```
1 #include "CASP_Return.h"
 2
 3 void GenericData::Print() {}
 5 GenericObject::GenericObject() {}
 6 GenericObject::GenericObject(unordered_map<string, GenericData*> map) {
 7
      data = map;
 8 }
9 void GenericObject::Print() {
10
      int count = 0;
11
       cout << "{";
       for (auto it = data.begin(); it != data.end(); ++it ) {
12
           if (count++ > 0) {
13
               cout << ",";
14
15
16
           cout << "\"" << it->first << "\":";</pre>
17
           if (it->second != NULL)
18
               it->second->Print();
19
           else
20
               cout << "null";</pre>
21
      }
22
      cout << "}";
23 }
24
25 void GenericObject::Add(string key, GenericData* d) {
26
      data[key] = d;
27 }
28
29 GenericData* GenericObject::At(string key) {
30
      return data[key];
31 }
32
33
34 GenericArray::GenericArray() {}
35 GenericArray::GenericArray(vector<GenericData*> list) {
      data = list;
37 }
38
39 void GenericArray::Print() {
40
      cout << "[";
41
      for (int i = 0; i < data.size(); i++) {</pre>
42
          if (i > 0)
43
               cout << ",";
           data[i]->Print();
44
45
      }
46
      cout << "]";
47 }
48
49 void GenericArray::Add(GenericData* d) {
      data.push_back(d);
50
51 }
52
53 GenericData* GenericArray::At(int index) {
      return data[index];
55 }
56
57 CASP_Return::CASP_Return() {
58
      Add("Data", new GenericObject());
59
      Add("Warnings", new GenericArray());
      Add("Errors", new GenericArray());
60
61 }
62
63 GenericArray* CASP_Return::Errors() {
64
      return (GenericArray*)data["Errors"];
65 }
66 GenericArray* CASP_Return::Warnings() {
```

```
67
      return (GenericArray*)data["Warnings"];
68 }
69 GenericObject* CASP_Return::Data() {
      return (GenericObject*)data["Data"];
71 }
72 void CASP_Return::AddStandardWarning(string message, int warningId) {
73
      GenericObject* warn = CreateObject({ "id", CreateLeaf(warningId) }, { "message", CreateLeaf(message) } });
74
      Warnings()->Add(warn);
75 }
76 void CASP_Return::AddStandardError(string message, int errorId) {
      GenericObject* err = CreateObject({ { "id", CreateLeaf(errorId) }, { "message", CreateLeaf(message) } });
77
78
      Errors()->Add(err);
79 }
80
81
82 GenericObject* CreateObject() {
      GenericObject* ob = new GenericObject();
83
84
      return ob;
85 };
86 GenericObject* CreateObject(unordered map<string, GenericData*> map) {
87
      GenericObject* ob = new GenericObject(map);
      return ob;
88
89 };
90 GenericArray* CreateArray() {
      GenericArray* arr = new GenericArray();
92
93 };
94 GenericArray* CreateArray(vector<GenericData*> list) {
95
      GenericArray* arr = new GenericArray(list);
96
      return arr;
97 };
```