
Subject: Prefix to prevent name clash in SQL: Sqlld, variables, tables, ...

Posted by [mingodad](#) on Sun, 17 Feb 2008 12:40:01 GMT

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Today I was converting one application to upp 2008.1 and found that the actual system of parse database schema can generate name clash:

```
TABLE_(CURRENCIES)
INT_(CURRENCY)
END_TABLE
```

The above will generate a name clash:

main.cpp

In file included from d:\upp\uppsrc/Sql/sch_model.h:162,

from d:\upp\uppsrc/plugin/sqlite3/Sqlite3Schema.h:82,

from d:\upp\uppsrc/Sql/sch_header.h:45,

from d:\MyApps\DADBiz\DADBiz.h:17,

from d:\MyApps\DADBiz\main.cpp:1:

d:\MyApps\DADBiz\dadbiz.sch:33: error: 'Upp::Sqlld CURRENCY' redeclared as different kind of symbol

d:\upp\mingw\include\oidl.h:113: error: previous declaration of 'typedef union CY CURRENCY'

In file included from d:\upp\uppsrc/Sql/sch_model.h:162,

from d:\upp\uppsrc/plugin/sqlite3/Sqlite3Schema.h:82,

from d:\upp\uppsrc/Sql/sch_source.h:6,

from d:\MyApps\DADBiz\DADBiz.h:18,

from d:\MyApps\DADBiz\main.cpp:1:

d:\MyApps\DADBiz\dadbiz.sch:33: error: 'Upp::Sqlld CURRENCY' redeclared as different kind of symbol

d:\upp\mingw\include\oidl.h:113: error: previous declaration of 'typedef union CY CURRENCY'

[FEATURE REQUEST]

So I studied the source code and end up with some modifications that allow us to specify a prefix to the generated symbols with a definition of one preprocessor macro:

```
#define SCHEMA_PREFIX_CPP _ANY_PREFIX_YOU_LIKE_
```

And after that any reference to tables or fields should be done as:

```
dbList.AddKey(_ANY_PREFIX_YOU_LIKE_CURRENCY);
dbList.SetTable(_ANY_PREFIX_YOU_LIKE_CURRENCIES);
dbList.AddColumn(_ANY_PREFIX_YOU_LIKE_CURRENCY, t_("Id"), .SetFormat("%8>d");
dbList.SetOrderBy(_ANY_PREFIX_YOU_LIKE_CURRENCY).Limit(100);
```

It doesn't break any application that already works, because without defining SCHEMA_PREFIX_CPP all generated symbols remain as before.

In this process I've found a bug in GCC when joining string in macros, in some cases it adds a

space between the tokens, that's why the macro ADD_SCHEMA_PREFIX_CPP2 was created.

I've sending attached the files I've modified.

I'll hope it will be usefull to others and probably be included in the official distribution too !

Thanks for all of you that help develop this fantastic tool !

If you need more explanations, ask me !

Ps:

[FEATURE REQUEST]

As well to allow applications made with upp to work with databases, tables generated by other programs that doesn't create table and record fields names in uppercase (commonly lowercase) a patch to sql.cpp to make comparisons after convert field names retrieved from queries to upper case.

Instead of:

```
// sql.cpp line 254
Value Sql::operator[](SqlId id) const {
    String s = ~id;
    for(int i = 0; i < cn->info.GetCount(); i++)
        if(cn->info[i].name == s)
            return operator[](i);
    return Value();
}
```

Use this :

```
Value Sql::operator[](SqlId id) const {
    String s = ~id;
    for(int i = 0; i < cn->info.GetCount(); i++)
    {
        String sb = ToUpper(cn->info[i].name);
        if(sb == s)
            return operator[](i);
    }
    return Value();
}
```

File Attachments

- 1) [sch_header.h](#), downloaded 431 times
 - 2) [sch_model.h](#), downloaded 459 times
 - 3) [sch_source.h](#), downloaded 708 times
 - 4) [Sql.cpp](#), downloaded 559 times
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-

Subject: Re: Prefix to prevent name clash in SQL: Sqlld, variables, tables, ...

Posted by [mirek](#) on Tue, 19 Feb 2008 22:42:05 GMT

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OK, why not. Path accepted.

