

```
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 WRITE 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 | //-----//