Tracy Protector Code Comments

webAPserver

```
#include "WiFi.h"
#include "ESPAsyncWebServer.h"
#include <WiFiClient.h>
#include <WiFiAP.h>


#include <HardwareSerial.h>
HardwareSerial RfSerial(1);


const char *ssid = "TRACY";
const char *password = "tracy1234";

int checkPower = 15;
int checkSensor = 18;
int buzzer = 25;
int batteryOn=19;

String address = "Call for code challenge is on fire! Let the battle begin! ";
String receiveMsg="Received:\n";
String phone;
String Message;
bool duplex = false;

AsyncWebServer server(80);
```

Special Library

Create Provision for the Web Page

```
void transmit(String data){
  if(RfSerial.available()){
  duplex = true;
  RfSerial.flush();
  RfSerial.println("PADDING" + data + "\n\n");
  duplex = false;
  }
}
```

Radio Transmission

```
void setup(){
  pinMode(checkPower,INPUT);
  pinMode(checkSensor,INPUT);
  pinMode(batteryOn,OUTPUT);
  pinMode(buzzer,OUTPUT);
  digitalWrite(batteryOn,LOW);
  digitalWrite(checkPower,LOW);
  digitalWrite(buzzer,LOW);
  Serial.begin(115200);
  Serial.println();

/* Define pins for radio transmit and receive */
  RfSerial.begin(2400,SERIAL_8N1,16,17);
```

Coakum Technology Rights 1

```
/* WiFi Hotspot logic */
  Serial.println("Configuring access point...");
   // You can remove the password parameter if you want the AP to be open
   WiFi.softAP(ssid, password);
   IPAddress myIP = WiFi.softAPIP();
   Serial.print("AP IP address: ");
   Serial.println(myIP);
   server.begin();
   Serial.println("Server started");
   server.on("/", HTTP_GET, [](AsyncWebServerRequest *request){
     const char* PARAM_KEY = "phone";
     int paramsNr = request->params();
     if(request->hasParam("phone")){
       phone = request->getParam(0)->value();
    }
    if(request->hasParam("message")){
       Message = request->getParam(1)->value();
    }
     transmit(phone+"\n"+Message+"\n");
     request->send(200, "text/html", "<html><body><form><input type='text'
name='phone'><textarea name='message'></textarea><br /><input type='submit'
/></form></body></html>");
   });
   server.on("/log", HTTP_GET, [](AsyncWebServerRequest *request){
     int paramsNr = request->params();
     AsyncWebParameter* p = request->getParam(0);
     request->send(200, "text/html", "<html><body><a
href='#'><button>Refresh</button></a><br
/><textarea>"+receiveMsg+"</textarea></body></html>");
   });
   server.begin();
}


   void loop(){
     String received="";
     if(!duplex && RfSerial.available()){
         received =char(RfSerial.read());
         receiveMsg += received;
     }
     Serial.print(receiveMsg);
   /* Switch to battery if POWER CUT */
     if(digitalRead(checkPower) == LOW){
         Serial.write("low");
         if(digitalRead(batteryOn) == LOW){
             digitalWrite(batteryOn,HIGH);
           }
     }

     if(digitalRead(checkPower) == HIGH){
         if(digitalRead(batteryOn) == HIGH){
             digitalWrite(batteryOn,LOW);
         }
```

Wifi Hotspot

Web Page

Read Messages

Coakum Technology Rights 2

```
/* Battery Logic till here */


/* Check Fire Sensor and give buzzer */
if(digitalRead(checkSensor) == LOW){
  if(digitalRead(buzzer) == LOW){
      digitalWrite(buzzer,HIGH);
      transmit("PADDING FIRE WARNING:" + address + "\n\n");
  }
}

if(digitalRead(checkSensor) == HIGH){
  if(digitalRead(buzzer) == HIGH){
      digitalWrite(buzzer,LOW);
  }
}
/*  Fire sensor Logic till here  */

}
```