

Unidade Curricular:

Integração de Sistemas de Informação

Tema da Ficha Prática:

Utilização de Java e XML para implementar o parsing de ficheiros XML

Objetivos:

Pretende-se com esta ficha prática que os alunos implementem um parsing de ficheiros XML

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Bibliografia

Para apoio a esta ficha os alunos devem consultar os apontamentos teóricos e práticos da disciplina bem como de outros recursos online, como por exemplo:

a) Validação de Ficheiros XML:

http://www.w3schools.com/xml/xml_validator.asp

<http://www.xmlvalidation.com/>

<http://validator.w3.org/>

b) Informação sobre a interpretação de ficheiros XML usando programação:

<http://www.developerfusion.com/code/2064/a-simple-way-to-read-an-xml-file-in-java/>

<http://docs.oracle.com/javase/tutorial/jaxp/stax/example.html>

http://docs.oracle.com/cd/B28359_01/appdev.111/b28394/adx_j_parser.htm

<http://www.mkyong.com/tutorials/java-xml-tutorials/>

Outras referências:

- How to read XML file in Java: <https://mkyong.com/java/how-to-read-xml-file-in-java-dom-parser/>
- java DOM Parser - Parse XML Document - Example 1:
https://www.tutorialspoint.com/java_xml/java_dom_parse_document.htm
- java DOM Parser - Parse XML Document - Example 2: <https://howtodoinjava.com/java/xml/read-xml-dom-parser-example/>
- Parsing XML using DOM, SAX and StAX Parser in Java: <https://dzone.com/articles/parsing-xml-using-dom-sax-and>

Differences between JDOM, SAX, JAXB:

- <https://dzone.com/articles/jaxb-sax-dom-performance>
- <https://www.javapedia.net/JAXB/1842>
- <https://javarevisited.blogspot.com/2011/12/difference-between-dom-and-sax-parsers.html#axzz6d0G07t3K>

Enquadramento do Exercício

Considere o exemplo de envio de ficheiros da ficha 3, usando um cliente e um servidor RPC. Pretende-se que um cliente envie um ficheiro XML e o servidor o receba e faça o parsing desse ficheiro XML. Neste contexto, do lado do servidor crie vários procedimentos para implementar um parser usando:

1. Document Object Model (DOM):

<http://docs.oracle.com/javase/tutorial/jaxp/dom/readingXML.html>

2. Simple API for XML (SAX):

<http://docs.oracle.com/javase/1.5.0/docs/api/org/xml/sax/package-summary.html>

<http://www.saxproject.org/quickstart.html>

3. JDOM XML Parser

<http://www.jdom.org/>

<http://www.jdom.org/docs/oracle/jdom-part1.pdf>

4. Java API for XML Processing (JAXP):

<http://www.oracle.com/technetwork/java/intro-140052.html>

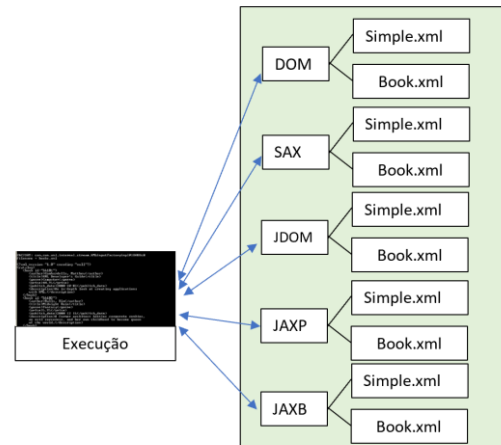
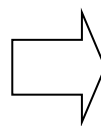
5. Java Architecture for XML Binding (JAXB)

<http://jaxb.java.net/tutorial/index.html>

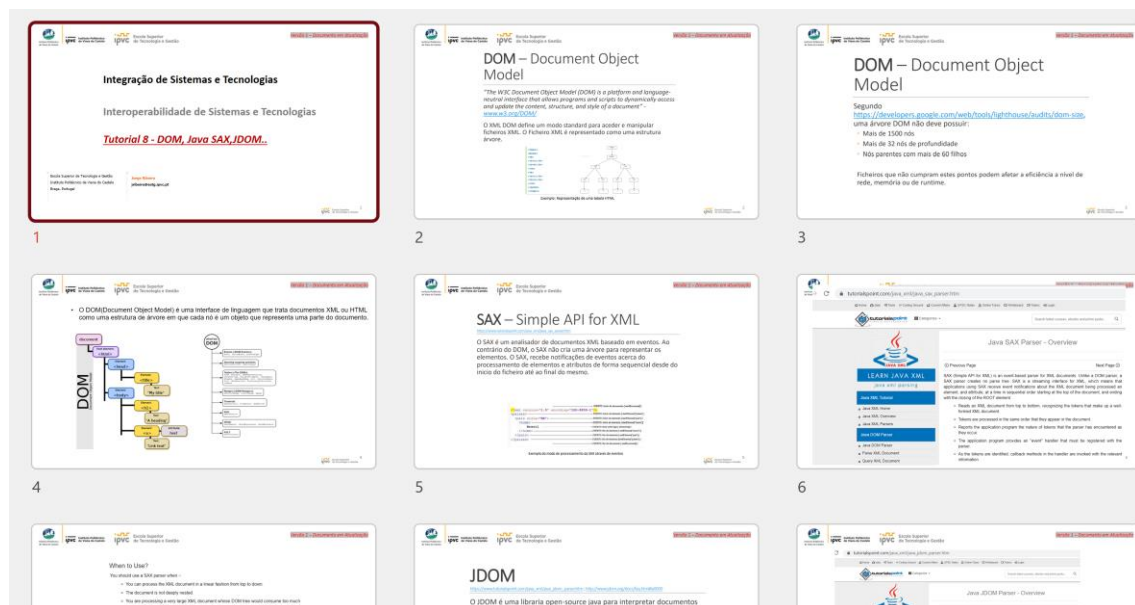
Nota: Para simplificar o processo, pretende-se que o servidor receba o ficheiro XML, faça o parsing do ficheiro na estrutura de armazenamento implementada (DOM, SAX, JDOM, JAXP e JAXB) e que faça o print do ficheiro do lado do servidor.

Em termos gerais, pretende-se que execute os parsers XML, usando a linguagem de programação JAVA:

- 1.1 - DOM.....
- 1.1.1 Simple.xml.....
- 1.1.2 Book.xml.....
- 1.1.3 medsamp2014.xml.....
- 1.2 - SAX.....
- 1.2.1 - Books.xml.....
- 1.2.2 Note.xml.....
- 1.2.3 Nedsamp2013.xml.....
- 1.3 - JDOM.....
- 1.3.1 Books.xml.....
- 1.3.2 Note.xml.....
- 1.3.3 Nedsamp2013.xml.....
- 1.4 - JAXP.....
- 1.4.1 Books.xml.....
- 1.4.2 Simple.xml.....
- 1.4.3 medsamp2014.xml.....
- 1.5 JAXB.....
- 1.5.1 Po.xml.....



