CRACK THE COVID-19 CRISIS
BY

NASSCOM FUTURESKILLS AND IBM

Team Name: COVID VIJAY

Title of the project: GPS EMERGENCY RESPONSE SERVICES

SOURCE CODE

```
#include "TinyGPS++.h"
#include "SoftwareSerial.h"
SoftwareSerial GPRS(2,3);
SoftwareSerial serial_connection(10, 11); //RX=pin 10, TX=pin 11
TinyGPSPlus gps;//This is the GPS object that will pretty much do all the grunt work with the NMEA data
float latitude=0;
float longitude=0;
String Speed="";
int Contrast=20;
#define x A1
#define y A2
#define z A3
int xsample=0;
int ysample=0;
int zsample=0;
#define samples 10
#define minVal -50
#define MaxVal 50
void setup()
{
  Serial.begin(9600);//This opens up communications to the Serial monitor in the Arduino IDE
  serial_connection.begin(9600);//This opens up communications to the GPS
  Serial.println("successfully Initialized....");
  Serial.println("GPS Start");//Just show to the monitor that the sketch has started
  for(int i=0;i<samples;i++)
  {
    xsample+=analogRead(x);
    ysample+=analogRead(y);
    zsample+=analogRead(z);
  }

  xsample/=samples;
  ysample/=samples;
  zsample/=samples;

  Serial.println(xsample);
  Serial.println(ysample);
  Serial.println(zsample);
  delay(1000);
}

void loop()
{
  while(serial_connection.available())//While there are characters to come from the GPS
  {
    gps.encode(serial_connection.read());//This feeds the serial NMEA data into the library one char at a time
    //Serial.println("Satellite Count:");
  }
  if(gps.location.isUpdated())//This will pretty much be fired all the time anyway but will at least reduce it to only after a package of NMEA data comes in
  {
    //Get the latest info from the gps object which it derived from the data sent by the GPS unit
    Serial.println("Satellite Count:");
    Serial.println(gps.satellites.value());
    Serial.prin tln("Latitude:");
    Serial.println(gps.location.lat(), 6);
    Serial.println("Longitude:");
    Serial.println(gps.location.lng(), 6);
    Serial.println("Speed MPH:");
    Serial.println(gps.speed.mph());
    Serial.println("Altitude Feet:");
    Serial.println(gps.altitude.feet());
    Serial.println("");
  delay(1000);
  }
   int value1=analogRead(x);
    int value2=analogRead(y);
  int value3=analogRead(z);

  int xValue=xsample-value1;
  int yValue=ysample-value2;
  int zValue=zsample-value3;

  Serial.print("x=");
  Serial.println(xValue);
  Serial.print("y=");
  Serial.println(yValue);
  Serial.print("z=");
  Serial.println(zValue);
 delay(1000);
 //condition for accident detection
  if(xValue < minVal || xValue > MaxVal  || yValue < minVal || yValue
> MaxVal  || zValue < minVal || zValue > MaxVal)
  {//in case of accident calling to a number 5 times if needed we can
add multiple numbers.
   for(int i=0;i<5;i++)
   {
   Serial.println("calling");
   GPRS.begin(9600);
   Serial.println("Connecting to network");
   delay(20000);
   Serial.println("Should be connected to network by now");
   GPRS.print("ATD+xxxxxxxxxxxx;\r");
   Serial.println("Dialing");
   delay(12000); //Give it time to connect
   //GPRS.print("ATH\r"); // And disconnect
   Serial.println("Disconnect");
   }
  }`
  delay(1000);
}
```

Team Members:

1. B.NAVEEN
2. P.SATYAVATHI
3. G.NIKHITHA
4. T.SUDHARSHAN REDDY

Team Mentor :

Mr. RAHUL KUMAR

ASSISTANT PROFESSOR EEE