Thank you for your interest in the YNCN Tech Team!

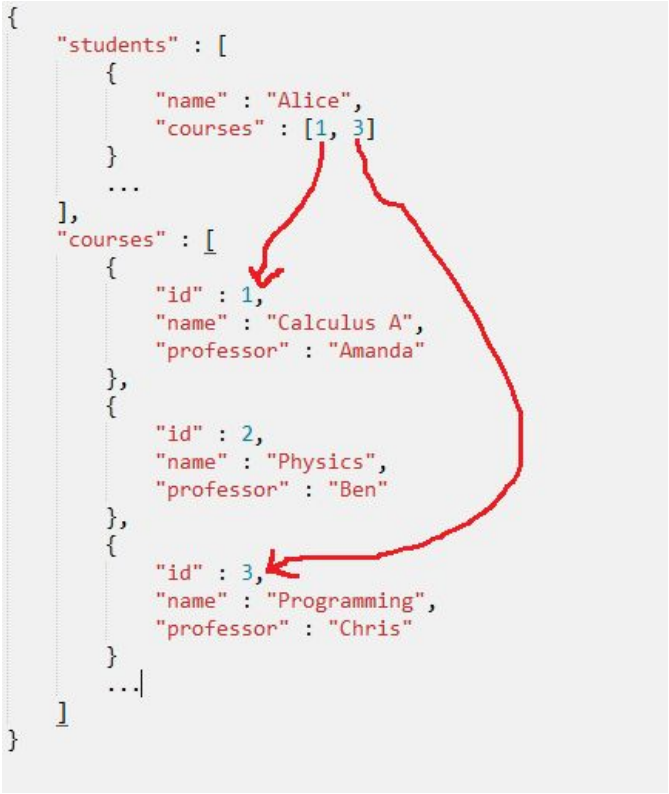
We have prepared a short programming challenge. Please write code to solve the problems below, and **send your code to us by March 3, 2016**. **You are allowed to use any programming language you want**. Good luck!

Note: you will be required to parse and use a JSON (JavaScript Object Notation) file. JSON is a way of representing data, and is commonly used in software development. **If you don't know JSON, that's OK! We place emphasis on your ability to learn new technologies quickly.** Feel free to search up resources and read tutorials about JSON to answer these questions. **Also, you are allowed (and encouraged!) to use an existing library to parse the JSON.**

All the questions use the "student_courses.json" file as input.

Question 1
Within "student_courses.json", there is a JSON object containing an array of student objects and an array of course objects. Each student object contains an array of course ID's - this indicates that a student is taking those courses. The course ID is reflected in the courses objects further down the file.

Example: Alice is taking courses 1 and 3, meaning she is taking Calculus A (which has ID 1) and Programming (which has ID 3) - see the diagram below.



Your job is to write a script that reads in the JSON data from “student_courses.json”, and for each course print out a list of students who are taking that course. Using the above example, for the course Calculus A, you would print out Alice and any other students who are taking that course. The output format is up to your discretion.

Question 2 (bonus - optional)
Write a script that reads in the data from “student_courses.json”, and for each professor print out a list of students who have taken a course taught by that professor. The output format is up to your discretion.