IOT BASED SAFETY GADGET FOR CHILD SAFETY MONITORING AND NOTIFICATION

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FINAL CODE :

```
#include <WiFi.h>
#include <WiFiClient.h>
#include <PubSubClient.h>
#include <ArduinoJson.h>
#include<TinyGPS++.h>
#define RXD2 16
#define TXD2 17
HardwareSerial neogps(1);
TinyGPSPlus gps; char arr[100];
const char* ssid = "Redmi"; const
char* password = "krish@08";
#define ID "17cmwk"
#define DEVICE_TYPE "Tracker"
```

```
#define DEVICE_ID "gps1"  #define TOKEN "childtracker1"
char server[] = ID ".messaging.internetofthings.ibmcloud.com";
char publish_Topic1[] = "iot-2/evt/Data1/fmt/json"; char
publish_Topic2[] = "iot-2/evt/Data2/fmt/json"; char
authMethod[] = "use-token-auth"; char token[] = TOKEN;

char clientId[] = "d:" ID ":" DEVICE_TYPE ":" DEVICE_ID;
WiFiClient wifiClient;
PubSubClient client(server, 1883, NULL, wifiClient);
void setup() { Serial.begin(115200); Serial.println();
wifi_init(); } long previous_message = 0; void loop()
{ client.loop();

String payload = getLocationPayload();
if(payload=="{}"){ return;

}
Serial.print("Sending payload: "); Serial.println(payload);

if (client.publish(publish_Topic1, arr)) {
Serial.println("Published successfully");
} else
{
Serial.println("Failed");
} delay(2000); } void wifi_init(){
WiFi.begin(ssid, password);
neogps.begin(9600,SERIAL_8N1,RXD2,TXD2);
while (WiFi.status() != WL_CONNECTED) {
delay(500);

Serial.print(".");
```

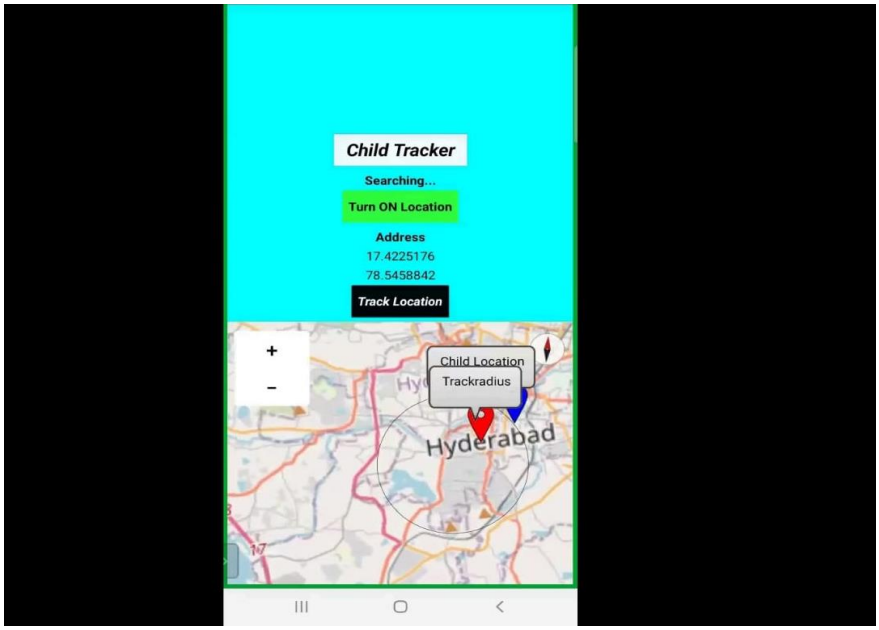
```
}
Serial.println("");
Serial.println(WiFi.localIP()); if
(!client.connected()) {
Serial.print("Reconnecting client to "); Serial.println(server);
while (!client.connect(clientId, authMethod, token)) {
Serial.print("."); delay(500);
}
Serial.println("Connected TO IBM IoT cloud!");
}
}
String getLocationPayload(){ boolean newData = false;
for(unsigned long start = millis();millis()-start<1000;){
while(neogps.available()){
if(gps.encode(neogps.read())){ newData = true;
}
}
}
String payload; if(newData == true){
newData = false; payload =
locationPayloadGenerator();
} else{
Serial.println("No data"); payload
="{}";
```

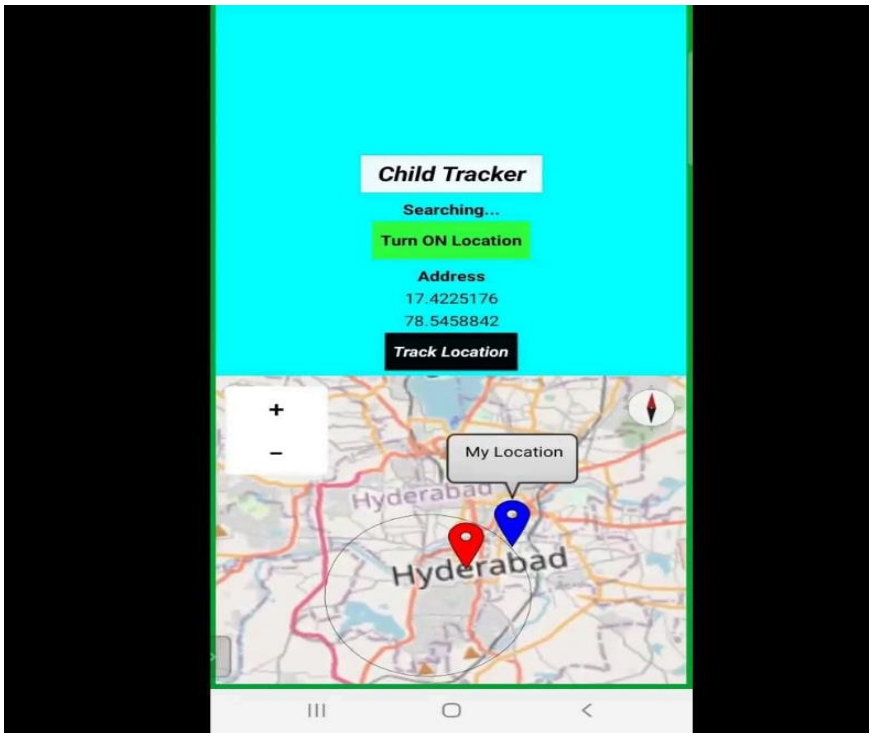
```
} return
payload;

}
String locationPayloadGenerator(){ String payload = "{}";
if(gps.location.isValid()){ float lat = gps.location.lat(); float lon =
gps.location.lng(); payload = "{\"latitude\" : "+String(lat)+",\"longitude\" :
"+String(lon)+"}"; create_json(lat,lon);

} return
payload;

}
void create_json(float lat,float lon){
StaticJsonDocument<100> doc;
JsonObject root = doc.to<JsonObject>();
root["name"]="Child"; root["latitude"] =
lat; root["longitude"] = lon;
serializeJsonPretty(doc,arr);
```


Child Tracker
Searching...
Turn ON Location
Address
17.4225176
78.5458842
Track Location
Child Location
Trackradius
Hyderabad


Child Tracker
Searching...
Turn ON Location
Address
17.4225176
78.5458842
Track Location
My Location
Hyderabad