Assignment 6

Answer all of the following:
Prepare your answers in presentation format and be ready to present in class

1. Look up websites containing the following data representations:
   a) Using JSON
   b) Using XML

   Analyze the websites in terms of structure and composition. Name the technology/methods use for creating the web database.

2. SQL exercise:

   i. Express the following query in SQL using no subqueries and no set operations. (Hint: left outer join)

      > **select** *ID*
      > **from** *student*
      > **except**
      > **select** *s id*
      > **from** *advisor*
      > **where** *i ID* **is not null**

   ii. Using the university schema, write an SQL query to find the names and IDs of those instructors who teach every course taught in his or her department (i.e., every course that appears in the *course* relation with the instructor's department name). Order result by name.

3. R and PostgreSQL
   a) Import the full database using <u>SQL code for creating large relations</u> (from textbook website)
   b) Run RPostgres01.R (in Teams R folder)
   c) Post results on website