Assignment 6

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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.

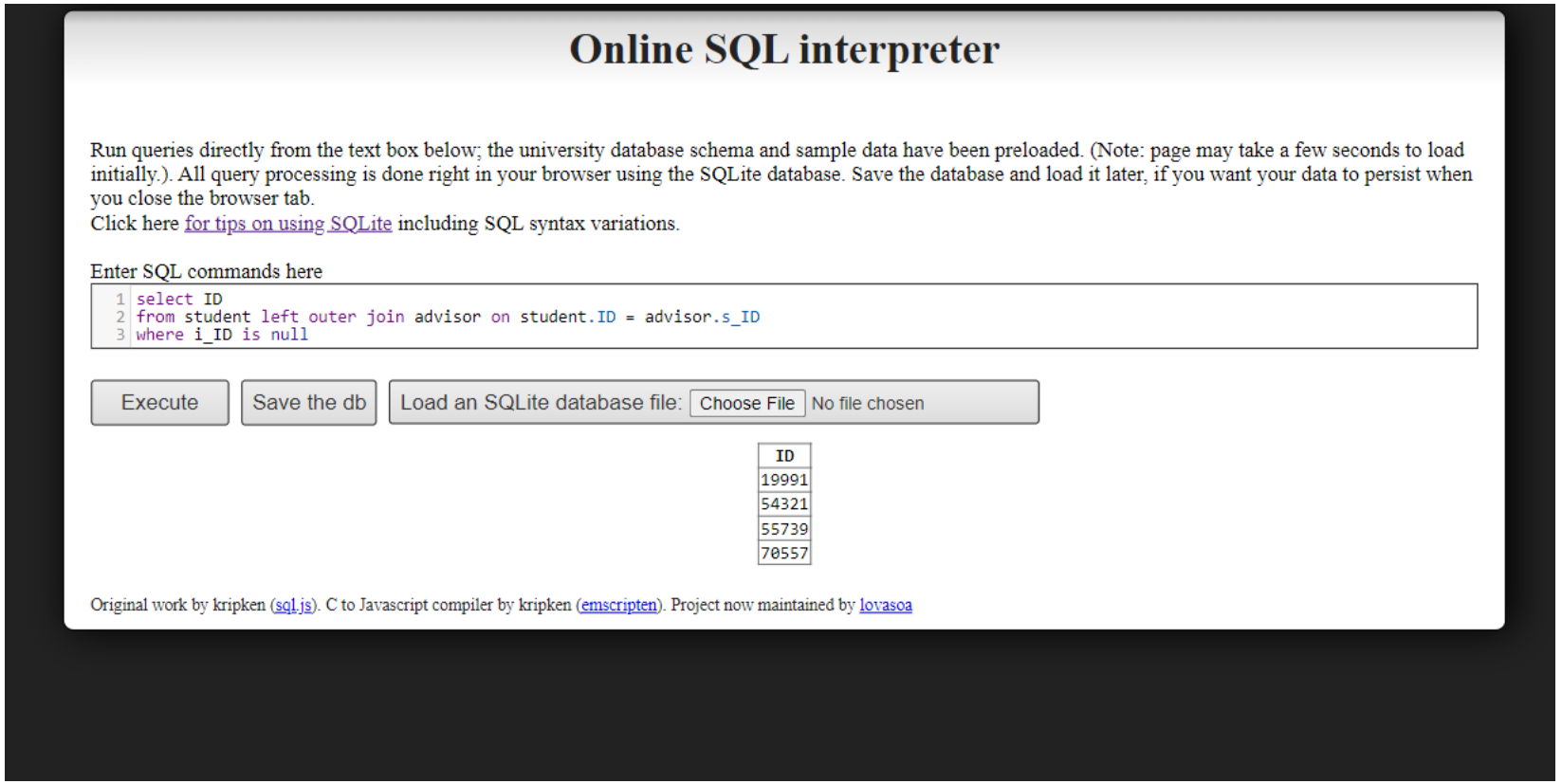
JSON EX:

```
{"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



- 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.