Para auxiliar a melhor compreensão do envolvimento do tutorial complementa a informação deste documento com a informação e esclarecimentos disponibilizados pelos docentes através do powerpoint apresentado aula e disponível no moodle:



FICHA PRÁTICA n.º 8

Integração de Sistemas de Informação

Os ficheiros XML a submeter ao servidor via cliente, são os seguintes:

1. Um ficheiro simples obtido em: http://www.w3schools.com/xml/xml_examples.asp
2. O ficheiro Books.xml: [http://msdn.microsoft.com/en-us/library/ms762271\(v=vs.85\).aspx](http://msdn.microsoft.com/en-us/library/ms762271(v=vs.85).aspx)
3. Um ficheiro de grande volume obtido em: http://www.nlm.nih.gov/bsd/sample_records_avail.html

1. Passos de Execução

Antes de executar os exemplos será necessário mudar o ficheiro **File Server** para cada um:

1. **DOM**: `Runtime.getRuntime().exec("cmd.exe /k start java dom/DOMEcho "+
in_arg.files[i].savedFilename());`
2. **JDOM**: `Runtime.getRuntime().exec("cmd.exe /c start java jdom/PlayWithJDom "+
in_arg.files[i].savedFilename());`
3. **SAX**: `Runtime.getRuntime().exec("cmd.exe /k start java sax/SAXLocalNameCount "+
in_arg.files[i].savedFilename());`
4. **JAXP**: `Runtime.getRuntime().exec("cmd.exe /c start java stax/cursor/CursorParse
"+in_arg.files[i].savedFilename());`
5. **JAXB**: `Runtime.getRuntime().exec("cmd.exe /c start java Main
"+in_arg.files[i].savedFilename());`

1. Linha de Comandos 1

Figuras → 1.a, 4.a, 5.a, 6.a, 7.a, 8.a, 9.a, 10.a, 11.a, 12.a, 13.a, 14.a, 15.a

- a. Fazer Classpath:
`set CLASSPATH=%CLASSPATH%;C:\TESTAR\orpc.dev\lib\orpc.jar`
- b. Executar Servidor:
`java FileServer`

2. Linha de Comandos 2

Figuras → 1.b, 4.b, 5.b, 6.b, 7.b, 8.b, 9.b, 10.b, 11.b, 12.b, 13.b, 14.b, 15.b

- a. Fazer Classpath:
`set CLASSPATH=%CLASSPATH%;C:\TESTAR\orpc.dev\lib\orpc.jar`
- b. Executar Portmapper:
`java -cp ".;orpc.jar" pmapsvc`

3. Linha de Comandos 3

Figuras → 1.c, 2.c, 3.c, 4.c, 5.c, 6.c, 7.c, 8.c, 9.c, 10.c, 11.c, 12.c, 13.c, 14.c, 15.c

- a. Fazer Classpath:
`set CLASSPATH=%CLASSPATH%;C:\TESTAR\orpc.dev\lib\orpc.jar`
- b. Executar Cliente:
`java FileClient localhost nome_do_ficheiro.xml`

4. Parsing

Figuras → 1.d, 2.d, 3.d, 4.c, 5.c, 6.c, 7.d, 8.d, 9.d, 10., 11.d, 12.d, 13.d, 14.d, 15.d

1.1 - DOM

1.1.1 Simple.xml

```

en32\Users\c:\WINDOWS\system32\WindowsPowerShell\v1.0;c:\Programas\Microsoft SQL
Server\100\Tools\Binn\c:\Programas\Microsoft SQL Server\100\Tools\Binn\c:\Programas\Microsoft SQL Server\100\Tools\Binn\SShell\Commo7\IDE\;C:\colocaFicheiro
Server\orpc.dev\bin\win32";

C:\colocaFicheiro Server>jrpcgen putfile.x
Netbula JRPCGen U2.5.5.
Netbula JavaRPC demo, expires after a fixed date!

Generated XDR files:
    NFiles.java

Generated RPC Client files:
    putfile_cln.java

Generated RPC Server files:
    putfile_svch.java

C:\colocaFicheiro Server>runServer.bat

C:\colocaFicheiro Server>set PATH=C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\Syst
en32\Users\c:\WINDOWS\system32\WindowsPowerShell\v1.0;c:\Programas\Microsoft SQL
Server\100\Tools\Binn\c:\Programas\Microsoft SQL Server\100\Tools\Binn\c:\Programas\Microsoft SQL Server\100\Tools\Binn\SShell\Commo7\IDE\;C:\colocaFicheiro
Server\orpc.dev\bin\win32";C:\colocaFicheiro Server\orpc.dev\bin\win32

C:\colocaFicheiro Server>set PATH=C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\Syst
en32\Users\c:\WINDOWS\system32\WindowsPowerShell\v1.0;c:\Programas\Microsoft SQL
Server\100\Tools\Binn\c:\Programas\Microsoft SQL Server\100\Tools\Binn\c:\Programas\Microsoft SQL Server\100\Tools\Binn\SShell\Commo7\IDE\;C:\colocaFicheiro
Server\orpc.dev\bin\win32";C:\colocaFicheiro Server\orpc.dev\bin\win32;"C:\Progra
mas\Java\jdk1.7.0_45\bin"

C:\colocaFicheiro Server>set CLASSPATH=C:\colocaFicheiro Server\orpc.dev\lib\or
pc.jar

C:\colocaFicheiro Server>java FileServer
Netbula JavaRPC demo, not distributable!
Registered TCP transport.
Registered UDP transport.

```

Figura 1.a

```

Microsoft Windows XP [Versão 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Ima>cd..
C:\Documents and Settings>cd..
C:\>cd colocaFicheiro
C:\colocaFicheiro>portnapper.bat

C:\colocaFicheiro>java -cp ".:orpc.jar" pmappsv
Netbula JavaRPC demo, not distributable!

