

QA Back-End Technologies Basics

Exam Prep I

You can check your solutions in [Judge](#).

1. Lost Music Festival Records

In Harmonyville, a small town, there is a **big music festival** every year. People from all over come to this festival. They play **different types of music and instruments**.

This year, something strange happened. Mr. Melody, who plans the festival, always keeps good records of everyone who comes to play music. But **his computer messed up!** Now, all the information about the musicians is mixed up. The festival is very soon, and Mr. Melody needs this information to be right.

Since we know that **you are smart with computers and we hope you love music**, your task is to help Mr. Melody. He needs to organize who is playing, what instruments they play, and what types of music they prefer.

You are given a **list of 5 musicians**, each described with details like **name, date of birth, instrument** they play, **skill level**, and **preferred genres**. The details are **presented in a sentence format**:

1. **Emma Johnson**, ID **101**, loves **Classical** and **Jazz**, plays **Violin** at level **4.2** and **Piano** at **3.6**, born on **1988-03-21**.
2. **Liam Brown**, born **1992-07-12**, enjoys **Rock** and **Pop**, ID **102**, skilled in **Guitar** at **3.5** and **Drums** at **3.0**.
3. **Olivia Martinez**, ID **103**, born **1995-01-08**, skilled in **Drums** at **4.0** and **Bass Guitar** at **3.5**, into **Rock** and **Metal** music.
4. **Noah Garcia**, prefers **Funk** and **Blues**, born **1989-09-15**, ID **104**, plays **Bass Guitar** at **4.5** and **Keyboard** at **3.2**.
5. **Sophia Rodriguez**, skilled in **Keyboard** at **3.3** and **Violin** at **3.1**, loves **Pop** and **Electronic** music, ID **105**, born **1993-05-22**.
6. **Mason Lee**, enjoys **Jazz** and **Classical**, ID **106**, **Saxophone** player at **3.7** and **Clarinet** at **3.4**, born **1991-11-30**.
7. ID **107**, **Isabella Harris**, born **1996-02-19**, plays **Cello** at **4.1** and **Viola** at **3.8**, loves **Opera** and **Classic** genres.

Convert the scrambled data into **structured JSON format manually**:

- Use a **text** or a **code editor** to write the JSON document. We recommend **Notepad++** or **VS Code**.
- **Extract relevant details** from each musician's description.
- **Organize the data** into a structured JSON format.
- Each **musician** should have the following attributes:
 - **participantId**: **Integer** (unique number for each participant)
 - **participantName**: **String** (text field that includes the first and last name of the musician)
 - **dateOfBirth**: **String** (in the format "YYYY-MM-DD")
 - **instrumentSkills**: **Array of Objects** (what instruments the participant can play and how good they are at each). Each item in the list is an **object** that contains the following:
 - **instrumentName**: **String** (the name of the musical instrument)
 - **experienceLevel**: **Double** (from 1.0 to 5.0)
 - **preferredGenres**: **Array of Strings** (list of music types)

Example:

NB! Keep in mind that there won't be an example in the exam!

```

Musicians.json
[
  {
    "participantId": 99,
    "participantName": "William Young",
    "dateOfBirth": "1990-04-27",
    "instrumentSkills": [
      {
        "instrumentName": "Trumpet",
        "experienceLevel": 4.3
      },
      {
        "instrumentName": "French Horn",
        "experienceLevel": 3.9
      }
    ],
    "preferredGenres": ["Electronic", "Ambient"]
  },
  ... other musicians ...
]
```

You are provided with a **JSON parser application**. Use it to **parse and validate** the JSON file you have created.

- **Replace the content of Musicians.json** with the JSON data you created.
- After pasting your JSON data into the corresponding JSON file, **make sure to save any changes**.
- **Run the parser** application within your IDE.
- **The parser will process the chosen JSON file** and display the extracted data **in the console**.
- Carefully review the output in the console.
- If the parser displays an error message, check your JSON file for any syntax errors or formatting issues.
- Ensure all required keys are present and correctly named.
- **Copy the results from the console into the Judge System.**

*Use Ctrl + C to copy from the console.