

XML and Related Technologies

Lab 3 - Individual Work

MODE-4201

13797

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2021-10-02

Andrew Kuo

XML and Related Technologies

(a) XML tree diagram

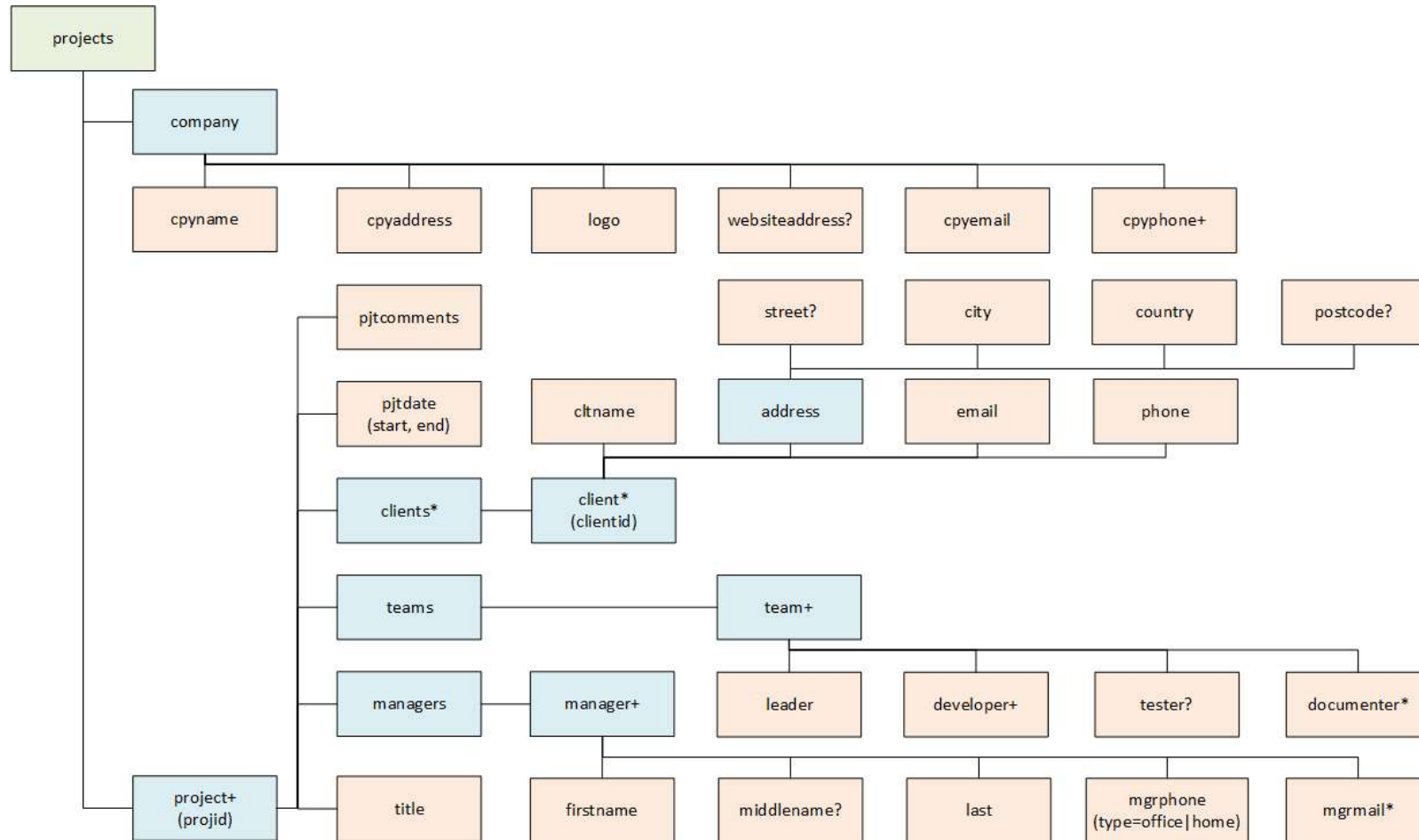


Figure 1: XML tree diagram.