```

Figura 1.b

```
Microsoft Windows XP [Versão 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Ina>cd..

C:\Documents and Settings>cd..

C:\>cd colocaFicheiro

C:\colocaFicheiro>runClient.bat

C:\colocaFicheiro>set PATH=C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Win
em;C:\WINDOWS\system32\WindowsPowerShell\v1.0;c:\Programas\Microsoft SQL Server\
100\Tools\Binn\c:\Programas\Microsoft SQL Server\100\DTs\Binn\c:\Programas\Mic
rosoft SQL Server\100\Tools\Binn\USShell\Comman?>IDE\;C:\colocaFicheiro\orpc.dev
\bin\win32

C:\colocaFicheiro>set PATH=C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Win
em;C:\WINDOWS\system32\WindowsPowerShell\v1.0;c:\Programas\Microsoft SQL Server\
100\Tools\Binn\c:\Programas\Microsoft SQL Server\100\DTs\Binn\c:\Programas\Mic
rosoft SQL Server\100\Tools\Binn\USShell\Comman?>IDE\;C:\colocaFicheiro\orpc.dev
\bin\win32;"C:\Arquivos de programas\Java\jdk1.7.0_45\bin"

C:\colocaFicheiro>set CLASSPATH=C:\colocaFicheiro\orpc.dev\lib\orpc.jar

C:\colocaFicheiro>java FileClient localhost simple.xml
Methula JavaRPC demo, not distributable!
Ligado ao servidor localhost
simple.xml 1135 bytes enviados
```

Figura1.c

```
C:\colocaFicheiro Server\jaxp-1_5_0-20130830\samples>java don/DOMEcho ...la.simp
la.xml
DOC: nodeName="#document"
  COMM: nodeName="#comment" nodeValue=" Edited by XMLSpyTκ "
  ELEM: nodeName="breakfast_menu" local="breakfast_menu"
    TEXT: nodeName="#text" nodeValue=[WS]
    ELEM: nodeName="food" local="food"
      TEXT: nodeName="#text" nodeValue=[WS]
      ELEM: nodeName="name" local="name"
        TEXT: nodeName="#text" nodeValue="Belgian Waffles"
        TEXT: nodeName="#text" nodeValue=[WS]
        ELEM: nodeName="price" local="price"
          TEXT: nodeName="#text" nodeValue="$5.95"
          TEXT: nodeName="#text" nodeValue=[WS]
          ELEM: nodeName="description" local="description"
            TEXT: nodeName="#text" nodeValue="Two of our famous Belgian Waffles with
plenty of real maple syrup"
            TEXT: nodeName="#text" nodeValue=[WS]
            ELEM: nodeName="calories" local="calories"
              TEXT: nodeName="#text" nodeValue="650"
              TEXT: nodeName="#text" nodeValue=[WS]
              ELEM: nodeName="name" local="name"
                TEXT: nodeName="#text" nodeValue="Strawberry Belgian Waffles"
                TEXT: nodeName="#text" nodeValue=[WS]
                ELEM: nodeName="price" local="price"
                  TEXT: nodeName="#text" nodeValue="$7.95"
                  TEXT: nodeName="#text" nodeValue=[WS]
                  ELEM: nodeName="description" local="description"
                    TEXT: nodeName="#text" nodeValue="Light Belgian waffles covered with str
awberries and whipped cream"
                    TEXT: nodeName="#text" nodeValue=[WS]
                    ELEM: nodeName="calories" local="calories"
                      TEXT: nodeName="#text" nodeValue="900"
                      TEXT: nodeName="#text" nodeValue=[WS]
                      ELEM: nodeName="name" local="name"
                        TEXT: nodeName="#text" nodeValue="Berry-Berry Belgian Waffles"
                        TEXT: nodeName="#text" nodeValue=[WS]
```

Figura 1.d

1.1.2 Book.xml

```
C:\>cd colocaFicheiro

C:\colocaFicheiro>runClient.bat

C:\colocaFicheiro>set PATH=C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Win
em;C:\WINDOWS\system32\WindowsPowerShell\v1.0;c:\Programas\Microsoft SQL Server\
100\Tools\Binn\c:\Programas\Microsoft SQL Server\100\DTs\Binn\c:\Programas\Mic
rosoft SQL Server\100\Tools\Binn\USShell\Comman?>IDE\;C:\colocaFicheiro\orpc.dev
\bin\win32

C:\colocaFicheiro>set PATH=C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Win
em;C:\WINDOWS\system32\WindowsPowerShell\v1.0;c:\Programas\Microsoft SQL Server\
100\Tools\Binn\c:\Programas\Microsoft SQL Server\100\DTs\Binn\c:\Programas\Mic
rosoft SQL Server\100\Tools\Binn\USShell\Comman?>IDE\;C:\colocaFicheiro\orpc.dev
\bin\win32;"C:\Arquivos de programas\Java\jdk1.7.0_45\bin"

C:\colocaFicheiro>set CLASSPATH=C:\colocaFicheiro\orpc.dev\lib\orpc.jar

C:\colocaFicheiro>java FileClient localhost books.xml
Methula JavaRPC demo, not distributable!
Ligado ao servidor localhost
books.xml 4550 bytes enviados

C:\colocaFicheiro>
```

Figura 2.c

```

ELEM: nodeName="price" local="price"
  TEXT: nodeName="#text" nodeValue="44.95"
TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="publish_date" local="publish_date"
  TEXT: nodeName="#text" nodeValue="2000-10-01"
TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="description" local="description"
  TEXT: nodeName="#text" nodeValue="An in-depth look at creating applications
    with XML."
  TEXT: nodeName="#text" nodeValue=[WS]
TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="book" local="book"
  ATTR: nodeName="id" local="id" nodeValue="bk102"
  TEXT: nodeName="#text" nodeValue="bk102"
  TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="author" local="author"
  TEXT: nodeName="#text" nodeValue="Ralls, Kim"
  TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="title" local="title"
  TEXT: nodeName="#text" nodeValue="Midnight Rain"
  TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="genre" local="genre"
  TEXT: nodeName="#text" nodeValue="Fantasy"
  TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="price" local="price"
  TEXT: nodeName="#text" nodeValue="5.95"
  TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="publish_date" local="publish_date"
  TEXT: nodeName="#text" nodeValue="2000-12-16"
  TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="description" local="description"
  TEXT: nodeName="#text" nodeValue="A former architect battles corporate zombies,
    an evil sorceress, and her own childhood to become queen
    of the world."
  TEXT: nodeName="#text" nodeValue=[WS]
TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="book" local="book"
  ATTR: nodeName="id" local="id" nodeValue="bk103"
  TEXT: nodeName="#text" nodeValue="bk103"

