열血講義

프리렉의 열혈강의 시리즈

Python
파이썬

Python

❖ 21-4

: XSLT

(gslee@mail.kw.ac.kr)

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1.
2. SAX
3. DOM
4. Traversal
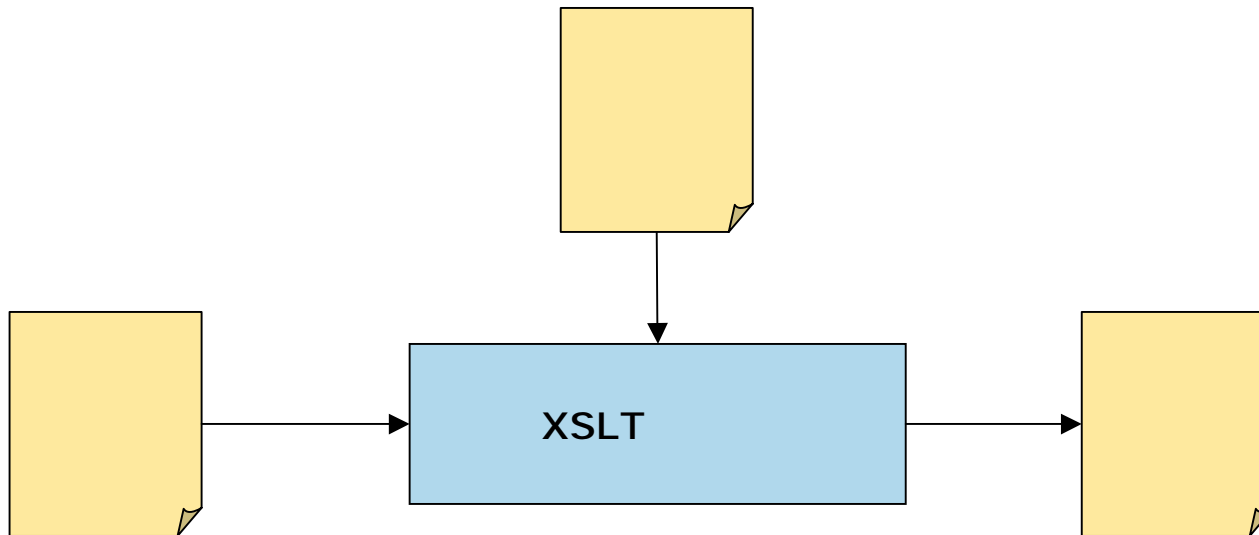5. XPath
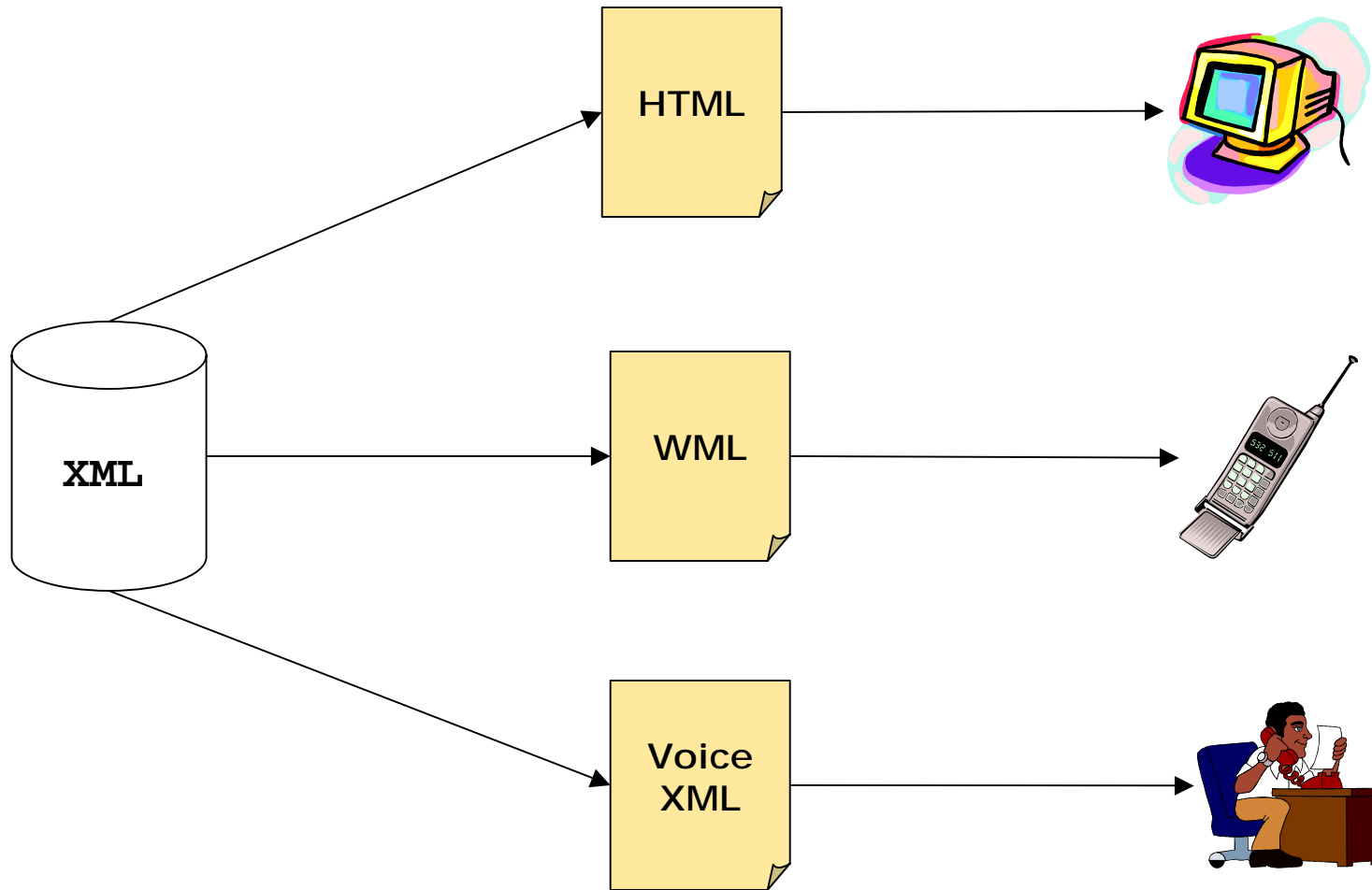6. XSLT

