

```
#include <EEPROM.h>
```

```
#include <string.h>
```

```
struct MessageValue {  
    String message;  
    String value;  
};
```

```
struct MessageValue getMessage(String inputtedStr) {  
    struct MessageValue result;
```

```
    char charArr[50];  
    inputtedStr.toCharArray(charArr, 50);  
    char* ptr = strtok(charArr, "|");  
    result.message = String(ptr);  
    ptr = strtok(NULL, "|");
```

```
    if (ptr == NULL) {  
        result.value = String("");  
        return result;  
    }
```

```
    result.value = String(ptr);  
    return result;
```

```
}
```

```
struct MessageValue receivedData;  
int addrOffset= 80;  
int addressSaldo = 10;  
int addressAvanzamento = 4;  
int addressAvanzamento2 = 8;  
int addressAvanzamento3 = 15;  
int addressAvanzamento4 = 20;  
int addressStart = 25;  
int addressNickname = 30;  
int addressNickLenght = 35;  
int addressMaiale = 40;  
int addressPrimoGoal = 45;  
int addressSpostamentoObiettivo = 50;
```

```
const int pinIr10c = 6;  
const int pinIr20c = 5;  
const int pinIr50c = 4;  
const int pinIr1e = 3;  
const int pinIr2e = 2;
```

```
int IRvalue10c = 0;  
int IRvalue20c = 0;  
int IRvalue50c = 0;  
int IRvalue1e = 0;  
int IRvalue2e = 0;
```

```
int maialescelto;  
int Start = 1;
```

```
int SpostamentoObiettivo = 0;
```

```
float Saldo = 0;
```

```
float Goal = 5;
```

```
float Goal2 = 30;
```

```
float ObiettivoAggiunto = 0;
```

```
float Avanzamento = 0;
```

```
float Avanzamento2 = 0;
```

```
float Avanzamento3 = 0;
```

```
float Avanzamento4 = 0;
```

```
String Nickname;
```

```
String msg;
```

```
char letter;
```

```
byte len;
```

```
void sendSaldoProtoPie(float Saldo) {  
  Serial.print("SALDO||");  
  Serial.println(Saldo);  
  EEPROM.put(addressSaldo, Saldo);  
}
```

```
void sendAvanzamentoProtoPie(float Avanzamento) {  
  Serial.print("Avanzamento1||");  
  Serial.println(Avanzamento);  
  EEPROM.put(addressAvanzamento, Avanzamento);  
}
```

```
void sendAvanzamentoProtoPie2(float Avanzamento2) {  
  Serial.print("Avanzamento2||");  
  Serial.println(Avanzamento2);  
  EEPROM.put(addressAvanzamento2, Avanzamento2);  
}
```

```
void sendAvanzamentoProtoPie3(float Avanzamento3) {  
  Serial.print("Avanzamento3||");  
  Serial.println(Avanzamento3);  
  EEPROM.put(addressAvanzamento3, Avanzamento3);  
}
```

```
void sendAvanzamentoProtoPie4(float Avanzamento4) {  
  Serial.print("Avanzamento4||");  
  Serial.println(Avanzamento4);  
  EEPROM.put(addressAvanzamento4, Avanzamento4);  
}
```

```
void writeStringToEEPROM() {  
  len = Nickname.length();  
  EEPROM.put(addressNickLenght, len);  
  for (int i = 0; i < len; i++) {  
    EEPROM.put(addrOffset + i, Nickname[i]);  
  }  
}
```

```

void readStringFromEEPROM(){
  EEPROM.get(addressNickLenght, len);
  for (int i = 0; i < len; i++) {
    EEPROM.get(addrOffset + i, letter);
    Nickname = Nickname + letter;
  }
}

void sendSpostamentoProtopie(){
  EEPROM.get(addressSpostamentoObiettivo, SpostamentoObiettivo);
  if (SpostamentoObiettivo == 1) {
    Serial.println("SpostamentoObiettivo");
  }
}

void contoSaldo() {
  Serial.print("€");
  Serial.println(Saldo);
  Serial.println();
}

void setup() {
  Serial.begin(9600);
  Serial.println(Saldo);

  EEPROM.get(addressSaldo, Saldo);
  sendSaldoProtoPie(Saldo);

  EEPROM.get(addressAvanzamento, Avanzamento);
  sendAvanzamentoProtoPie(Avanzamento);

  EEPROM.get(addressAvanzamento2, Avanzamento2);
  sendAvanzamentoProtoPie2(Avanzamento2);

  EEPROM.get(addressAvanzamento3, Avanzamento3);
  sendAvanzamentoProtoPie3(Avanzamento3);

  EEPROM.get(addressAvanzamento4, Avanzamento4);
  sendAvanzamentoProtoPie4(Avanzamento4);

  EEPROM.get(addressStart, Start);

  EEPROM.get(addressMaiale, maialescelto);

  readStringFromEEPROM();
}

void loop() {
  IRvalue10c = digitalRead(pinIr10c);
  IRvalue20c = digitalRead(pinIr20c);
