**Instructions**

Please write a Java class to convert the below XML input file to the below JSON output file.

You are welcome to use any existing libraries. However, you should write generalized code supported by a mapping file of your own design. This mapping file can be any file type that you like, and the description of the translations within it can be of your own design.

Your Java code should not have any hardcoded references to field names or field values. The Java code should instead read this mapping file in order to intelligently make decisions about which translation (if any) to provide to a given field.

The end goal would be a class that can convert any structure of XML to JSON given the proper mapping file. This will include processes to change field names and field values.

Important differences in the below files (from XML to JSON) that your mapping file will want to have some mechanism for describing and exposing to your Java code:

1. ‘id’ (a number) becomes ‘patientid’ (a number)
2. ‘dateOfBirth’ (a date) becomes ‘age’ (a number)
3. ‘gender’ (a letter) becomes ‘sex’ (a word)
4. ‘state’ (a full state name) becomes ‘state’ (a state abbreviation)

Please email us your Java project with sample files in one zip file. You do not have to include the external JAR files.

**XML input file:**

|  |
| --- |
| <?xml version="1.0" encoding="UTF-8"?>  <patients>    <patient>         <id>1234</id>         <gender>m</gender>         <name>John Smith</name>         <state>Michigan</state>         <dateOfBirth>03/04/1962</dateOfBirth >    </patient>    <patient>         <id>5678</id>         <gender>f</gender>         <name>Jane Smith</name>         <state>Ohio</state>         <dateOfBirth>08/24/1971</dateOfBirth>    </patient>  </patients> |

**JSON output file:**

|  |
| --- |
| [         {                "patientid": 1234,                "sex": "male",                "state": "MI",                "name": "John Smith",                "age": 55         },         {                "patientid": 5678,                "sex": "female",                "state": "OH",                "name": "Jane Smith",                "age": 45         }  ] |