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(3 , ^^)

XML XML . C++ MSXML

XML

1. Object

SmartPointer 2가 . ?? 가 .
SmartPointer 2가 . ;)

```
IXMLDOMDocument2Ptr pDoc; //  
1) pDoc.CreateInstance(__uuidof(DOMDocument));  
2) pDoc=IXMLDOMDocument2Ptr(__uuidof(DOMDocument));
```

;) ^^ 1 ;)

2. IXMLDOMDocument2Ptr

MSXML DOM (?) . XML /
. (? ^^)

```
IXMLDOMDocument2Ptr pDoc=NULL; // XML DOM  
pDoc.CreateInstance(__uuidof(DOMDocument)); //
```

```
IXMLDOMDocument2 , __uuidof DOMDocument2가  
DOMDocument 가?? . ^^;  
~ +a ;)
```

3. IXMLDOMProcessingInstructionPtr

PI . PI가 XML ... ^^; ^^

```
IXMLDOMProcessingInstructionPtr pPI=NULL; // PI  
pPI=pDoc ->createProcessingInstruction(L"xml",L"version=\ "1.0\ " encoding=\ "euc -kr \ ""); // PI  
pDoc ->appendChild(pPI); // PI XML Document 가 ;)
```

PI 가 ^^;;
 가 :P

4. IXMLDOMElementPtr

MSXML Element Node ...
 가 . element 가
 (selectSingleNode) IXMLDOMElement ;)

```
IXMLDOMElementPtr pElement=NULL; // Element
pElement=pDoc ->createElement(L "hick "); // "hick " Element
pDoc ->appendChild(pElement); // XML element 가
```

element가 가 ? ^^;
 “ -> -> 가 ” 가 .
 ;) ^^;;

5. IXMLDOMTextPtr

TextNode ? TextNode element . <nick>wiluby</nick> wiluby 가
 TextNode가 ^^; ?

```
IXMLDOMTextPtr pText; // XML Text
pText=pDoc ->createTextNode(L"wiluby"); // "wiluby" text element
pElement ->appendChild(pText); // text element element 가
```

pElement element ;) ^^ ~ ? ^^

? XML ? ~ XML
 ;) 가 . (...)

6. XML

load() save() ☺ ?

XML load() .

```
load(const _variant_t &
```

~ xml variant .. ^^; test.xml c: \ 가 .

```
pDoc ->load((_variant_t) "c: \ \ test.xml ");
```

? C: \ test.xml

;)

FAILED

;) ^^

```
HRESULT hr=pDoc ->load((_variant_t) "c: \ \ test.xml ");
if(FAILED(hr)) {
    // load
    ...
}
}
```

!

?

save()

. Save()

?

save(const _variant_t &)

~ save()

load()

variant

^^;;

~~ *

*

pDoc ->save((_variant_t)"c: \ \ result.xml");

c: \ result.xml

☺

??

?

!! ^^

7.

(XPath)

;) XML

?

?

XML

☺

<?xml version="1.0" encoding="euc -kr"?>

<IRC>

<Nick SN= '001 "SEX= 'M ">wiluby</Nick>

<Nick SN= '002 "SEX= 'M ">darkduck</Nick>

</IRC>

? ~

☺

가

Attribute

가

'Nick " element

'SN "

'SEX "

attribute가

?

가

;) ^^;

^^;;

가

~~ ^^

1)

가

element

XPath

가 XPath X 가 ;) 6^^

가 가 .

```
IXMLDOMNodeList * selectNodes(XPath String) //
IXMLDOMNode * selectSingleNode(XPath String) //
```

IXMLDOMElement가 IXMLDOMNode IXMLDOMNodeList . 가

Element Node . Element ProcessingInstruction
, Node . IXMLDOMElement
element , IXMLDOMNode element . (
... —;; . * *)
element XPath .

```
//element <<- . —;
```

~ ? “/” 가 element . “Nick” element
!

```
IXMLDOMElementPtr pElement=NULL;  
pElement=pDoc ->selectSingleNode(L “/Nick”);
```

;) pElement 가 가 ? 가 ? pElement NULL
가 ^^;

“Nick” ? Node IXMLDOMNodeList
.

```
IXMLDOMNodeListPtr pNodeList=NULL;  
pNodeList=pDoc ->selectNodes(L “/Nick”);
```

~ “Nick” 가 ;)

?

```
long ICount=pNodeList->Getlength();
```

Getlength() long ;) ^^;