  IRvalue50c = digitalRead(pinIr50c);
  IRvalue1e = digitalRead(pinIr1e);
  IRvalue2e = digitalRead(pinIr2e);
}

```

```
if (IRvalue10c == 0) {  
  Serial.println("€0.10 rilevati");  
  Saldo = Saldo + 0.10;  
  contoSaldo();  
  sendSaldoProtoPie(Saldo);  
  sendAvanzamentoProtoPie(Avanzamento);  
  delay(200);  
}
```

```
if (IRvalue20c == 0) {  
  Serial.println("€0.20 rilevati");  
  Saldo = Saldo + 0.20;  
  contoSaldo();  
  sendSaldoProtoPie(Saldo);  
  sendAvanzamentoProtoPie(Avanzamento);  
  delay(200);  
}
```

```
if (IRvalue50c == 0) {  
  Serial.println("€0.50 rilevati");  
  Saldo = Saldo + 0.50;  
  contoSaldo();  
  sendSaldoProtoPie(Saldo);  
  sendAvanzamentoProtoPie(Avanzamento);  
  delay(200);  
}
```

```
if (IRvalue1e == 0) {  
  Serial.println("€1.00 rilevati");  
  Saldo = Saldo + 1.00;  
  contoSaldo();  
  sendSaldoProtoPie(Saldo);  
  sendAvanzamentoProtoPie(Avanzamento);  
  delay(200);  
}
```

```
if (IRvalue2e == 0) {  
  Serial.println("€2.00 rilevati");  
  Saldo = Saldo + 2.00;  
  contoSaldo();  
  sendSaldoProtoPie(Saldo);  
  sendAvanzamentoProtoPie(Avanzamento);  
  delay(200);  
}
```

```
if (Serial.available() > 0) {  
  String receivedString = Serial.readStringUntil('\0');  
  receivedData = getMessage(receivedString);  
}  
if (receivedData.message.equals("CambioGoal")) {  
  Goal=receivedData.value.toInt();  
  EEPROM.put(addressPrimoGoal, Goal);  
}  
if (receivedData.message.equals("Collect the award")) {
```

```

Saldo = Saldo - Goal;
contoSaldo();
sendSaldoProtoPie(Saldo);
sendAvanzamentoProtoPie(Avanzamento);
receivedData.message="resetString";
}

if (receivedData.message.equals("Nickname")) {
    Start=2;
    Serial.println("NicknameInserito");
    Nickname=receivedData.value;
    Serial.println(Nickname);
    EEPROM.put(addressStart, Start);
    writeStringToEEPROM();
    receivedData.message="resetString";
}

if (receivedData.message.equals("SpostamentoObiettivo")) {
    SpostamentoObiettivo=1;
    EEPROM.put(addressSpostamentoObiettivo, SpostamentoObiettivo);
    receivedData.message="resetString";
}

if (receivedData.message.equals("Avanzamento1")) {
    Avanzamento=receivedData.value.toFloat();
    sendAvanzamentoProtoPie(Avanzamento);
    receivedData.message="resetString";
}

if (receivedData.message.equals("Avanzamento2")) {
    Avanzamento2=receivedData.value.toFloat();
    sendAvanzamentoProtoPie2(Avanzamento2);
    receivedData.message="resetString";
}

if (receivedData.message.equals("Avanzamento3")) {
    Avanzamento3=receivedData.value.toFloat();
    sendAvanzamentoProtoPie3(Avanzamento3);
    receivedData.message="resetString";
}

if (receivedData.message.equals("Avanzamento4")) {
    Avanzamento4=receivedData.value.toFloat();
    sendAvanzamentoProtoPie4(Avanzamento4);
    receivedData.message="resetString";
}

if (receivedData.message.equals("1")) {
    sendSaldoProtoPie(Saldo);
    sendAvanzamentoProtoPie(Avanzamento);
    sendAvanzamentoProtoPie2(Avanzamento2);
    sendAvanzamentoProtoPie3(Avanzamento3);
    sendAvanzamentoProtoPie4(Avanzamento4);
    receivedData.message="resetString";
}

```

```
if (receivedData.message.equals("StartingTap")) {  
  if(Start==2){  
    Serial.print("Nickname||");  
    Serial.println(Nickname);  
    if(maialescelto==1){  
      Serial.println("GoHomeBlu");  
    }  
    else if (maialescelto==2){  
      Serial.println("GoHomeRosa");  
    }  
  }  
  receivedData.message="resetString";  
}
```

```
if (receivedData.message.equals("Berto")) {  
  maialescelto = 1;  
  EEPROM.put(addressMaiale, maialescelto);  
  Serial.println("BertoChoice");  
  receivedData.message="resetString";  
}
```

```
if (receivedData.message.equals("Gea")) {  
  maialescelto = 2;  
  EEPROM.put(addressMaiale, maialescelto);  
  Serial.println("GeaChoice");  
  receivedData.message="resetString";  
}
```

```
}
```