Subject: SQL : how to prevent duplicates ?
Posted by jibe on Mon, 10 Mar 2014 19:15:17 GMT
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Hi,

Sorry for this very newbie question, but either I'm blind, either there is nothing about it : I'm googling for a long time and neither I can find a solution, nor I can get it working...

Let's say that we have this table :

```
TABLE_(CUSTOMERS)
  INT_  (CODE) PRIMARY_KEY
  STRING_  (LASTNAME, 40)
  STRING_  (FIRSTNAME, 40)
END_TABLE
```

We don't want duplicate names on this table. To begin, let's say that the LASTNAME must be unique. How to do that ???

I tried :

```
TABLE_(CUSTOMERS)
  INT_  (CODE) PRIMARY_KEY
  STRING_  (LASTNAME, 40) UNIQUE INDEX
  STRING_  (FIRSTNAME, 40)
END_TABLE
```

but this does not prevents to have duplicates...

In a second time, we will have to autorize duplicate LASTNAMES, but only with different FIRSTNAMES (that is, you can have John SMITH and Jack SMITH, but not two times John SMITH with 2 different CODE). How to do that ?

Sure, it can be done with some simple tests, but normally (almost) all SQL engines can manage that internally with a UNIQUE INDEX, isn't it ? So, there is surely a way to manage that with UPP...

PS : I tried with SQLite, but as far as I know, one can normally create UNIQUE INDEX with this engine ?

Subject: Re: SQL : how to prevent duplicates ?
Posted by dolik.rce on Mon, 10 Mar 2014 20:43:58 GMT
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Hi jibe,

Unique index can be made simply with UNIQUE:
```
TABLE_(CUSTOMERS)
  INT_  (CODE) PRIMARY_KEY
  STRING_  (LASTNAME, 40) UNIQUE
  STRING_  (FIRSTNAME, 40)
END_TABLE
```
It should work for most of the supported engines, including sqlite, I believe.

For two unique columns, there is DUAL_UNIQUE:
```
TABLE_(CUSTOMERS)
  INT_  (CODE) PRIMARY_KEY
  STRING_  (LASTNAME, 40)
  STRING_  (FIRSTNAME, 40) DUAL_UNIQUE(FIRSTNAME, LASTNAME)
END_TABLE
```

If you need even more columns to be unique, there is UNIQUE_LIST(u, l), where u stands for identifier and l is list of columns. I never used it but I think it should work like this:
```
TABLE_(CUSTOMERS)
  INT_  (CODE) PRIMARY_KEY
  STRING_  (LASTNAME, 40)
  STRING_  (FIRSTNAME, 40)
  STRING_  (CITY, 40) UNIQUE_LIST(address_key, FIRSTNAME, LASTNAME, CITY)
END_TABLE
```

If you have some troubles, it might be a good idea to check the schema of the created table, from command line (or other) client. Sometimes there are subtle bugs that prevent some parts of the schema to be created properly, and they're simply missing. Also any error messages and or logs might tell you if there is any hidden problem. Hope that helps

Best regards,
Honza

Subject: Re: SQL : how to prevent duplicates ?
Posted by jibe on Tue, 11 Mar 2014 10:04:46 GMT
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Hi, Honza,

Thanks a lot

So, my way to do was good... The problem was that the index was already created as not unique by a precedent try, and I did not saw that... I dopped and re-created it as unique, and all works fine.

And now, I'll know how to do unique indexes on several columns

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Subject: Re: SQL : how to prevent duplicates ?
Posted by jibe on Tue, 11 Mar 2014 14:08:09 GMT
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I still have a problem : how can I display a message box when someone is trying to create or modify a record that has a duplicated data on a unique index ?

I tried what is explained in this doc, but sql.IsError() does not (no more ?) exists...

I tried with sql.GetErrorCode(), but the error code is always 0 ! However, the error is written to the log.

Subject: Re: SQL : how to prevent duplicates ?
Posted by dolik.rce on Tue, 11 Mar 2014 19:16:23 GMT
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I think that IsError() become WasError() at some point in the history

There is whole lot of well-documented error-related methods in SqlSession class:
bool WasError() const;
void SetError(String error, String stmt, int code = 0, const char * scode = NULL,
Sql::ERRORCLASS clss = Sql::ERROR_UNSPECIFIED);
String GetLastError() const;
String GetErrorStatement() const;
int GetErrorCode() const;
String GetErrorCodeString() const;
Sql::ERRORCLASS GetErrorClass() const;
void ClearError();
void InstallErrorHandler(bool (*handler)(String error, String stmt, int code, const char *scode,
Sql::ERRORCLASS clss));

They should solve any problem you have, at least in theory

Honza

Subject: Re: SQL : how to prevent duplicates ?
Posted by jibe on Tue, 11 Mar 2014 23:33:47 GMT
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WasError() and GetLastError() do the job. But I don't understand why GetErrorCode did not.

My error was to look in Sql class instead of SqlSession class !

Thanks, Honza