```

Figura 2.d

1.1.3 medsamp2014.xml

```

C:\>cd colocaFicheiro
C:\colocaFicheiro>runClient.bat
C:\colocaFicheiro>set PATH=C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Win
em;C:\WINDOWS\system32\WindowsPowerShell\v1.0;c:\Programas\Microsoft SQL Server\
100\Tools\Binn\jc\Programas\Microsoft SQL Server\100\DTs\Binn\jc\Programas\Mid
rosoft SQL Server\100\Tools\Binn\SShell\Common7\IDE;c:\colocaFicheiro\orpc.dev
\bin\win32
C:\colocaFicheiro>set PATH=C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Win
em;C:\WINDOWS\system32\WindowsPowerShell\v1.0;c:\Programas\Microsoft SQL Server\
100\Tools\Binn\jc\Programas\Microsoft SQL Server\100\DTs\Binn\jc\Programas\Mid
rosoft SQL Server\100\Tools\Binn\SShell\Common7\IDE;c:\colocaFicheiro\orpc.dev
\bin\win32;"C:\Arquivos de programas\Java\jdk1.7.0_45\bin"
C:\colocaFicheiro>set CLASSPATH=C:\colocaFicheiro\orpc.dev\lib\orpc.jar
C:\colocaFicheiro>java FileClient localhost medsamp2014.xml
Nethula JavaRPC demo, not distributable!
Ligado ao servidor localhost
medsamp2014.xml 879145 bytes enviados
C:\colocaFicheiro>

```

Figura 3.c

```

TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="MedlineId" local="MedlineId"
  TEXT: nodeName="#text" nodeValue="Mayo Clin Womens Healthsource"
  TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="NlmUniqueID" local="NlmUniqueID"
  TEXT: nodeName="#text" nodeValue="9891120"
  TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="ISSNLinking" local="ISSNLinking"
  TEXT: nodeName="#text" nodeValue="1091-0220"
  TEXT: nodeName="#text" nodeValue=[WS]
TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="CitationSubset" local="CitationSubset"
  TEXT: nodeName="#text" nodeValue="R"
  TEXT: nodeName="#text" nodeValue=[WS]
TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="MedlineCitation" local="MedlineCitation"
  ATTR: nodeName="Owner" local="Owner" nodeValue="NLM"
  TEXT: nodeName="#text" nodeValue="NLM"
  ATTR: nodeName="Status" local="Status" nodeValue="MEDLINE"
  TEXT: nodeName="#text" nodeValue="MEDLINE"
  TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="PMID" local="PMID"
  ATTR: nodeName="Version" local="Version" nodeValue="1"
  TEXT: nodeName="#text" nodeValue="1"
  TEXT: nodeName="#text" nodeValue="1726191"
  TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="DateCreated" local="DateCreated"
  TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="Year" local="Year"
  TEXT: nodeName="#text" nodeValue="2008"
  TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="Month" local="Month"
  TEXT: nodeName="#text" nodeValue="03"
  TEXT: nodeName="#text" nodeValue=[WS]
ELEM: nodeName="Day" local="Day"

```

Figura 3.d

1.2 - SAX

1.2.1 - Books.xml

```
C:\TESTAR\exemplosParserXML>runServer.bat

C:\TESTAR\exemplosParserXML>set PATH=C:\Program Files (x86)\NVIDIA Corporation\PhysX\Common;C:\Program Files (x86)\Intel\iCLS Client;C:\Program Files\Intel\iCLS Client;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wbem;C:\WINDOWS\System32\WindowsPowerShell\v1.0\;C:\Program Files (x86)\Windows Live\Shared;C:\Program Files\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files\Intel\Intel(R) Management Engine Components\IPT;C:\Program Files (x86)\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files (x86)\Intel\Intel(R) Management Engine Components\IPT;C:\Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x86;C:\Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x64;C:\Program Files (x86)\Microsoft SQL Server\100\Tools\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\DTSBinn\;C:\Program Files (x86)\Microsoft SQL Server\100\Tools\Binn\SShell\Common7\IDE;C:\TESTAR\exemplosParserXML\orpc.dev\bin\win32

C:\TESTAR\exemplosParserXML>set PATH=C:\Program Files (x86)\NVIDIA Corporation\PhysX\Common;C:\Program Files (x86)\Intel\iCLS Client;C:\Program Files\Intel\iCLS Client;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wbem;C:\WINDOWS\System32\WindowsPowerShell\v1.0\;C:\Program Files (x86)\Windows Live\Shared;C:\Program Files\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files\Intel\Intel(R) Management Engine Components\IPT;C:\Program Files (x86)\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x86;C:\Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x64;C:\Program Files (x86)\Microsoft SQL Server\100\Tools\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\DTSBinn\;C:\Program Files (x86)\Microsoft SQL Server\100\Tools\Binn\SShell\Common7\IDE;C:\TESTAR\exemplosParserXML\orpc.dev\bin\win32;"C:\Program Files\Java\jdk1.7.0_45\bin"

C:\TESTAR\exemplosParserXML>set CLASSPATH=C:\TESTAR\exemplosParserXML\orpc.dev\lib\orpc.jar

C:\TESTAR\exemplosParserXML>java FileServer
Netbula JavaRPC demo, not distributable!
Registered TCP transport.
Registered UDP transport.
Ficheiro recebido: books.xml 4548 bytes transferidos
Ficheiro gravado: books.xml
Closing socket
```

Figura 4.a

```
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. Todos os direitos reservados.

C:\WINDOWS\system32>cd..

C:\Windows>cd..

C:\>cd TESTAR\exemplosParserXML

C:\TESTAR\exemplosParserXML>portnapper.bat

C:\TESTAR\exemplosParserXML>java -cp ".\orpc.jar" pnapsvc
Netbula JavaRPC demo, not distributable!
```

Figura 4.b

```
C:\TESTAR\exemplosParserXML>set PATH=C:\Program Files (x86)\NVIDIA Corporation\PhysX\Common;C:\Program Files (x86)\Intel\iCLS Client\;C:\Program Files\Intel\iCLS Client\;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wbem;C:\WINDOWS\System32\WindowsPowerShell\v1.0\;C:\Program Files (x86)\Windows Live\Shared;C:\Program Files\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files (x86)\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x86;C:\Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x64;C:\Program Files (x86)\Microsoft SQL Server\100\Tools\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\DTSD\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\Tools\Binn\SShell\Comon7\IDE\;C:\TESTAR\exemplosParserXML\orpc.dev\bin\win32;"C:\Program Files\Java\jdk1.7.0_45\bin"
```

```
C:\TESTAR\exemplosParserXML>set CLASSPATH=C:\TESTAR\exemplosParserXML\orpc.dev\lib\orpc.jar
```

```
C:\TESTAR\exemplosParserXML>java FileClient localhost books.xml
Netbula JavaRPC demo, not distributable!
Ligado ao servidor localhost
books.xml 4548 bytes enviados
```

```
C:\TESTAR\exemplosParserXML>cd "C:\TESTAR\exemplosParserXML\jasp-1_5_0-20130830\samples"
```

```
C:\TESTAR\exemplosParserXML\jasp-1_5_0-20130830\samples>javac sax/*
Note: sax\SAXLocalNameCount.java uses unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.
```

```
C:\TESTAR\exemplosParserXML\jasp-1_5_0-20130830\samples>java sax\SAXLocalNameCount "C:\TESTAR\exemplosParserXML\books.xml"
Local Name "genre" occurs 12 times
Local Name "catalog" occurs 1 times
Local Name "book" occurs 12 times
Local Name "author" occurs 12 times
Local Name "description" occurs 12 times
Local Name "price" occurs 12 times
Local Name "publish_date" occurs 12 times
Local Name "title" occurs 12 times
```

