

Article

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Iterate over dynamic object

Here's a sample code to display JSON or dynamic object.

It shows how to iterate over object, get property values and their paths.

```
Class JSON.Test
{
    /// do ##class(JSON.Test).Test()
    ClassMethod Test()
    {
        set json = '{"a":1,"b":2,"c":{"c1":3,"c2":4},"d": [5, {"e_e":6}, 7]}'

        set obj = {}.%FromJSON(json)

        do ..Iterate(obj)
    }

    ClassMethod Iterate(obj As %DynamicAbstractObject, level = 0, path = "obj")
    {
        set indent = $j("", level * 4)
        #dim iterator As %Iterator.Array
        set iterator = obj.%GetIterator()

        while iterator.%GetNext(.key, .value) {
            set type = obj.%GetTypeOf(key)
            write indent, "Key: ", key, !
            write indent, "Type: ", type, !

            if $classname(obj) = "%Library.DynamicArray" {
                set newPath = path _ ".%GetAt(" _ key _ ")"
            } else {
                if $zname(key, 6) = 1 {
                    set newPath = path _ "." _ key
                } else {
                    set newPath = path _ "\"\" _ key _ "\""
                }
            }

            write indent, "Path: ", newPath, !
            if $isObject(value) {
                write indent, "Value: ", !
                do ..Iterate(value, level + 1, newPath)
            } else {
                write indent, "Value: ", value, !
            }
        }
    }
}
```

```
        write !  
    }  
}  
  
}
```

Output from running Test method:

Key: a
Type: number
Path: obj.a
Value: 1

Key: b
Type: number
Path: obj.b
Value: 2

Key: c
Type: object
Path: obj.c
Value:
 Key: c1
 Type: number
 Path: obj.c.c1
 Value: 3

Key: c2
 Type: number
 Path: obj.c.c2
 Value: 4

Key: d
Type: array
Path: obj.d
Value:
 Key: 0
 Type: number
 Path: obj.d.%GetAt(0)
 Value: 5

Key: 1
 Type: object
 Path: obj.d.%GetAt(1)
 Value:
 Key: e_e
 Type: number
 Path: obj.d.%GetAt(1)."e_e"
 Value: 6

Key: 2
 Type: number
 Path: obj.d.%GetAt(2)
 Value: 7

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