

SMART DOOR LOCK SYSTEM

PROGRAM

```
#include <Arduino.h>

#ifdef ESP32

#include <WiFi.h>

#include <FirebaseESP32.h>

#elif defined(ESP8266)

#include <ESP8266WiFi.h>

#include <FirebaseESP8266.h>

#elif defined(ARDUINO_RASPBERRY_PI_PICO_W)

#include <WiFi.h>

#include <FirebaseESP8266.h>

#endif

#include <addons/TokenHelper.h>

#include <addons/RTDBHelper.h>

#include <Keypad.h>

#define Password_Length 4

char Data[Password_Length + 1] = {0}; //all locations contain 0

const int lock = 13;

byte data_count = 0;

char customKey;

char myPassword[] = "1234"; //pre-stored password

const byte ROWS = 4;

const byte COLS = 4;

char hexaKeys[ROWS][COLS] = {

{'1', '2', '3', 'A'},

{'4', '5', '6', 'B'},

{'7', '8', '9', 'C'},

{'*', '0', '#', 'D'}
```

Jeffrey Hamlin V (210701094)

Harini V (210701071)

```
};
```

```
byte rowPins[ROWS] = {13, 12, 14, 27};
```

```
byte colPins[COLS] = {26, 25, 33, 32};
```

```
Keypad customKeypad = Keypad(makeKeymap(hexaKeys), rowPins, colPins,  
ROWS, COLS);
```

```
#define WIFI_SSID "Unknown"
```

```
#define WIFI_PASSWORD "43214321"
```

```
#define API_KEY "AlzaSyDCQZOD3P2uDUE7CGYWR2vwsLj9VDh710M"
```

```
#define DATABASE_URL "https://project-324f8-default-rtdb.firebaseio.com"
```

```
#define USER_EMAIL "project@gmail.com"
```

```
#define USER_PASSWORD "123456789"
```

```
FirebaseData fbdo;
```

```
FirebaseAuth auth;
```

```
FirebaseConfig config;
```

```
unsigned long sendDataPrevMillis = 0;
```

```
unsigned long count = 0;
```

```
void setup()
```

```
{
```

```
Serial.begin(115200);
```

```
WiFi.begin(WIFI_SSID, WIFI_PASSWORD);
```

```
Serial.print("Connecting to Wi-Fi");
```

```
while (WiFi.status() != WL_CONNECTED)
```

```
{
```

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

```
delay(300);
```

```
}
```

```
Serial.println();
```

```
Serial.print("Connected with IP: ");
```

```
Serial.println(WiFi.localIP());
```

Jeffrey Hamlin V (210701094)

Harini V (210701071)

```
Serial.println();

Serial.printf("Firebase Client v%s\n\n", FIREBASE_CLIENT_VERSION);

config.api_key = API_KEY;

auth.user.email = USER_EMAIL;

auth.user.password = USER_PASSWORD;

config.database_url = DATABASE_URL;

config.token_status_callback = tokenStatusCallback; // see addons/TokenHelper.h

Firebase.begin(&config, &auth);

Firebase.reconnectWiFi(true);

Firebase.setDoubleDigits(5);

pinMode(D1, OUTPUT);

}

void loop()

{

Serial.printf("Get string... %s\n", Firebase.getString(fbdo, F("/finger2/data"))) ?

fbdo.to<const char *>() : fbdo.errorReason().c_str());

String a=Firebase.getString(fbdo, F("/finger2/data")) ? fbdo.to<const char *>() :

fbdo.errorReason().c_str();

int y=a.toInt();

if(y==1)

{

digitalWrite(D1, HIGH);

Serial.printf("Set string... %s\n", Firebase.setString(fbdo, F("/finger2/data"), 2) ?

"ok" : fbdo.errorReason().c_str());

delay(1500);

digitalWrite(D1, LOW);

delay(1500);

}

}
```