

## Example

.../System.DirectoryServices.Protocols/tests/SortRequestControlTests.cs

<https://tools.ietf.org/html/rfc2891>

ASN.1 spec:

```
MatchingRuleId ::= OCTET STRING

AttributeDescription ::= OCTET STRING

SortKeyList ::= SEQUENCE OF SEQUENCE {
    attributeType  AttributeDescription,
    orderingRule   [0] MatchingRuleId OPTIONAL,
    reverseOrder   [1] BOOLEAN DEFAULT FALSE }
```

## Unit test

```
public void Ctor_SortKeys(bool critical)
{
    SortKey[] sortKeys = new SortKey[] { new SortKey("name1", "rule1", true), new
SortKey("name2", "rule2", false) };
    var control = new SortRequestControl(sortKeys);
    Assert.True(control.IsCritical);
    Assert.True(control.ServerSide);
    Assert.Equal("1.2.840.113556.1.4.473", control.Type);

    Assert.NotSame(sortKeys, control.SortKeys);
    for (int i = 0; i < sortKeys.Length; i++)
    {
        Assert.Equal(sortKeys[i].AttributeName, control.SortKeys[i].AttributeName);
        Assert.Equal(sortKeys[i].MatchingRule, control.SortKeys[i].MatchingRule);
        Assert.Equal(sortKeys[i].ReverseOrder, control.SortKeys[i].ReverseOrder);
    }
}
```

```

    }

    control.IsCritical = critical;
    Assert.Equal(new byte[]
    {
        48, 132, 0, 0, 0, 43, 48, 132, 0, 0, 0, 17, 4, 5, 110,
        97, 109, 101, 49, 128, 5, 114, 117, 108, 101, 49, 129,
        1, 255, 48, 132, 0, 0, 0, 14, 4, 5, 110, 97, 109, 101,
        50, 128, 5, 114, 117, 108, 101, 50
    }, control.GetValue());
}

```

Result of "control.GetValue()":

**Wldap32:** 30 84 00 00 00 2B 30 84 00 00 00 11 04 05 6E 61 6D 65 31 80 05 72 75 6C 65 31 81 01 FF 30 84 00 00 00 0E 04 05 6E 61 6D 65 32 80 05 72 75 6C 65 32

30: SEQUENCE OF: [UNIVERSAL 16] constructed;

84: 10000100: long form, 4 length octects

00 00 00 2B: length = 43

30: SEQUENCE: [UNIVERSAL 16] constructed

84: 10000100: long form, 4 length octects

00 00 00 11: length= 17

04: [UNIVERSAL 4] primitive

05: short form, length=5

6E 61 6D 65 31: "name1"

...

**OpenLdap:** 30 23 30 11 04 05 6E 61 6D 65 31 80 05 72 75 6C 65 31 81 01 FF 30 0E 04 05 6E 61 6D 65 32 80 05 72 75 6C 65 32

30: SEQUENCE OF: [UNIVERSAL 16] constructed

23: short form, length=35

30: SEQUENCE: [UNIVERSAL 16] constructed

11: short form, length= 17

04: [UNIVERSAL 4] primitive

05: short form, length=5

6E 61 6D 65 31: "name1"

...