Mika Huttunen

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1.

<!ELEMENT Customers (person)\*>

<!ELEMENT person (name, age?, gender?, hobby\*)>

<!ELEMENT name (first\_name, last\_name)

<!ELEMENT first\_name (#PCDATA)>

<!ELEMENT last\_name (#PCDATA)>

<!ELEMENT age (#PCDATA)>

<!ELEMENT gender (#PCDATA)>

<!ELEMENT hobby (#PCDATA)>

2.

1. <hobby>Jogging</hobby>

<hobby>Swim </hobby>

<hobby>Reading</hobby>

1. <age>42</age>
2. No match

3.

[

{"Name": "John", "Quantity": 1.5},

{"Name": "Mary", "Quantity": 2.0}

]

4.

1. for $x in /bookstore/book

where $x/price>30

return $x/title

1. for $x in /bookstore/book/title

order by $x

return $x

1. for $x in //book

where $x/year > 1991 and $x/price > 39.95

return ($x/year, $x/title)

1. for $x in //book

where count($x/author) >= 3

return $x/title

1. for $b1 in //book

for $b2 in //book

where $b1/author = $b2/author and $b1 < $b2

return <BookPair>

{$b1/title} {$b2/title}

{

for $a in $b1/author

where $a = $b2/author

return $a

}

</BookPair>