Figura 4.c

1.2.2 Note.xml

```
C:\TESTAR\exemplosParserXML>runServer.bat
```

```
C:\TESTAR\exemplosParserXML>set PATH=C:\Program Files (x86)\NVIDIA Corporation\PhysX\Common;C:\Program Files (x86)\Intel\iCLS Client\;C:\Program Files\Intel\iCLS Client\;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wbem;C:\WINDOWS\System32\WindowsPowerShell\v1.0\;C:\Program Files (x86)\Windows Live\Shared;C:\Program Files\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files (x86)\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x86;C:\Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x64;C:\Program Files (x86)\Microsoft SQL Server\100\Tools\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\DTSD\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\Tools\Binn\SShell\Comon7\IDE\;C:\TESTAR\exemplosParserXML\orpc.dev\bin\win32;"C:\Program Files\Java\jdk1.7.0_45\bin"
```

```
C:\TESTAR\exemplosParserXML>set CLASSPATH=C:\TESTAR\exemplosParserXML\orpc.dev\lib\orpc.jar
```

```
C:\TESTAR\exemplosParserXML>java FileServer
Netbula JavaRPC demo, not distributable!
Registered TCP transport.
Registered UDP transport.
Ficheiro recebido: note.xml 145 bytes transferidos
Ficheiro gravado: note.xml
Closing socket.
```

Figura 5.a

```
C:\TESTAR\exemplosParserXML>portmapper.bat
```

```
C:\TESTAR\exemplosParserXML>java -cp ".;orpc.jar" pnapsvc
Netbula JavaRPC demo, not distributable!
```

Figura 5.b

```
S Client\;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wbem;C:\WINDOWS\Sys
tem32\WindowsPowerShell\v1.0\;C:\Program Files (x86)\Windows Live\Shared;C:\Prog
ram Files\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files\Intel
\Intel(R) Management Engine Components\IPT;C:\Program Files (x86)\Intel\Intel(R)
Management Engine Components\DAL;C:\Program Files (x86)\Intel\Intel(R) Manage
ment Engine Components\IPT;C:\Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x86;C:\
Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x64;C:\Program Files (x86)\Microsof
t SQL Server\100\Tools\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\DIS
\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\Tools\Binn\VSShell\Comm
7\IDE\;C:\TESTAR\exemplosParserXML\orpc.dev\bin\win32

C:\TESTAR\exemplosParserXML>set PATH=C:\Program Files (x86)\NVIDIA Corporation\P
hysX\Common;C:\Program Files (x86)\Intel\iCLS Client\;C:\Program Files\Intel\iCL
S Client\;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wbem;C:\WINDOWS\Sys
tem32\WindowsPowerShell\v1.0\;C:\Program Files (x86)\Windows Live\Shared;C:\Prog
ram Files\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files\Intel
\Intel(R) Management Engine Components\IPT;C:\Program Files (x86)\Intel\Intel(R)
Management Engine Components\DAL;C:\Program Files (x86)\Intel\Intel(R) Manage
ment Engine Components\IPT;C:\Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x86;C:\
Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x64;C:\Program Files (x86)\Microsof
t SQL Server\100\Tools\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\DIS
\Binn\;C:\TESTAR\exemplosParserXML\orpc.dev\bin\win32;"C:\Program Files\Java\jdk
1.7.0_45\bin"

C:\TESTAR\exemplosParserXML>set CLASSPATH=C:\TESTAR\exemplosParserXML\orpc.dev\
lib\orpc.jar

C:\TESTAR\exemplosParserXML>java FileClient localhost note.xml
Netbula JavaRPC demo, not distributable!
Ligado ao servidor localhost
note.xml 145 bytes enviados

C:\TESTAR\exemplosParserXML>cd "C:\TESTAR\exemplosParserXML\jaxp-1_5_0-20130830\
samples"

C:\TESTAR\exemplosParserXML\jaxp-1_5_0-20130830\samples>javac sax/*
javac: invalid flag: sax\SAXLocalNameCount$MyErrorHandler.class
Usage: javac <options> <source files>
use -help for a list of possible options

C:\TESTAR\exemplosParserXML\jaxp-1_5_0-20130830\samples>java sax/SAXLocalNameCou
nt "C:\TESTAR\exemplosParserXML\note.xml"
Local Name "body" occurs 1 times
Local Name "note" occurs 1 times
Local Name "heading" occurs 1 times
Local Name "from" occurs 1 times
Local Name "to" occurs 1 times
```

Figura 5.c

1.2.3 Nedsamp2013.xml

```
C:\TESTAR\exemplosParserXML>runServer.bat

C:\TESTAR\exemplosParserXML>set PATH=C:\Program Files (x86)\NVIDIA Corporation\P
hysX\Common;C:\Program Files (x86)\Intel\iCLS Client\;C:\Program Files\Intel\iCL
S Client\;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wbem;C:\WINDOWS\Sys
tem32\WindowsPowerShell\v1.0\;C:\Program Files (x86)\Windows Live\Shared;C:\Prog
ram Files\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files\Intel
\Intel(R) Management Engine Components\IPT;C:\Program Files (x86)\Intel\Intel(R)
Management Engine Components\DAL;C:\Program Files (x86)\Intel\Intel(R) Manage
ment Engine Components\IPT;C:\Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x86;C:\
Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x64;C:\Program Files (x86)\Microsof
t SQL Server\100\Tools\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\DIS
\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\Tools\Binn\VSShell\Comm
7\IDE\;C:\TESTAR\exemplosParserXML\orpc.dev\bin\win32

C:\TESTAR\exemplosParserXML>set PATH=C:\Program Files (x86)\NVIDIA Corporation\P
hysX\Common;C:\Program Files (x86)\Intel\iCLS Client\;C:\Program Files\Intel\iCL
S Client\;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wbem;C:\WINDOWS\Sys
tem32\WindowsPowerShell\v1.0\;C:\Program Files (x86)\Windows Live\Shared;C:\Prog
ram Files\Intel\Intel(R) Management Engine Components\DAL;C:\Program Files\Intel
\Intel(R) Management Engine Components\IPT;C:\Program Files (x86)\Intel\Intel(R)
Management Engine Components\DAL;C:\Program Files (x86)\Intel\Intel(R) Manage
ment Engine Components\IPT;C:\Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x86;C:\
Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x64;C:\Program Files (x86)\Microsof
t SQL Server\100\Tools\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\DIS
\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\Tools\Binn\VSShell\Comm
7\IDE\;C:\TESTAR\exemplosParserXML\orpc.dev\bin\win32;"C:\Program Files\Java\jdk
1.7.0_45\bin"

C:\TESTAR\exemplosParserXML>set CLASSPATH=C:\TESTAR\exemplosParserXML\orpc.dev\
lib\orpc.jar

C:\TESTAR\exemplosParserXML>java FileServer
Netbula JavaRPC demo, not distributable!
Fail to register TCP transport.
Fail to register UDP transport.
```


