

Exercise 4: Document XML files

In this exercise, you will create documentation for two XML files. For this exercise, you'll need a word processor like Microsoft Word, Apple Pages, or Google Drive Document.

Part 1: Request to record a TV program

Let's say that you have an API that lets you control various electronic devices through an app. The app could send out an API request to record a TV program with XML that looks like this:

```
<recordTV>
  <date>2015-06-01</date>
  <time format="24">18:00</time>
  <duration>1.5</duration>
  <channel>54</channel>
</recordTV>
```

Open up your word processor and create a table. Refer to the previous lecture to figure out what should be in that table. Also, in the table, be sure to include information from these notes from the developer:

- The date element is optional. If not included, it will use today's date
- The format attribute on time can be either "24" or "12" for 24 or 12 hour formats. (12 hour formats are like "6:00 PM")

You only need to create one table. Don't forget to include a one line description before the table.

Finally, compare your documentation to what I came up with at: <http://sdkbridge.com/ud/tvrequest1.pdf>

Part 2: Different TV request

Now copy and paste your table and modify it so that it works for the same data, but in a slightly different form that uses more attributes:

```
<recordTV>
  <when date="2015-06-01" time="18:00" format="24"/>
  <duration hours="1.5"/>
  <station channel="54"/>
</recordTV>
```

The same notes as before apply. Again, you only need to create one table. I suggest that you only have one row each for duration and station, since they only have one attribute and are otherwise empty. It seems unnecessary to have an extra row for their one attribute. But this is a judgement call — the kind of judgement call you will often have to make as an API writer.

Finally, compare it to mine:

<http://sdkbridge.com/ud/tvrequest2.pdf>

Part 3: Temperature and Humidity

Let's use an example from the "Internet of Things". That's where devices make API requests without people being directly involved. Imagine you have a museum with a bunch of sensors scattered about that measure temperature and humidity. They send that information to a computer that gathers up the data and sends it to a server through an API request, once per day. The XML that the museum computer sends looks like this:

```
<dailyData>
  <date>2015-06-01</date>
  <hourlyData>
    <time>10:00</time>
    <device>
      <id>34</id>
      <temperature>70</temperature>
      <humidity>11</humidity>
    </device>
    <device>
      <id>35</id>
      <temperature>72</temperature>
      <humidity>12</humidity>
    </device>
    ...
  </hourlyData>
  <hourlyData>
    <time>11:00</time>
    <device>
      <id>34</id>
      <temperature>71</temperature>
      <humidity>10</humidity>
    </device>
    ...
  </hourlyData>
  ...
</dailyData>
```

Notes:

- time is local time.
- temperature is degrees F
- humidity is percentage

Create a series of documentation tables for this response. Don't worry about putting in links for this exercise. Each of the tables should have one line before them in the format:

objectName: One sentence description.

When you are done, check your answers against mine at: <http://sdkbridge.com/ud/sensors.pdf>.