(b) projects.dtd

```
<!ELEMENT projects (company, project+) >
  <!ELEMENT company (cpyname, cpyaddress, logo, websiteaddress?, cpyemail,
cpyphone+) >
    <!ELEMENT cpyname (#PCDATA)>
    <!ELEMENT cpyaddress (#PCDATA) >
    <!ELEMENT logo (#PCDATA) >
    <!ELEMENT websiteaddress (#PCDATA) >
    <!ELEMENT cpyemail (#PCDATA) >
    <!ELEMENT cpyphone (#PCDATA) >
  <!ELEMENT project (title, managers, teams, clients?, pjtdate,
pjtcomments) >
    <!ATTLIST project projid CDATA #REQUIRED >
    <!ELEMENT title (#PCDATA) >
    <!ELEMENT managers (manager+) >
      <!ELEMENT manager (firstname, middlename?, last, mgrphone,
mgremail*) >
        <!ELEMENT firstname (#PCDATA) >
        <!ELEMENT middlename (#PCDATA) >
        <!ELEMENT last (#PCDATA) >
        <!ELEMENT mgrphone (#PCDATA) >
        <!ATTLIST mgrphone Type (office|home) #REQUIRED >
        <!ELEMENT mgremail (#PCDATA) >
    <!ELEMENT teams (team+) >
      <!ELEMENT team (leader, developer+, tester?, documenter*) >
        <!ELEMENT leader (#PCDATA) >
        <!ELEMENT developer (#PCDATA) >
        <!ELEMENT tester (#PCDATA) >
        <!ELEMENT documenter (#PCDATA) >
    <!ELEMENT clients (client*) >
      <!ELEMENT client (cltname, address, email, phone) >
        <!ATTLIST client clientid ID #REQUIRED >
        <!ELEMENT cltname (#PCDATA) >
        <!ELEMENT address (street?, city, country, postcode?) >
          <!ELEMENT street (#PCDATA) >
          <!ELEMENT city (#PCDATA) >
          <!ELEMENT country (#PCDATA) >
          <!ELEMENT postcode (#PCDATA) >
        <!ELEMENT email (#PCDATA) >
        <!ELEMENT phone (#PCDATA) >
    <!ELEMENT pjtdate (#PCDATA) >
      <!ATTLIST pjtdate start CDATA #REQUIRED >
      <!ATTLIST pjtdate end CDATA #REQUIRED >
    <!ELEMENT pjtdcomments (#PCDATA) >
```

(c) projects.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE projects SYSTEM "projects.dtd">

<projects>

  <company>
    <cpyname>Mark Software Ltd</cpyname>
    <cpyaddress>2002 Simcoe St N., Durham, ON L1G 0C4</cpyaddress>
    <logo>"/marklogo.jpg"</logo>
    <websiteaddress>https://marksoftware.com</websiteaddress>
    <cpyemail>info@marksoftware.com</cpyemail>
    <cpyphone>519-555-5555</cpyphone>
    <cpyphone>519-555-5000</cpyphone>
  </company>

  <project projid="P01">
    <title>Sun Side Records</title>

    <managers>

      <manager>
        <firstname>Aaron</firstname>
        <middlename>Mark</middlename>
        <last>Long</last>
        <mgrphone Type="office">519-555-5555 #1214</mgrphone>
        <mgremail>amlong@marksoftware.com</mgremail>
        <mgremail>along@marklimited.ca</mgremail>
      </manager>
      <manager>
        <firstname>Jane</firstname>
        <last>Walker</last>
        <mgrphone Type="office">519-555-5555 #1000</mgrphone>
        <mgremail>janewalker@marksoftware.com</mgremail>
      </manager>

    </managers>

    <teams>

      <team>
        <leader>Jasmin Zachary</leader>
        <developer>Briseida Tsagadai</developer>
        <tester>Milo Paulos</tester>
        <documenter>Gabriella Susanna</documenter>
        <documenter>Shad Mitra</documenter>
      </team>

    </teams>

  </project>

</projects>
```

```

    <team>
      <leader>Silvija Taranis</leader>
      <developer>Ophelia Bracha</developer>
      <documenter>Gilberte Hekabe</documenter>
    </team>

  </teams>

  <clients>

    <client clientid="C10001">
      <cltname>Ivette Eilert</cltname>
      <address >
        <street>2000 Simcoe Street North</street>
        <city>Oshawa</city>
        <country>Canada</country>
        <postcode>L1G 0C5</postcode>
      </address>
      <email>ieilert@validemail.ca</email>
      <phone>(905) 124-5678</phone>
    </client>
    <client clientid="C10002">
      <cltname>Shamus W. Silvester</cltname>
      <address >
        <street>12 Commencement Drive</street>
        <city>Oshawa</city>
        <country>Canada</country>
        <postcode>L1G 0C5</postcode>
      </address>
      <email>swsilverster@validemail.ca</email>
      <phone>(905) 997-4432</phone>
    </client>