Figura 6.a

```
C:\TESTAR\exemplosParserXML>portmapper.bat
C:\TESTAR\exemplosParserXML>java -cp ".;orpc.jar" pnapsvc
Netbula JavaRPC demo, not distributable!
```

Figura 6.b

```
Program Files (x86)\Intel\OpenCL SDK\3.0\bin\x64;C:\Program Files (x86)\Microsoft
t SQL Server\100\Tools\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\DT
\Binn\;C:\Program Files (x86)\Microsoft SQL Server\100\Tools\Binn\Ushell\Commor
7\IDE\;C:\TESTAR\exemplosParserXML\orpc.dev\bin\win32;C:\Program Files\Java\jdk
1.7.0_45\bin"
C:\TESTAR\exemplosParserXML>set CLASSPATH=.;C:\TESTAR\exemplosParserXML\orpc.dev\
lib\orpc.jar
C:\TESTAR\exemplosParserXML>java FileClient localhost nedsamp2013.xml
Netbula JavaRPC demo, not distributable!
rpc: RPC: Program not registered
RPC: Program not registered
    at netbula.ORPC.RPCCClient.set(RPCCClient.java:115)
    at netbula.ORPC.RPCCClient.<init>(RPCCClient.java:74)
    at netbula.ORPC.ClientTCP.<init>(ClientTCP.java:44)
    at netbula.ORPC.ClientGeneric.<init>(ClientGeneric.java:60)
    at putfile_cln.<init>(putfile_cln.java:19)
    at FileClient.main(FileClient.java:17)
C:\TESTAR\exemplosParserXML>cd "C:\TESTAR\exemplosParserXML\jaxp-1_5_0-20130830\
samples"
C:\TESTAR\exemplosParserXML\jaxp-1_5_0-20130830\samples>javac sax/*
javac: invalid flag: sax\SAXLocalNameCount$MyErrorHandler.class
Usage: javac <options> <source files>
use -help for a list of possible options
C:\TESTAR\exemplosParserXML\jaxp-1_5_0-20130830\samples>java sax/SAXLocalNameCou
nt "C:\TESTAR\exemplosParserXML\nedsamp2013.xml"
Local Name "AuthorList" occurs 149 times
Local Name "AccessionNumberList" occurs 8 times
Local Name "DescriptorName" occurs 1562 times
Local Name "ISOAbbreviation" occurs 156 times
Local Name "VernacularTitle" occurs 11 times
Local Name "SupplMeshList" occurs 2 times
Local Name "ArticleTitle" occurs 156 times
Local Name "RegistryNumber" occurs 294 times
Local Name "PublicationTypeList" occurs 156 times
Local Name "MedlineCitation" occurs 156 times
Local Name "Grant" occurs 21 times
Local Name "Issue" occurs 135 times
Local Name "ChemicalList" occurs 69 times
Local Name "Pageination" occurs 156 times
Local Name "Keyword" occurs 175 times
Local Name "MedlineCitationSet" occurs 1 times
Local Name "CitationSubset" occurs 174 times
Local Name "PersonalNameSubject" occurs 5 times
Local Name "Note" occurs 5 times
```

Figura 6.c

1.3 – JDOM

NOTA: É Necessário definir o jdom-2.0.5.jar na CLASSPATH além do orpc.jar.

1.3.1 Books.xml

```
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. Todos os direitos reservados.
C:\TESTAR\ficha 7\3\jdom-2.0.5\jdom-2.0.5>run1.bat
C:\TESTAR\ficha 7\3\jdom-2.0.5\jdom-2.0.5>set CLASSPATH=.;C:\TESTAR\orpc.dev\lib\
orpc.jar
C:\TESTAR\ficha 7\3\jdom-2.0.5\jdom-2.0.5>java FileServer
Netbula JavaRPC demo, not distributable!
Registered TCP transport.
Registered UDP transport.
Ficheiro recebido: books.xml 4548 bytes transferidos
Ficheiro gravado: books.xml
Closing socket.
```

Figura 7.a

```
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. Todos os direitos reservados.

C:\TESTAR\figha 7\3\jdon-2.0.5\jdon-2.0.5>run.bat

C:\TESTAR\figha 7\3\jdon-2.0.5\jdon-2.0.5>set CLASSPATH=C:\TESTAR\orpc.dev\lib\
orpc.jar

C:\TESTAR\figha 7\3\jdon-2.0.5\jdon-2.0.5>java -cp ".;orpc.jar" pnapsv
Netbula JavaRPC demo, not distributable!
```

Figura 7.b

```
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. Todos os direitos reservados.

C:\TESTAR\figha 7\3\jdon-2.0.5\jdon-2.0.5>run2.bat

C:\TESTAR\figha 7\3\jdon-2.0.5\jdon-2.0.5>set CLASSPATH=C:\TESTAR\orpc.dev\lib\
orpc.jar

C:\TESTAR\figha 7\3\jdon-2.0.5\jdon-2.0.5>java FileClient localhost books.xml
Netbula JavaRPC demo, not distributable!
Ligado ao servidor localhost
books.xml 4548 bytes enviados

C:\TESTAR\figha 7\3\jdon-2.0.5\jdon-2.0.5>
```

Figura 7.c

```
<price>6.95</price>
<publish_date>2000-11-02</publish_date>
<description>After an inadvertant trip through a Heisenberg
Uncertainty Device, James Salway discovers the problems
of being quantun.</description>
</book>
<book id="bk110">
  <author>O'Brien, Tim</author>
  <title>Microsoft .NET: The Programming Bible</title>
  <genre>Computer</genre>
  <price>36.95</price>
  <publish_date>2000-12-09</publish_date>
  <description>Microsoft's .NET initiative is explored in
detail in this deep programmer's reference.</description>
</book>
<book id="bk111">
  <author>O'Brien, Tim</author>
  <title>MSXML3: A Comprehensive Guide</title>
  <genre>Computer</genre>
  <price>36.95</price>
  <publish_date>2000-12-01</publish_date>
  <description>The Microsoft MSXML3 parser is covered in
detail, with attention to XML DOM interfaces, XSLT processing,
SAX and more.</description>
</book>
<book id="bk112">
  <author>Galos, Mike</author>
  <title>Visual Studio 7: A Comprehensive Guide</title>
  <genre>Computer</genre>
  <price>49.95</price>
  <publish_date>2001-04-16</publish_date>
  <description>Microsoft Visual Studio 7 is explored in depth,
looking at how Visual Basic, Visual C++, C#, and ASP+ are
integrated into a comprehensive development
environment.</description>
</book>
</catalog>
```