Only I have rather placed ToUpper to Execute -> that way we will avoid ToUpper in each row fetch... (Equality comparison is fast, ToUpper is not...):

```
bool Sql::Execute() {
    SqlSession &session = GetSession();
    if(session.traceslow < INT_MAX)
        cn->starttime = GetTickCount();
    if(session.usrlog)
        UsrLogT(9, cn->statement);
    Stream *s = session.GetTrace();
    if(s) {
#ifdef NOAPPSQL
        if(this == &AppCursor())
            *s << "SQL * ";
#endif
        *s << cn->statement << '\n';
    }
    session.GetStatus().Statement(cn->statement);
    session.PassStatus(ActivityStatus::EXECUTING);
    bool b = cn->Execute();
    session.GetStatus().Time(GetTickCount() - cn->starttime);
    session.PassStatus(ActivityStatus::END_EXECUTING);
    if(!b) {
        if(s) {
            *s << "## ERROR: " << session.GetLastError() << '\n';
        }
        session.GetStatus()
            .Error(session.GetLastError())
            .ErrorCode(session.GetErrorCode())
            .ErrorCode(session.GetErrorCodeString());
        session.PassStatus(ActivityStatus::EXECUTING_ERROR);
    }
    for(int i = 0; i < cn->info.GetCount(); i++)
        cn->info[i].name = ToUpper(cn->info[i].name);
    return b;
}
```

(please check)

BTW, was your suggestion based on real problems or do you just want to play safe?

Mirek

Subject: Re: Prefix to prevent name clash in SQL: Sqlld, variables, tables, ...
Posted by [WebChaot](#) on Wed, 30 Jul 2008 15:57:39 GMT
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Hi Mirek!

I found this article in forum related to my current problem:

I need to create grids (arrayctrl) via database tables. But because of these lines

```
for(int i = 0; i < cn->info.GetCount(); i++)  
    cn->info[i].name = Toupper(cn->info[i].name);
```

i allways get the column headers in upper case. Is it possible to put switch to suppress this auto-uppercase functionality?

WebChaot

Subject: Re: Prefix to prevent name clash in SQL: Sqlld, variables, tables, ...
Posted by [mirek](#) on Fri, 01 Aug 2008 08:07:51 GMT
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WebChaot wrote on Wed, 30 July 2008 11:57Hi Mirek!

I found this article in forum related to my current problem:

I need to create grids (arrayctrl) via database tables. But because of these lines

```
for(int i = 0; i < cn->info.GetCount(); i++)  
    cn->info[i].name = Toupper(cn->info[i].name);
```

i allways get the column headers in upper case. Is it possible to put switch to suppress this auto-uppercase functionality?

WebChaot

Hm, I am afraid it is not the right approach.

Maybe we could add the name in the "original form" to ColumnInfo?

Mirek

Subject: Re: Prefix to prevent name clash in SQL: SqlId, variables, tables, ...

Posted by [sevenjay](#) on Mon, 30 Aug 2010 13:45:34 GMT

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I have another opinion on this.

When you create tables/columns with lower-case names, set SqlID like

SqlId TITLE("Title");

It will not match the table/column name "Title" because it will be "TITLE" in cn->info[i].name.

That is not convenient to force user to set SqlID all upper case.

SqlId TITLE("TITLE");

I think it could be case insensitive equality comparison.

```
if(cn->info[i].name == s)
```

```
could be
```

```
if( 0 == s.CompareInsensitive(~(cn->info[i].name)))
```

```
The method CompareInsensitive maybe like this
```

```
template <class B>
```

```
int AString<B>::CompareInsensitive(const tchar *b) const
```

```
{
```

```
    const tchar *a = B::Begin();
```

```
    const tchar *ae = End();
```

```
    for(;;) {
```

```
        if(a >= ae)
```

```
            return *b == 0 ? 0 : -1;
```

```
        if(*b == 0)
```

```
            return 1;
```

```
        int q = cmpval__(*a) - cmpval__(*b);
```

```
        if( (cmpval__('a') < cmpval__(*a) && cmpval__(*a) < cmpval__('z')) ||
```

```
            (cmpval__('A') < cmpval__(*a) && cmpval__(*a) < cmpval__('Z')) )
```

```
            if(q == cmpval__('a') - cmpval__('A') || q == cmpval__('A') - cmpval__('a'))
```

```
                q = 0;
```

```
        if(q)
```

```
            return q;
```

```
        *a++;
```

```
        *b++;
```

```
    }
```

```
}
```

```
I tried it's OK.
```

```
But I am not sure if it is faster than ToUpper.
```
