Lab9

Alternate Logging

JSON
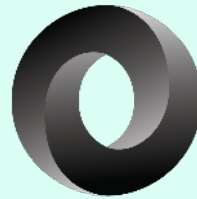
Java**S**cript
Object
Notation

JSON
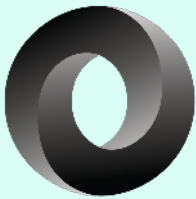
Douglas CrockFord 🇺🇸
(1955-)

JSON

Object: Name-Value pairs, separated by commas (unordered)

{"name1":value1, "name2":value2, ... }

Can be null, true/false, a string, a number, an object or an array

Array: (ordered)

[element1, element2, ...]

Can be null, true/false, a string, a number, an object or an array

JSON

Very popular

JSON functions in every DBMS

(including SQLite)

Basic storage in MongoDB

PostgreSQL: json datatype (+ jsonb)

https://www.postgresql.org/docs/9.6/static/functions-json.html

TODAY'S ASSIGNMENT

Create an audit trigger on table people that records only one row per update/insert/ delete statement with all modified columns in a single JSON string.

You can start with the audit trigger shown during the lecture (full code in Sakai)

PostgreSQL

```
create table people_audit(auditid      serial,
                          peopleid     int not null,
                          type_of_change  char(1),
                          column_name  varchar(30),
                          old_value    varchar(250),
                          new_value    varchar(250),
                          changed_by   varchar(100),
                          time_changed timestamp);
```

PostgreSQL

One row per change

```
create table people_audit(auditid      serial,
                          peopleid     int not null,
                          type_of_change  char(1),
                          changes      json,
                          changed_by   varchar(100),
                          time_changed timestamp);
```

{"column name":[old_value, new_value], "column_name": ...}

{"column name":new_value, "column_name": ...}

{"column name":old_value, "column_name": ...}

No null for insert/delete