Figura 7.d

1.3.2 Note.xml

```
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. Todos os direitos reservados.

C:\TESTAR\ficha 7\3\jdon-2.0.5\jdon-2.0.5>run1.bat

C:\TESTAR\ficha 7\3\jdon-2.0.5\jdon-2.0.5>set CLASSPATH=C:\TESTAR\orpc.dev\lib\orpc.jar

C:\TESTAR\ficha 7\3\jdon-2.0.5\jdon-2.0.5>java FileServer
Netbula JavaRPC demo, not distributable!
Registered TCP transport.
Registered UDP transport.
Ficheiro recebido: note.xml 145 bytes transferidos
Ficheiro gravado: note.xml
Closing socket.
```

Figura 8.a

```
C:\TESTAR\ficha 7\3\jdon-2.0.5\jdon-2.0.5>java -cp ".;orpc.jar" pnapvc
Netbula JavaRPC demo, not distributable!
```

Figura 8.b

```
C:\TESTAR\ficha 7\3\jdon-2.0.5\jdon-2.0.5>java FileClient localhost note.xml
Netbula JavaRPC demo, not distributable!
Ligado ao servidor localhost
note.xml 145 bytes enviados

C:\TESTAR\ficha 7\3\jdon-2.0.5\jdon-2.0.5>
```

Figura 8.c

```
<-----XML DOCUMENT----->
<?xml version="1.0" encoding="UTF-8"?>
<!-- Edited by XMLSpy --><note>
<to>Iove</to>
<from>Jani</from>
<heading>Reminder</heading>
<body>Don't forget me this weekend!</body>
</note>
```

Figura 8.d

1.3.3 Nedsamp2013.xml

```
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. Todos os direitos reservados.

C:\TESTAR\ficha 7\3\jdon-2.0.5\jdon-2.0.5>run1.bat

C:\TESTAR\ficha 7\3\jdon-2.0.5\jdon-2.0.5>set CLASSPATH=C:\TESTAR\orpc.dev\lib\orpc.jar

C:\TESTAR\ficha 7\3\jdon-2.0.5\jdon-2.0.5>java FileServer
Netbula JavaRPC demo, not distributable!
Registered TCP transport.
Registered UDP transport.
Ficheiro recebido: nedsamp2013.xml 57344 bytes transferidos
Ficheiro gravado: nedsamp2013.xml
Closing socket.
```

Figura 9.a

1.4 - JAXP

1.4.1 Books.xml

```
Microsoft Windows XP [Versão 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\TESTAR\4>run1

C:\TESTAR\4>set CLASSPATH=.;C:\TESTAR\orpc.dev\lib\orpc.jar

C:\TESTAR\4>java FileServer
Netbula JavaRPC demo, not distributable!
Registered TCP transport.
Registered UDP transport.
Ficheiro recebido: books.xml 4550 bytes transferidos
Ficheiro gravado: books.xml
Closing socket.
```

Figura 10.a

```
Microsoft Windows XP [Versão 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\TESTAR\4>run

C:\TESTAR\4>set CLASSPATH=.;C:\TESTAR\orpc.dev\lib\orpc.jar

C:\TESTAR\4>java -cp ".;orpc.jar" pmapsuc
Netbula JavaRPC demo, not distributable!
```

Figura 10.b

```
Microsoft Windows XP [Versão 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\TESTAR\4>run2

C:\TESTAR\4>set CLASSPATH=.;C:\TESTAR\orpc.dev\lib\orpc.jar

C:\TESTAR\4>java FileClient localhost books.xml
Netbula JavaRPC demo, not distributable!
Ligado ao servidor localhost
books.xml 4550 bytes enviados

C:\TESTAR\4>run2

C:\TESTAR\4>set CLASSPATH=.;C:\TESTAR\orpc.dev\lib\orpc.jar;C:\TESTAR\orpc.dev\lib\orpc.jar

C:\TESTAR\4>java FileClient localhost books.xml
Netbula JavaRPC demo, not distributable!
Ligado ao servidor localhost
books.xml 4550 bytes enviados

C:\TESTAR\4>
```

Figura 10.c

```
FACTORY: com.sun.xml.internal.stream.XMLInputFactoryImpl@18088c0
filename = books.xml

<?xml version="1.0" encoding="null"?>
<catalog>
  <book id="bk101">
    <author>Gambardella, Matthew</author>
    <title>XML Developer's Guide</title>
    <genre>Computer</genre>
    <price>44.95</price>
    <publish_date>2000-10-01</publish_date>
    <description>An in-depth look at creating applications
    with XML.</description>
  </book>
  <book id="bk102">
    <author>Ralls, Kim</author>
    <title>Midnight Rain</title>
    <genre>Fantasy</genre>
    <price>5.95</price>
    <publish_date>2000-12-16</publish_date>
    <description>A former architect battles corporate zombies,
    an evil sorceress, and her own childhood to become queen
    of the world.</description>
  </book>
```


Figura 10.d

1.4.2 Simple.xml

```
Microsoft Windows XP [Versão 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\TESTAR\4>run1

C:\TESTAR\4>set CLASSPATH=;C:\TESTAR\orpc.dev\lib\orpc.jar

C:\TESTAR\4>java FileServer
Netbula JavaRPC demo, not distributable!
Registered TCP transport.
Registered UDP transport.
Ficheiro recebido: simple.xml 1135 bytes transferidos
Ficheiro gravado: simple.xml
Closing socket.
```

Figura 11.a

```
Microsoft Windows XP [Versão 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\TESTAR\4>run

C:\TESTAR\4>set CLASSPATH=;C:\TESTAR\orpc.dev\lib\orpc.jar

C:\TESTAR\4>java -cp ".;orpc.jar" pmapsvc
Netbula JavaRPC demo, not distributable!
```

Figura 11.b

```
Microsoft Windows XP [Versão 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\TESTAR\4>run2

C:\TESTAR\4>set CLASSPATH=;C:\TESTAR\orpc.dev\lib\orpc.jar

C:\TESTAR\4>java FileClient localhost simple.xml
Netbula JavaRPC demo, not distributable!
Ligado ao servidor localhost
simple.xml 1135 bytes enviados

C:\TESTAR\4>_
```

