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1 # Packet Structure (request.py)
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3 # 01/08/2020
4
5 from packet import *
6
7 class DT_Request(DT_Packet):
8     ErrorMessage = [
9         "Expecting received packet have MagicNum 0x497E.",
10        "Expecting received packet have packetType 0x0001.",
11        "Undefined output Type [date/time]?",
12        "Packet header is shorter than expected"
13    ]
14    def __init__(self, mode, head_info=None):
15        self.requestType = mode # 0x0001 or 0x0002
16        if head_info is None:
17            super().__init__(0x0001)
18        else:
19            self.MagicNum = head_info[0]
20            self.packetType = head_info[1]
21
22    def __repr__(self):
23        out = "<Magic: {}> <packetType: {}> <requestType: {}>\n"
24        out = out.format(hex(self.MagicNum), DT_Packet.DT_hex(self.packetType),
25        DT_Packet.DT_hex(self.requestType))
26        out += type(self).__name__ + " with request type: " + ("DATE" if self.requestType==1
27        else "TIME")
28        return out
29
30    def header_errorCode(self):
31        error_code = 0
32        if self.MagicNum != 0x497E:
33            error_code = 1
34        elif self.packetType != 0x0001:
35            error_code = 2
36        elif self.requestType < 0x0001 or self.requestType > 0x0002:
37            error_code = 3
38
39        return error_code
40
41    def encodePacket(self):
42        # Error check
43        check = self.isValid()
44        if check != 0:
45            return check
46
47        # Header
48        header = ""
49        header += DT_Packet.intToBinStr(self.MagicNum,16)
50        header += DT_Packet.intToBinStr(self.packetType,16)
51        header += DT_Packet.intToBinStr(self.requestType,16)
52        header = int(header, 2).to_bytes(6, byteorder='big')
53
54        # Pack
55        packet = bytearray()
56        packet += header
57        return packet
58
59    @staticmethod
60    def decodePacket(packet):
61        if len(packet) < 6:

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60         return 4
61
62     magic      = DT_Packet.byteArrToInt(packet[0:2])
63     packType = DT_Packet.byteArrToInt(packet[2:4])
64     mode = DT_Packet.byteArrToInt(packet[4:6])
65     requestPack = DT_Request(mode)
66
67     # Error check
68     param = [magic, packType]
69     requestPack = DT_Request(mode, tuple(param))
70     check = requestPack.isValid()
71     if check != 0:
72         return check
73     return requestPack
74
```