  </clients>

  <pjtdate start="2021-09-13" end="2022-01-20" />
  <pjtcomments>Sun Side Records database upgrade.</pjtcomments>
</project>

<project projid="P02">
  <title>Massimiliano Project</title>

  <managers>

    <manager>
      <firstname>Renaud</firstname>
      <last>Konstantin</last>
      <mgrphone Type="home">519-555-5555 #1005</mgrphone>
    </manager>
  </managers>

```

```
</managers>

<teams>

  <team>
    <leader>Boris Azat</leader>
    <developer>Rafael Wadud</developer>
  </team>

</teams>

<pjtdate start="2021-09-30" end="2021-12-18" />
<pjtcomments>Massimiliano hardware store front-end.</pjtcomments>
</project>
</projects>
```



[Validate](#)

[Documentation](#)

[An
exam](#)

Validate an XML file

Read [here how to validate your XML files](#) (including referenced DTDs) online with just a few mouse clicks.

No errors were found

The following files have been uploaded so far:

[XML document:](#)

[projects.dtd](#)

Click on any file name if you want to edit the file.

Please copy your XML document in here:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE projects SYSTEM "projects.dtd">

<projects>

  <company>
    <cpymame>Mark Software Ltd</cpymame>
    <cpyaddress>2002 Simcoe St N., Durham, ON L1G 0C4</cpyaddress>
    <logo>"/marklogo.jpg"</logo>
    <websiteaddress>https://marksoftware.com</websiteaddress>
```

Or upload it:

Choose file

No file chosen

The validation check is performed against any XML schema or DTD declared inside the XML document.

If neither an XML schema nor a DTD is declared, only a syntax check is performed.

To validate the XML document against an external XML schema, click below.

☐ Validate against external XML schema

validate

The following files have been uploaded so far:

[XML document:](#)

[projects.dtd](#)

Click on any file name if you want to edit the file.

C:\College\2021 50FALL\MODE 4201\Lab03\lab3\projects.xml - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

projects.xml projects.dtd

```

1 <?xml version="1.0" encoding="UTF-8"?>
2 <!DOCTYPE projects SYSTEM "projects.dtd">
3
4 <projects>
5
6   <company>
7     <cpyname>Mark Software Ltd</cpyname>
8     <cpyaddress>2002 Simcoe St N., Durham, ON L1G 0C4</cpyaddress>
9     <logo>./marklogo.jpg</logo>
10    <websiteaddress>https://marksoftware.com</websiteaddress>
11    <cpyemail>info@marksoftware.com</cpyemail>
12    <cpyphone>519-555-5555</cpyphone>
13    <cpyphone>519-555-5000</cpyphone>
14  </company>
15
16  <project projid="P01">
17    <title>Sun Side Records</title>
18
19    <managers>
20
21      <manager>
22        <firstname>Aaron</firstname>
23        <lastname>Mark</lastname>
24        <last>Long</last>
25        <mgrphone Type="office">519-555-5555</mgrphone>
26        <mgremail>amlong@marksoftware.com</mgremail>
27        <mgremail>along@marksoftware.com</mgremail>
28      </manager>
29
30      <manager>
31        <firstname>Jane</firstname>
32        <lastname>Walker</lastname>
33        <mgrphone Type="office">519-555-5555-#1000</mgrphone>
34        <mgremail>janewalker@marksoftware.com</mgremail>
35      </manager>
36    </managers>
37
38    <teams>
39
40      <team>
41        <leader>Jasmin Zachary</leader>
42        <developer>Briseida Tsagadai</developer>
43        <tester>Milo Paulos</tester>
44        <documenter>Gabriella Susanna</documenter>
45        <documenter>Shad Mitra</documenter>
46      </team>
47
48      <team>
49        <leader>Silvija Taranis</leader>
50        <developer>Ophelia Bracha</developer>
51        <documenter>Gilberte Hekabe</documenter>
52      </team>
53    </teams>
54  </project>
55</projects>

```

XML Tools plugin

No error detected.

OK

length: 3,603 lines: 111 Ln: 2 Col: 28 Pos: 68 Windows (CR LF) UTF-8 INS