ATLAS Online Software

ConditionsDB MySQL Backend Implementation

PROGRESS INDICATOR

API layered structure

Upper layer: set of virtual classes imposed by the interface specification

Middle layer: implementation specific concrete classes, derived from the interface classes.

Bottom layer (NEW) : mySQL tight connected classes (replacing the old implementation's wrapper functions)

?? Data Constraints ??

Upper layer: the overall database structure is a guarantied at this level

Middle layer: specific topics like the “*time validity range*”, the “*insertion time*”, the correctness of folderset/folder hierarchy are assured by this layer.

Bottom layer: Time partitioning policies and correctness

MySQL level: *define default values... what else?*

Why the additional bottom layer

Not quite a new layer, but a replacement for a set of wrapper C like functions.

Allows one to plug/unplug/replace new features not forseen in the interface:

- Time partitioning managment.

Clearer code interfaces:

- Code is easier to maintain or extend;
- improved robustness.

Painless integration with the rest of the code and possibly more efficient coding (and code).

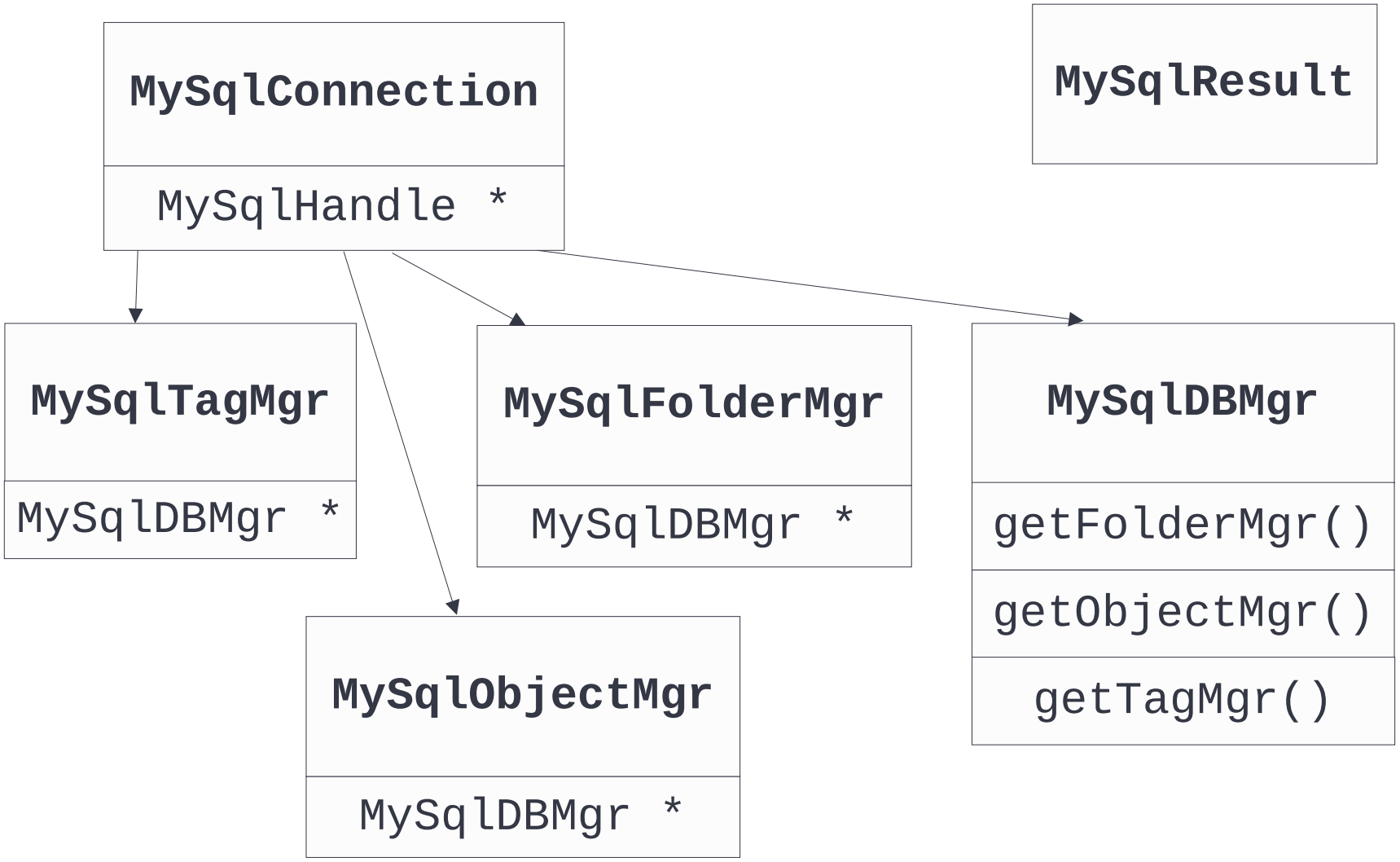
PRE-RELEASE NOTES

Use LIMIT SQL keyword to retrieve only the desired rows instead of using `mysql_use_result()` to avoid retrieving a large number of rows.

The `mysql_use_result()` as many drawbacks in the implementation when compared to `mysql_store_result()`.

Use of `strstreams` to build up the querys and the `mysql_real_query()`, instead of `mysql_query()`, provide a more efficient approach specially when dealing with large querys.

Bottom layer snapshot



Architecture