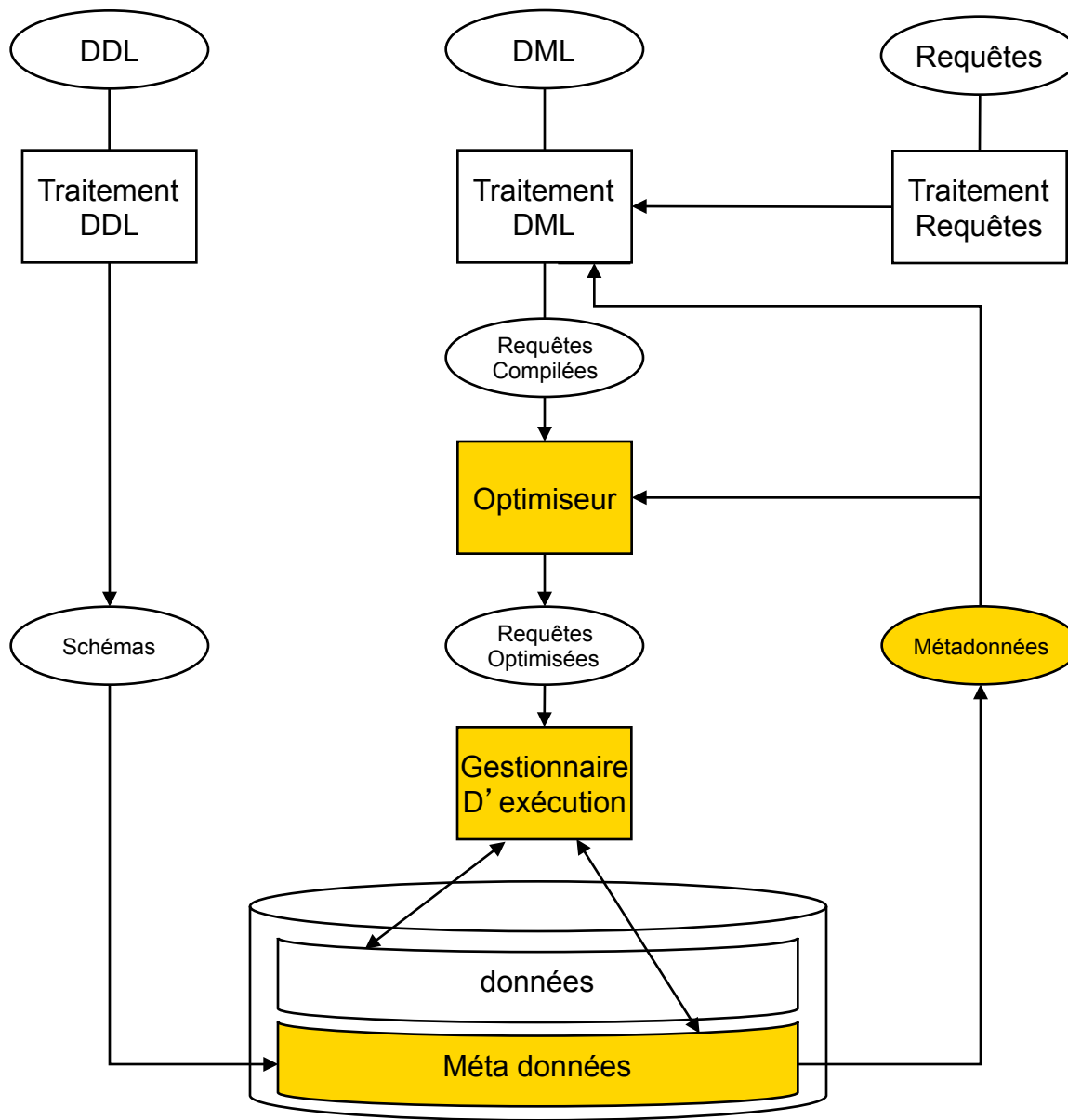


Conception Avancée de Bases de Données

pg_class





D'après C.J DATE

DDL : langage de définition des données; DML : langage de manipulation des données

pg_class



- PostgreSQL documentation
 - <http://www.postgresql.org/docs/9.0/static/catalog-pg-class.html>
- The catalog pg_class catalogs tables and most everything else that has columns or is otherwise similar to a table.

