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1 //-----//  
2 //-----Data Sharing over I2C-----//  
3 //-----//  
4 float telGetValue(uint8_t telAddr, const char* dsKey) {  
5     uint8_t rb_CmdByte[1] = {0};  
6     char rb_keyBuffer[5] = {0};  
7     floatToBytes readVal;  
8  
9     telReadValue(telAddr, dsKey);  
10    telReadBack(telAddr, rb_CmdByte, rb_keyBuffer, readVal.asBytes);  
11  
12    if (rb_CmdByte[0] != 0xFF) {  
13        return 0xFFFFFFFF;  
14    }  
15    if (!strstr(rb_keyBuffer, dsKey)) {  
16        return 0xFFFFFFFF;  
17    }  
18    return readVal.asFloat;  
19}  
20  
21 bool telSetValue(uint8_t telAddr, const char* dsKey, float dsVal) {  
22     uint8_t rb_CmdByte[1] = {0};  
23     char rb_keyBuffer[5] = {0};  
24     floatToBytes readVal;  
25  
26     telWriteValue(telAddr, dsKey, dsVal);  
27     telReadBack(telAddr, rb_CmdByte, rb_keyBuffer, readVal.asBytes);  
28  
29     if (rb_CmdByte[0] != 0xFE) {  
30         return false;  
31     }  
32     if (!strstr(rb_keyBuffer, dsKey)) {  
33         return false;  
34     }  
35     if (readVal.asFloat != dsVal) {  
36         return false;  
37     }  
38  
39     return true;  
40}  
41  
42 void telWriteValue(uint8_t telAddr, const char* dsKey, float dsVal) {  
43     floatToBytes writeVal;  
44     writeVal.asFloat = dsVal;  
45     Wire.beginTransmission(telAddr);           //Address of Uno used for telemetry  
46     Wire.write(0xFE);                         //Indicates a WRITE operation  
47     Wire.write(dsKey);                       //Coorelates to a Storage key  
48     Wire.write(writeVal.asBytes, 4);  
49     Wire.endTransmission();                  //Send message  
50}  
51  
52 void telReadValue(uint8_t telAddr, const char* dsKey) {  
53     Wire.beginTransmission(telAddr);           //Address of Uno used for telemetry  
54     Wire.write(0xFF);                         //Indicates a READ operation  
55     Wire.write(dsKey);                       //Coorelates to a Storage key  
56     Wire.endTransmission();                  //Send message  
57}  
58  
59 float telReadBack(uint8_t telAddr, uint8_t* cmdByte, char* dsKey, char* dsVal) {  
60  
61     Wire.requestFrom(telAddr, 10);  
62  
63     cmdByte[0] = Wire.read();  
64  
65     for (int i = 0; i < 5; ++i) {  
66         dsKey[i] = Wire.read();  
67     }  
68  
69     for (int i = 0; i < 4; ++i) {  
70         dsVal[i] = Wire.read();  
71     }  
72 }  
73 //-----//  
74 //-----//
```

75 | //-----//