XSLT

- **Extensible Stylesheet Language Transformations**

- **XML**

  - **XML → XML, XML → HTML, XML → Text**

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  - **http://www.w3.org/TR/xslt20/**

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  - **PyXML(http://pyxml.sourceforge.net/)**
  - **4Suite(http://4suite.org)**

XSLT

- **XSLT**
  - : . XML
  - : . XSLT

  - : (XML, HTML, Text)

XML

- ## sample04.xml

```xml
<?xml version="1.0" ?>
<userlist>
    <user sex="male">
        <name>gslee</name>
        <email>gslee@mail.kw.ac.kr</email>
    </user>
    <user sex="female">
        <name>spam</name>
        <email>spam@mail.kw.ac.kr</email>
    </user>
    <user sex="male">
        <name>HongGilDong</name>
        <email>home@mail.kw.ac.kr</email>
    </user>
    <user sex="female">
        <name>Sunny</name>
        <email>sunny@mail.kw.ac.kr</email>
    </user>
</userlist>
```

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- ## sample04.xsl

```
<?xml version="1.0"?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
version="1.0">
  <xsl:output method='html' indent='yes'/>

  <xsl:template match="/">
    <HTML><HEAD><TITLE>USER LIST</TITLE></HEAD>
    <BODY>
    <H1>User List</H1>
    <TABLE border="1">
    <TR><TH>Sex</TH><TH>Name</TH><TH>Email</TH></TR>
    <xsl:apply-templates/>
    </TABLE>
    </BODY>
    </HTML>
  </xsl:template>
```

- ## sample04.xsl

```
<xsl:template match="user">
  <TR>
  <TD><xsl:value-of select='@sex'/></TD>
  <xsl:apply-templates select='name|email'/>
  </TR>
</xsl:template>

<xsl:template match="name">
  <TD><xsl:apply-templates/></TD>
</xsl:template>

<xsl:template match="email">
  <TD><xsl:apply-templates/></TD>
</xsl:template>

</xsl:stylesheet>
```