Figura 11.c

```
FACTORY: com.sun.xml.internal.stream.XMLInputFactoryImpl$fec107
filename = simple.xml

<?xml version="1.0" encoding="ISO-8859-1"?>
Edited by XMLSpy< <!-- Edited by XMLSpy --><breakfast_menu>
  <food>
    <name>Belgian Waffles</name>
    <price>$5.95</price>
    <description>Two of our famous Belgian Waffles with plenty of re
al maple syrup</description>
    <calories>650</calories>
  </food>
  <food>
    <name>Strawberry Belgian Waffles</name>
    <price>$7.95</price>
    <description>Light Belgian waffles covered with strawberries and
whipped cream</description>
    <calories>900</calories>
  </food>
  <food>
    <name>Berry-Berry Belgian Waffles</name>
    <price>$8.95</price>
    <description>Light Belgian waffles covered with an assortment of
fresh berries and whipped cream</description>
```

Figura 11.d

1.4.3 medsamp2014.xml

```
Microsoft Windows XP [Versão 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\TESTAR\4>run1

C:\TESTAR\4>set CLASSPATH=.;C:\TESTAR\orpc.dev\lib\orpc.jar

C:\TESTAR\4>java FileServer
Methula JavaRPC demo, not distributable!
Registered TCP transport.
Registered UDP transport.
Ficheiro recebido: medsamp2014.xml 299008 bytes transferidos
Ficheiro gravado: medsamp2014.xml
Closing socket.
```

Figura 12.a

```
Microsoft Windows XP [Versão 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\TESTAR\4>run

C:\TESTAR\4>set CLASSPATH=.;C:\TESTAR\orpc.dev\lib\orpc.jar

C:\TESTAR\4>java -cp ".;orpc.jar" pmapsvc
Methula JavaRPC demo, not distributable!
```

Figura 12.b

```
Microsoft Windows XP [Versão 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\TESTAR\4>run2

C:\TESTAR\4>set CLASSPATH=.;C:\TESTAR\orpc.dev\lib\orpc.jar

C:\TESTAR\4>java FileClient localhost medsamp2014.xml
Methula JavaRPC demo, not distributable!
Ligado ao servidor localhost
medsamp2014.xml 299008 bytes enviados

C:\TESTAR\4>
```

Figura 12.c

```

eading</DescriptorName MajorTopicVN="N">Dental Implantation, Endosseous</Descrip
torName></MeshHeading><MeshHeading><DescriptorName MajorTopicVN="Y">Dental Impla
nts</DescriptorName></MeshHeading><MeshHeading><DescriptorName MajorTopicVN="N">
Dental Polishing</DescriptorName></MeshHeading><MeshHeading><DescriptorName Major
TopicVN="Y">Dental Prosthesis Design</DescriptorName></MeshHeading><MeshHeading>
<DescriptorName MajorTopicVN="N">Device Removal</DescriptorName></MeshHeading><
MeshHeading><DescriptorName MajorTopicVN="N">Femur</DescriptorName></MeshHeading>
<MeshHeading><DescriptorName MajorTopicVN="N">Hydrochloric Acid</DescriptorName>
</MeshHeading><MeshHeading><DescriptorName MajorTopicVN="Y">Implants, Experimen
tal</DescriptorName></MeshHeading><MeshHeading><DescriptorName MajorTopicVN="N">
Metallurgy</DescriptorName></MeshHeading><MeshHeading><DescriptorName MajorTopic
VN="Y">Osseointegration</DescriptorName></MeshHeading><MeshHeading><DescriptorNa
me MajorTopicVN="N">Rabbits</DescriptorName></MeshHeading><MeshHeading><Descript
orName MajorTopicVN="N">Sulfuric Acids</DescriptorName></MeshHeading><MeshHeadin
g><DescriptorName MajorTopicVN="N">Surface Properties</DescriptorName></MeshHead
ing><MeshHeading><DescriptorName MajorTopicVN="Y">Titanium</DescriptorName></Mes
hHeading><MeshHeading><DescriptorName MajorTopicVN="N">Torque</DescriptorName></
MeshHeading></MeshHeadingList></MedlineCitation><MedlineCitation Owner="NLM" Sta
tus="MEDLINE"><PMID Version="1">1488868</PMID><DateCreated><Year>2001</Year><Mo
nth>08</Month><Day>07</Day></DateCreated><DateCompleted><Year>2001</Year><Month>
10</Month><Day>25</Day></DateCompleted><DateRevised><Year>2001</Year><Month>11</
Month><Day>15</Day></DateRevised><Article PubModel="Print"><Journal><ISSN IssnTy
pe="Print">0905-7161</ISSN><JournalIssue CitedMedium="Print"><Volume>12</Volume>
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ssue><Title>Clinical oral implants research</Title><ISOAbbreviation>Clin Oral Im

```

Figura 12.d

1.5 JAXB

1.5.1 Po.xml

```

Microsoft Windows [Version 6.3.9600]
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C:\TESTAR\ficha 7\5\samples\unmarshal-read>run1.bat

C:\TESTAR\ficha 7\5\samples\unmarshal-read>set CLASSPATH=.;C:\TESTAR\orpc.dev\lib
\orpc.jar

C:\TESTAR\ficha 7\5\samples\unmarshal-read>java FileServer
Netbula JavaRPC demo, not distributable!
Registered TCP transport.
Registered UDP transport.
Ficheiro recebido: po.xml 2035 bytes transferidos
Ficheiro gravado: po.xml
Closing socket.

```

Figura 13.a

```

Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. Todos os direitos reservados.

C:\TESTAR\ficha 7\5\samples\unmarshal-read>run.bat

C:\TESTAR\ficha 7\5\samples\unmarshal-read>set CLASSPATH=.;C:\TESTAR\orpc.dev\lib
\orpc.jar

C:\TESTAR\ficha 7\5\samples\unmarshal-read>java -cp ".;orpc.jar" pnapssc
Netbula JavaRPC demo, not distributable!

```

Figura 13.b

```

C:\TESTAR\ficha 7\5\samples\unmarshal-read>java FileClient localhost po.xml
Netbula JavaRPC demo, not distributable!
Ligado ao servidor localhost
po.xml 2035 bytes enviados

C:\TESTAR\ficha 7\5\samples\unmarshal-read>

```

Figura 13.c

FICHA PRÁTICA n.º 8

Integração de Sistemas de Informação

```
Ship the following items to:  
Alice Smith  
123 Maple Street  
Cambridge, MA 12345  
US  
  
5 copies of "Nosferatu - Special Edition (1929)"  
3 copies of "The Mummy (1959)"  
2 copies of "Godzilla and Mothra: Battle for Earth/Godzilla vs. King Ghi  
dora"
```

Figura 13.d