These exercises are a bit more difficult overall than the Course-Catalog XPath and XQuery Exercises. We suggest you work those problems first.

In these exercises, you will be working with a small XML data set about world countries. This data is adapted from the Mondial 3.0 database as hosted by the University of Washington, and was originally compiled by the Georg-August University of Goettingen Institute for Informatics. Each country has a name, population, and area (in sq. km). Some countries also list languages (with percentages of the population that speaks each language) and/or cities (with names and populations). The XML data is here.

Instructions: Each problem asks you to write a query in XPath or XQuery. When you click "Check Answer" our back-end runs your query against the sample database using Saxon. It displays the result and compares your answer against the correct one. When you're satisfied with your solution for a given problem, click the "Submit" button to check your answer.

You may perform these exercises as many times as you like, so we strongly encourage you to keep working with them until you complete the exercises with full credit.

Q1 (1 point possible)

Return the names of all countries with population greater than 100 million.

Note: Your solution will need to reference ***doc("countries.xml")*** to access the data.

```
1 Enter your XPath or XQuery here
```

Unanswered

Submit

Q2 (1 point possible)

Return the names of all countries where over 50% of the population speaks German. (Hint: Depending on your solution, you may want to use ".", which refers to the "current element" within an XPath expression.)

Note: Your solution will need to reference ***doc("countries.xml")*** to access the data.

```
1 Enter your XPath or XQuery here
```

Unanswered

Submit

Q3 (1 point possible)

Return the names of all countries where a city in that country contains more than one-third of the country's population.

Note: Your solution will need to reference ***doc("countries.xml")*** to access the data.

```
1 Enter your XPath or XQuery here
```

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Q4 (1 point possible)

Return the population density of Qatar. Note: Since the "/" operator has its own meaning in XPath and XQuery, the division operator is "div". To compute population density use "(@population div @area)".

Note: Your solution will need to reference ***doc("countries.xml")*** to access the data.

```
1 Enter your XPath or XQuery here
```

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