sample04.html

```
<HTML>
  <HEAD>
    <meta http-equiv='Content-Type'
content='text/html; charset=iso-8859-1'>
    <TITLE>USER LIST</TITLE>
  </HEAD>
  <BODY>
    <H1>User List</H1>
    <TABLE border='1'>
      <TR>
        <TH>Sex</TH>
        <TH>Name</TH>
        <TH>Email</TH>
      </TR>
      <TR>
        <TD>male</TD>
        <TD>gslee</TD>
        <TD>gslee@mail.kw.ac.kr</TD>
      </TR>
      <TR>
        <TD>female</TD>
        <TD>spam</TD>
        <TD>spam@mail.kw.ac.kr</TD>
      </TR>
      <TR>
        <TD>male</TD>
        <TD>HongGilDong</TD>
        <TD>home@mail.kw.ac.kr</TD>
      </TR>
      <TR>
        <TD>female</TD>
        <TD>Sunny</TD>
        <TD>sunny@mail.kw.ac.kr</TD>
      </TR>
    </TABLE>
  </BODY>
</HTML>
```
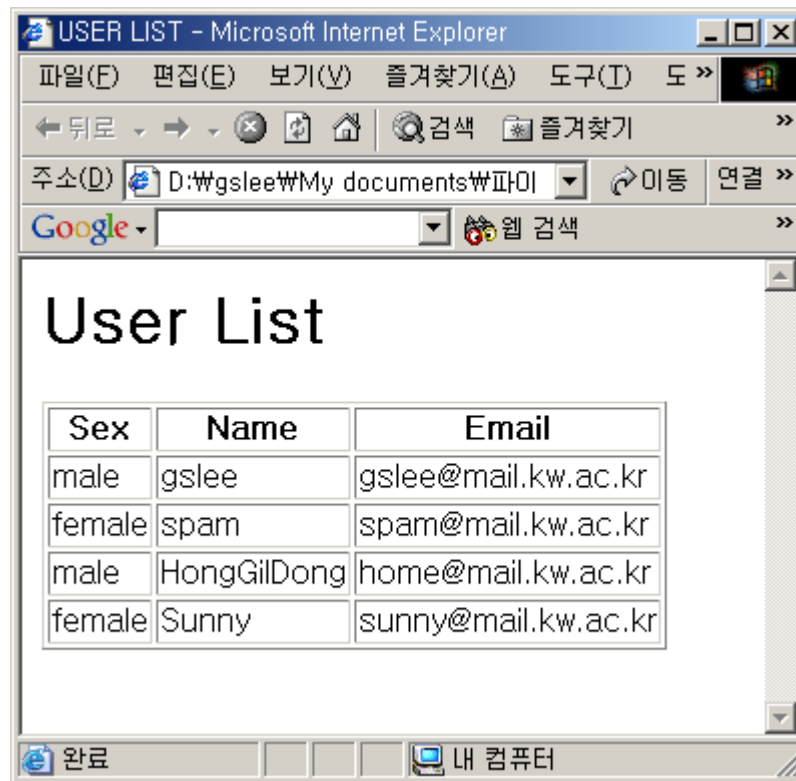
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sample04.html

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```
<?xml version="1.0"?>

<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
version="1.0">



</xsl:stylesheet>
```

- **output**

```
<xsl:output method='html' indent='yes'/>
```

```
<xsl:template match="/">

    <HTML><HEAD><TITLE>USER LIST</TITLE></HEAD>

    <BODY>

    <H1>User List</H1>

    <TABLE border="1">

    <TR><TH>Sex</TH><TH>Name</TH><TH>Email</TH></TR>

    <xsl:apply-templates/>

    </TABLE>

    </BODY>

    </HTML>

</xsl:template>
```

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```
<xsl:template match="user">

    <TR>

    <TD><xsl:value-of select='@sex'/></TD>

    <xsl:apply-templates select='name|email'/>

    </TR>

 </xsl:template>


 <xsl:template match="name">
    <TD><xsl:apply-templates/></TD>
 </xsl:template>
```

XSLT

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  ➢   **: 4xslt xml   xslt**

  ➢

  - **4xslt sample04.xml sample04.xsl**

XSLT

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```
# xslt01.py
from Ft.Xml.Xslt import Processor
from Ft.Xml import InputSource


processor = Processor.Processor()  #                    .
transform = InputSource.DefaultFactory.fromUri("sample04.xsl")
processor.appendStylesheet(transform)  #                  .


source = InputSource.DefaultFactory.fromUri("sample04.xml")
result = processor.run(source)    #        .
print result
```

XSLT

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```
# xslt02.py
from Ft.Xml.Xslt import Processor
from Ft.Xml import InputSource


xslt = open('sample04.xsl').read()  #
xml = open('sample04.xml').read()    # xml


processor = Processor.Processor()
transform = InputSource.DefaultFactory.fromString(xslt)
processor.appendStylesheet(transform)  #


source = InputSource.DefaultFactory.fromString(xml)
result = processor.run(source)      #          .
print result
```

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CGI

- xml   html   (cgi
  15   )

```
#! /usr/local/bin/python
# xslt04.py
from Ft.Xml.Xslt import Processor
from Ft.Xml import InputSource
import cgi

print 'Content-Type: text/html\n'
form = cgi.FieldStorage()
fname = form.getvalue('source', 'sample04.xml')
processor = Processor.Processor()
transform = InputSource.DefaultFactory.fromUri("sample04.xsl")
processor.appendStylesheet(transform)  #                 .

source = InputSource.DefaultFactory.fromUri(fname)
result = processor.run(source)     #          .
print result
```