TestXML 가 CTestXMLDlg OK
 OnOK() copy&paste ;)^

```
void CTestXMLDlg::OnOK()
{
    IXMLDOMDocument2Ptr pDoc=NULL;           // XML Document
    IXMLDOMNodeListPtr pNodeList=NULL;       // 가
    CString strTmp="";                        //
    long lCount=0,lTotal=0;                  // ,

    pDoc.CreateInstance(__uuidof(DOMDocument)); //
    pDoc->load((_variant_t)"c: \ \ test.xml"); // c: \ test.xml ^^

    pNodeList=pDoc->selectNodes(L"//Nick"); // "Nick "element

    lTotal=pNodeList->Getlength();           // ?

    while(lCount<lTotal)                    // ~
    {
        strTmp+=(LPCTSTR)pNodeList->Getitem(lCount++)->GetnodeName();
        strTmp+=" \ n";
        // strTmp 가 ;)
    }

    AfxMessageBox(strTmp); //
}
```

, OK ;)^



? ^^ ~ ~ ^^

2)

가 .
 —; ... (...)

element

attribute

. 가 . ?
--;

attribute

IXMLDOMNamedNodeMap

? ^^ (가 ~ ^^)

```
void CTestXMLDlg::OnOK()
{
    IXMLDOMDocument2Ptr pDoc=NULL;                // XML Document
    IXMLDOMNamedNodeMapPtr pNodeMap=NULL;          // for attribute
    IXMLDOMNodeListPtr pNodeList=NULL;            //
    IXMLDOMNodePtr pNode=NULL;                    // ( )
    CString strTmp="";
    long ICount=0,ITotal=0;                        //
    long ITotalAttr=0,ICountAttr=0;               // attribute

    pDoc.CreateInstance(__uuidof(DOMDocument));    //
    pDoc->load((_variant_t)"c: \ \ test.xml");      // ~ ^^

    pNodeList=pDoc->selectNodes(L"//Nick");        // "Nick " ~

    if(pNodeList) {
        ITotal=pNodeList->Getlength();             //
        while(ICount<ITotal)                       // ~
        {
            pNode=pNodeList->Getitem(ICount++);    // ICount
            pNodeMap=pNode->Getattributes();        // attribute

            ICountAttr=0;
            ITotalAttr=pNodeMap->Getlength(); // Total of Attribute
            while(ICountAttr<ITotalAttr)
            {
                strTmp+=(LPCTSTR)pNode->GetbaseName(); //
                strTmp+=" = ";
                // attribute name
                strTmp+=(LPCTSTR)pNodeMap->Getitem(ICountAttr)->GetnodeName();
                strTmp+=" / ";
                // attribute name attribute value( )
                strTmp+=(LPCTSTR)pNodeMap->Getitem(ICountAttr)->GetnodeValue().bstrVal;
                strTmp+=" \ n";
                ICountAttr++;
            }
        }
    }
}
```

```

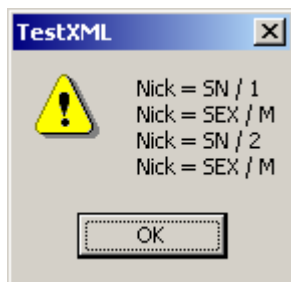
    }

    } // ICount < I Total
//    return S_OK;
}

AfxMessageBox(strTmp);
}

```

...



? ? ^^ 'Nick "element 가 attribute
;) ^^

가 attribute value ? ~ ^^

```
pNodeList=pDoc ->selectNodes(L"//Nick"); // 'Nick " ~
```

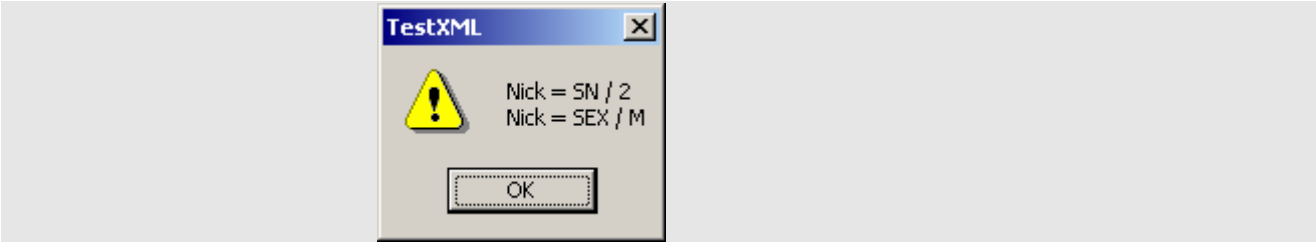
XPath

```
//elementname[@attributename= attributevalue ]
```

;))

xml 가 .

- 1) element가 'Nick " , attribute name 'SN " 'SN " '2 "
Element name = Nick
attribute name = SN
attribute value = 2
- 1)
//Nick[@SN= 2]
:)



2) element , attribute name 'SN ' 'SN ' "1 "

Element Name = (*)

attribute name = SN

attribute value = 1

2)

//*[@SN= 1]

:)

A screenshot of a Windows-style dialog box titled "TestXML". It features a yellow warning triangle icon on the left. To the right of the icon, the text reads "Nick = SN / 1" and "Nick = SEX / M". At the bottom center is an "OK" button.

가 ? ^^; 가 ^^;