to save contact numbers and the default message. This app contains gps sensor ,whenever the mobile will turned on the location the app will store the present location along with the message.whenever its recieves the alert from bluetooth module it send the message and the location to the saved contacts.

App user interface using mit app inventor:

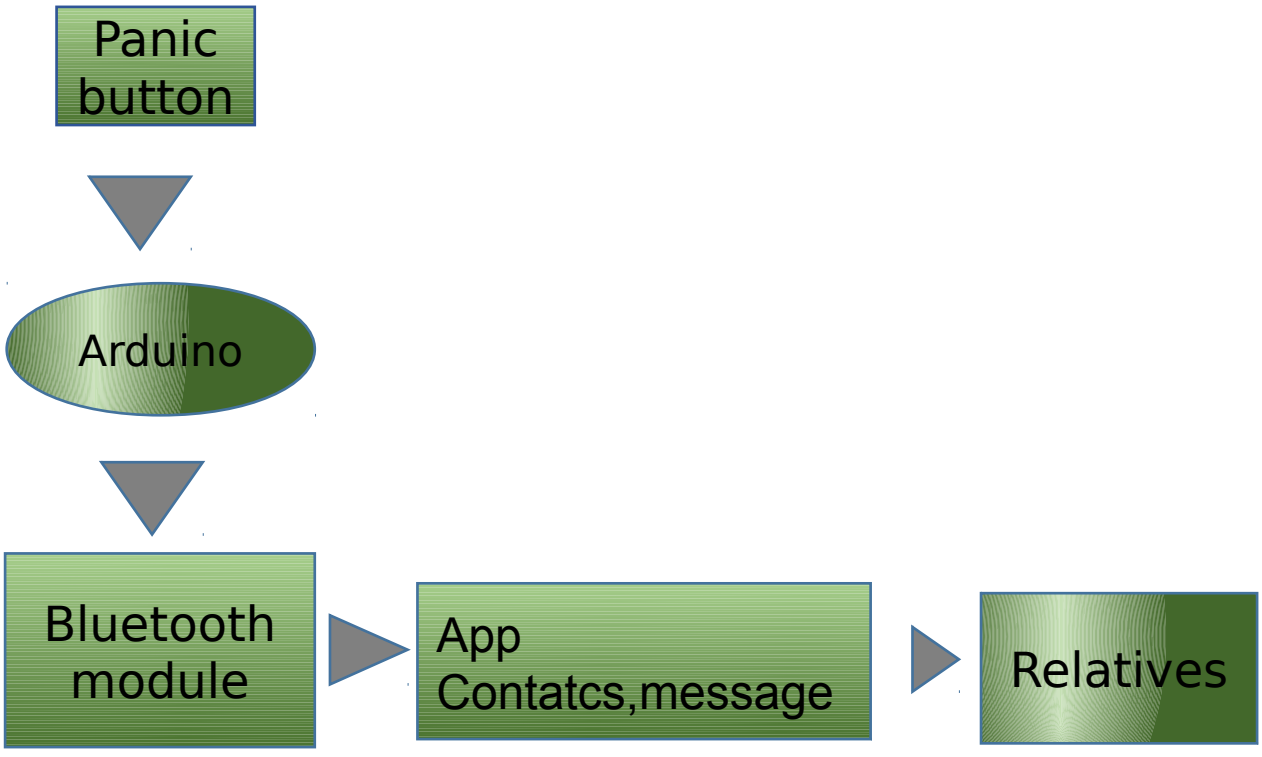


App inner side building using blocks:



WORKING PROCESS :

whenver we press the panic button, an alert in form of logic high will send to bluetooth module through arduino. The moudule will in conected with android app through BLE. Whenever the app recieves the alert from the device, it will send the emergrncy message which has already saved in app along with the location details in the form of google link.after pressing the panic switch we will recieve the message along with location link, if we click the link we can see the location of that person, and trace them easily.



APPLICATIONS:

- Easy Tracing method.
- Used in medical purpose mainly for heart patient and for womens safety also.

ADVANTAGES

Less expensive
Less complexity
Easily carriable looks like wrist watch
Easy to trace out the location
By this somewhat we can reduce danger situations

DISADVANTAGES

Always Bluetooth module and android Bluetooth must be connected

CONCLUSION:

"SAFETY DEVICE " pays a little contribution to the society by providing them security and safety.

Reference: google forms site,womens safety using ibeacons technology book.