

# Assignment 6

Chizoma Oparaji

Epps 6354 Information Management

Q1. Look up websites containing the following data representations: JSON and XML.

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

JSON: Twitter, Facebook, Reddit, Flickr, Youtube, Google Maps are some websites that use JSON. Textual representation that transmit complex data between applications and store data. Primary data representation. Used in Javascript, Java, Python, PHP.

XML: Ecommerce websites its representations use “tags” to markup information in textual representation. Tags make hierarchical structure are particularly important for representing business organizations. Tags also make people to easily understand what a particular piece of data means. the data Used in ordering websites.

JSON EX:

```
{ "menu": { "id": "file", "value": "File", "popup":  
  { "menuitem": [ {"value": "New", "onclick":  
    "CreateNewDoc()"}, {"value": "Open", "onclick":  
    "OpenDoc()"}, {"value": "Close", "onclick":  
    "CloseDoc()"}  
  ]  
}  
}
```

XML EX:

```
<menu id="file" value="File"><popup><menuitem  
  value="New" onclick="CreateNewDoc()"  
/><menuitem value="Open" onclick="OpenDoc()"  
/><menuitem value="Close" onclick="CloseDoc()"  
/></popup></menu>
```

# Q2. SQL Exercise

## Online SQL interpreter

Run queries directly from the text box below; the university database schema and sample data have been preloaded. (Note: page may take a few seconds to load initially.). All query processing is done right in your browser using the SQLite database. Save the database and load it later, if you want your data to persist when you close the browser tab.  
Click here [for tips on using SQLite](#) including SQL syntax variations.

Enter SQL commands here

```
1 select ID
2 from student left outer join advisor on student.ID = advisor.s_ID
3 where i_ID is null
```

ExecuteSave the db

Load an SQLite database file:  No file chosen

ID
19991
54321
55739
70557

Original work by kripken ([sql.js](#)). C to Javascript compiler by kripken ([emscripten](#)). Project now maintained by [lovasoa](#)

- The left outer join joins the student and advisor tables on the ID column. This ensures that all rows from the student table are included in the result set, even if there is no matching ID in the advisor table.
- The WHERE clause filters out the rows where there is a matching ID in the advisor table, leaving only the rows where the ID in the advisor table is NULL.
- The result set contains only the ID column from the student table, which is the same as the result of the original query using EXCEPT.

**Q2.** 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.

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Enter SQL commands here

```
1 select Distinct (name), ID
2 from instructor natural join department natural join course
3 order by name
```

Execute

Save the db

Load an SQLite database file: 

Choose File

 No file chosen

name	ID
Brandt	83821
Califieri	58583
Crick	76766
Einstein	22222
El Said	32343
Gold	33456
Katz	45565
Kim	98345
Mozart	15151
Singh	76543
Srinivasan	10101
Wu	12121

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