

JSON + X AMA

February 5, 2021

Devious Debugging – Common Issues

- Make sure to put your **netID** in YourNetID.txt, not your UIN
- The netID in YourNetID.txt must be present upon completing the last step for the hash to generate

JSON Testing

- Tests should cover your code, **not** GSON's parsing functionality
- Tests should cover
 - Everyone: Filtering & Analysis methods
 - Some of you: Any public methods created for visualization / data access
- Think of edge-case inputs to your functions

Filter Function

Name: Patrick
Courses: [126]

Name: Jason
Courses: [126,
374]

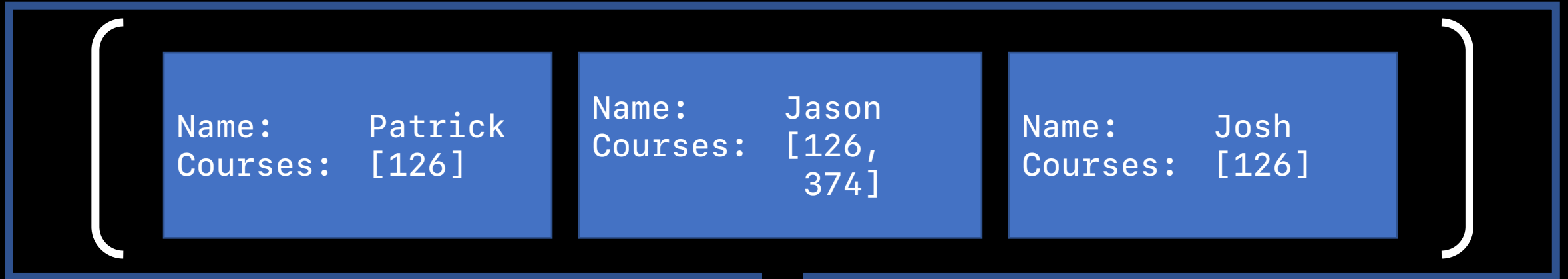
Name: Josh
Courses: [126]

```
filterByModNameFirstLetter("j", arr)
```

Name: Jason
Courses: [126,
374]

Name: Josh
Courses: [126]

Analysis Function



`findModMostCoursesTaught(arr)`

Name: Jason
Courses: [126, 374]

Visualization

- Completely up to you
- Charts, word clouds, mosaics, etc.
- For charts, explore JFreeChart

Something... else?

- If you have mad Java skills and want to do something with your JSON, go for it.
- E.g.: taking in a sheet music JSON and playing the notes with MIDI

Looking for interesting JSONs?

<https://github.com/jdorfman/awesome-json-datasets>

Code Review Digest – Magic Numbers

- Magic numbers: "numbers without obvious meaning"
 - To *always* get the next element
 - `arr[i + 1]`
 - To get the n-th next element:
 - `arr[i + 1]`
 - `arr[i + 6];`
 - `arr[i + OFFSET]`
 - Total numbers of cubes in a Rubiks cube
 - `27`
 - `3 * 3 * 3`
 - `CUBE_LENGTH * CUBE_LENGTH * CUBE_LENGTH`

Code Review Digest – `final`

- `final` keyword denotes a constant variable
- If class-level variable declared `final`, the variable cannot be changed across instances of the class
 - Therefore, must also be used with `static`
 - [Google Java Style Guide 5.2.4](#)

Code Review Digest – Conditional Nesting

- Try to flatten out your logic as much as possible
- Splitting into multiple functions can be more readable
- Don't be like this developer and repeat logic; use appropriate control flow





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