pg_class



- Total number of entries in each table :
 - Raw, Tuples
- The number of disk blocks occupied by each table and index
 - Disk Pages (blocks)



```
emmanuelfuchs — psql — 75x38
cavbd=> \d pg_class
        Table "pg_catalog.pg_class"
    Column      |      Type      | Modifiers
-----+-----+-----
 relname       | name           | not null
 relnamespace  | oid            | not null
 reltype       | oid            | not null
 reloftype     | oid            | not null
 relowner      | oid            | not null
 relam         | oid            | not null
 relfilenode   | oid            | not null
 reltablespace | oid            | not null
 relpages      | integer        | not null
 reltuples     | real           | not null
 relallvisible | integer        | not null
 reltoastrelid | oid            | not null
 reltoastidxid | oid            | not null
 relhasindex   | boolean        | not null
 relisshared   | boolean        | not null
 relpersistence | "char"         | not null
 relkind       | "char"         | not null
 relnatts      | smallint       | not null
 relchecks     | smallint       | not null
 relhasoids    | boolean        | not null
 relhaspkey    | boolean        | not null
 relhasrules   | boolean        | not null
 relhastriggers | boolean        | not null
 relhassubclass | boolean        | not null
 relispopulated | boolean        | not null
 relfrozenxid  | xid            | not null
 relminmxid    | xid            | not null
 relacl       | aclitem[]      |
 reloptions    | text[]         |
Indexes:
    "pg_class_oid_index" UNIQUE, btree (oid)
    "pg_class_relname_nsp_index" UNIQUE, btree (relname, relnamespace)

cavbd=> █
```

pg_class attributes name :

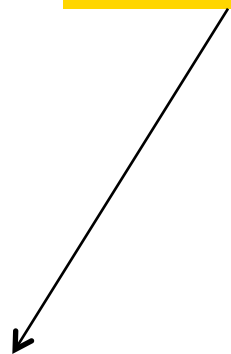


- rel : Relation
- relname : Relation Name
 - Name of the relation/table.
- reltuples : Relation Tuples
 - Number of lines in the table
- relpages : Relation pages
 - Number of pages



```
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 relam        | oid       | not null
 relfilenode  | oid       | not null
 reltablespace | oid       | not null
 relpages     | integer   | not null
 reltuples    | real      | not null
 relallvisible | integer   | not null
 reltoastrelid | oid       | not null
 reltoastidxid | oid       | not null
 relhasindex  | boolean   | not null
 relisshared  | boolean   | not null
 relpersistence | "char"    | not null
 relkind      | "char"    | not null
 relnatts     | smallint  | not null
 relchecks    | smallint  | not null
 relhasoids   | boolean   | not null
 relhaspkey   | boolean   | not null
 relhasrules  | boolean   | not null
 relhastriggers | boolean   | not null
 relhassubclass | boolean   | not null
 relispopulated | boolean   | not null
 relfrozenxid | xid       | not null
 relminmxid   | xid       | not null
 relacl       | aclitem[] | 
 reloptions   | text[]    | 
Indexes:
    "pg_class_oid_index" UNIQUE, btree (oid)
    "pg_class_relname_nsp_index" UNIQUE, btree (relname, relnamespace)
cavbd=> █
```

pg_class has two btree indexes.
By default postgres uses btree index



R creation



```
emmanuelfuchs — psql — 63x5
cavbd=> CREATE TABLE r (ri integer);
CREATE TABLE
cavbd=> █
```

```
emmanuelfuchs — psql — 87x5
cavbd=> CREATE TABLE r (ri integer);
CREATE TABLE
cavbd=> INSERT INTO r (ri) SELECT round(random()*10) FROM generate_series(1, 1000000);
INSERT 0 1000000
cavbd=> █
```


r pg_class



Stat

```
emmanuelfuchs — psql — 131x27

cavbd=> \x
Expanded display is on.
cavbd=> select * from pg_stats where tablename='r';
-[ RECORD 1 ]-----
schemaname      | public
tablename       | r
attname         | ri
inherited       | f
null_frac       | 0
avg_width       | 4
n_distinct      | 11
most_common_vals | {6,7,3,8,4,5,2,9,1,10,0}
most_common_freqs | {0.102433,0.1017,0.100867,0.1008,0.100433,0.0987667,0.0983667,0.0979,0.0974667,0.0522333,0.0490333}
histogram_bounds | 
correlation     | 0.0961845
most_common_elems | 
most_common_elem_freqs | 
elem_count_histogram | 

cavbd=> SELECT relname, reltuples, relpages FROM pg_class WHERE relname='r';
-[ RECORD 1 ]----
relname | r
reltuples | 1e+06
relpages | 4425

cavbd=> █
```

Actual

