

```
1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.0;
3
4 contract IOT_Web3 {
5
6     address public owner;
7
8     struct IOT_data {
9         string tagname;    // Tagname of the sensor
10        string timestamp;  // timestamp of data storage
11        uint value;       // value of the sensor
12        string unit;     // sensor unit
13    }
14
15    struct Machinery_Status {
16        string servicedate;    // latest service date
17        string nextservice;   // next service date
18        string healthy;      // healthy or not
19        string company;      // healthy or not
20        string engineer;     // healthy or not
21    }
22
23    }
24
25    IOT_data[] iot_datas;
26    Machinery_Status[] machinery_status_datas;
27
28    constructor() {
29        owner = msg.sender;
30    }
31
32    function getstatus() public view returns (Machinery_Status[] memory) {
33        return machinery_status_datas;
34    }
35
36    function setstatus(string memory servicedate,string memory
nextservice,string memory healthy,string memory company,string memory
engineer) public {
37        Machinery_Status memory machinery_data;
38        machinery_data.servicedate = servicedate;
39        machinery_data.nextservice = nextservice;
40        machinery_data.healthy = healthy;
41        machinery_data.company = company;
42        machinery_data.engineer = engineer;
43
44        machinery_status_datas.push(machinery_data);
45    }
46
47    function getiot_datas() public view returns (IOT_data[] memory) {
48        return iot_datas;
49    }
50
51    function create_iot_data(string memory tagname, string memory timestamp,
uint value, string memory unit) public {
52        IOT_data memory iot_data;
53        iot_data.tagname = tagname;
54        iot_data.timestamp = timestamp;
55        iot_data.value = value;
56        iot_data.unit = unit;
```

```
57  
58  
59  
60     iot_datas.push(iot_data);  
61 }  
62  
63 }  
64
```

Appendix B