

Exercise 02-03 - Enhancing messages

Instructions

This exercise builds on the previous exercise 02-02. We're going to validate the input document `input.xml` again:

```
<data>
  <book code="ABCD" pagecount="213"/>
  <magazine code="EFGH" articlecount="6"/>
  <!-- Invalid entries: -->
  <book code="ABCDX"/>
  <magazine code="EFGHX"/>
</data>
```

Rules are:

- A book must have a `pagecount` attribute
- A magazine must have an `articlecount` attribute
- All elements must have a `code` attribute of exactly 4 characters long

There's a basic Schematron schema in `template.sch`:

```
<schema xmlns="http://purl.oclc.org/dsdl/schematron" queryBinding="xslt3">
  <pattern>
    <rule context="/*/book">
      <assert test="exists(@pagecount)">A book must have a pagecount attribute</assert>
    </rule>
    <rule context="/*/magazine">
      <assert test="exists(@articlecount)">A magazine must have an articlecount attribute</assert>
    </rule>
  </pattern>
  <pattern>
    <rule context="/*/*">
      <assert test="string-length(@code) eq 4">A code must be 4 characters long</assert>
    </rule>
  </pattern>
</schema>
```

Please enhance this schema so all rules report the value of the `code` attribute somehow.

Additional changes

Please enhance the schema even further and assert that:

- Books have less than 200 pages
- Magazines have less than 6 articles

The messages for these rules must report both the book/magazine code and the incorrect number of pages/articles.

Make sure these additional checks don't fire on books/magazines that are invalid and have no `pagecount/articlecount` attribute.