Database Management System

Create table description file (*.tb file)

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Function

Generate table description information, and to be saved to a table description file "Ruanko.tb", and displayed in the tree view CDBView .

Input

(1) Read the "ruanko.db" file, access to database folder path of the default database "Ruanko".

(2) Users select "table-> create table" via the menu, and input table name in the pop-up dialog box CNewTableDlg.

Process

(1) Create database table description file “[DBMS_ROOT]\data\Ruanko\Ruanko.tb”

(2) Save the table description information to the “Ruanko.tb” file.

Output

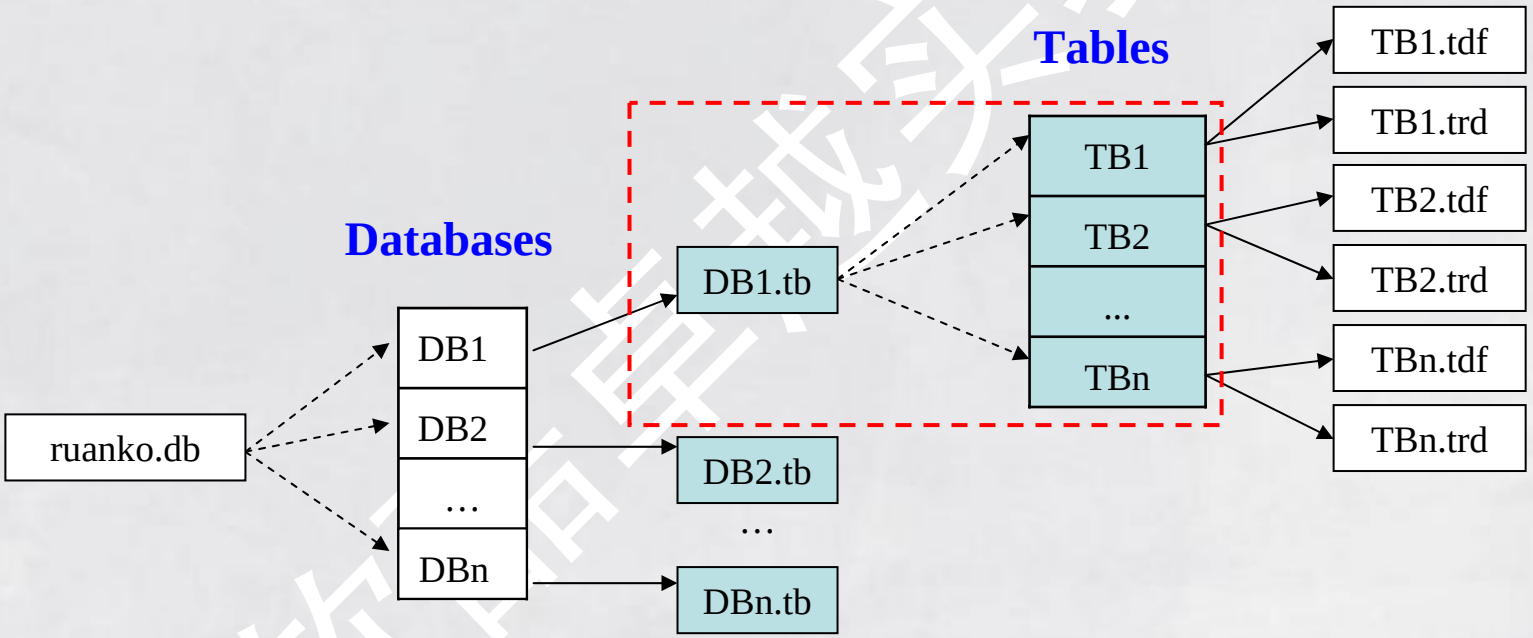
(1) Generate "Ruanko.tb" document, and write table information.

(2) In the tree view CDBView, add a child node HTREEITEM, and display the table name.

Design

Iterative develop the function of “create table description file” based on the “create database” function.

Create a database table description file Ruanko.tb according to the database name Ruanko to save the table information in the database. By reading the table description file (Ruanko.db), we can find the table structure definition file (*.tdf) and data record file (*.trd).



Design

1. Data structure design

Define the structure TableBlock to represent a database table information, it is used to storing and retrieving data to database table description file (Ruanko.tb). Database table information is as follows:

Field	Data type	Description
name	VARCHAR	table name
field_num	INTEGER	record number
record_num	INTEGER	field number
tdf	VARCHAR	table definition file path
trd	VARCHAR	table record file path
tic	VARCHAR	table integrity file path
tid	VARCHAR	table index file path
crtime	DATETIME	creation date
mtime	DATETIME	modification date

In this iteration, temporarily does not use the tic and tid fields. They will be used when developing the integrity constraints, index functions.

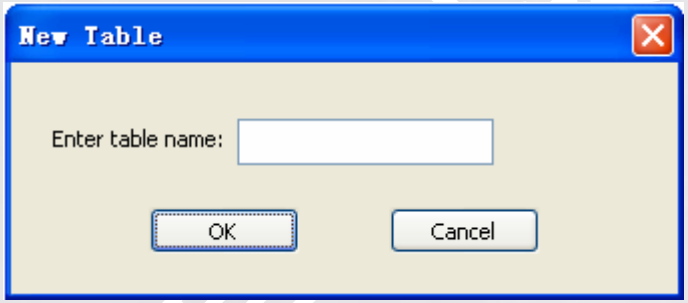
2. Interface design

Create a dialog box CNewTableDlg for entering table name, and add message response function CMainFrame ::OnNewTable() to the **menu** "table ->create table", then will popup this dialog box after click it.

(1) Dialog box design

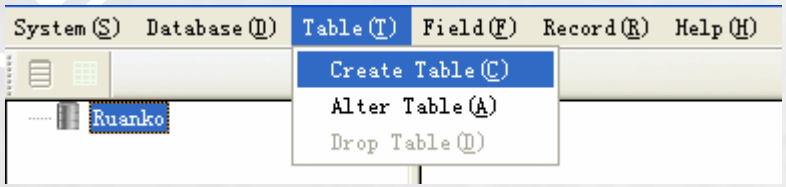
Create dialog box CNewTableDlg, and receive user input's table name by edit box control.

Confirm the entered table name by IDOK button.



(2) Menu

Add COMMAND message response function CMainFrame::OnNewTable() to the menu of "table ->create table".



3. Data transfer

Frame class CMainFrame get table name and transfer to the document class CRKDBMSDoc::CreateTable () function, then call the logic class CTableLogic of CreateTable () function to create the database.

After the table is successfully created, create object array TABLEARR of table entity class CTableEntity in the document class CRKDBMSDoc, for saving the table information.

4. View update

In the frame class CMainFrame, call CRKDMBSDoc::UpdateAllViews() function, and send the message of UPDATE_CREATE_TABLE and table information TableEntity. Notice all views updated.

The function OnUpdate() in the tree view CDBView receives PDATE_CREATE_TABLE message, and gets table information, then display table name in the tree control.

(1) send message

```
void CMainFrame::OnNewTable()
{
   ...

   // update view
   pDoc->UpdateAllViews(NULL, UPDATE_CREATE_TABLE, pTable);

   ...
}
```

(2) tree view updates

```
void CDBView::OnUpdate(CView* pSender, LPARAM lHint, CObject* pHint)
{
   switch (lHint)
   {
   case UPDATE_CREATE_TABLE://create table
      // get table information
      CTableEntity* pTable = (CTableEntity*)pHint;
      // display table name
      break;
   }
}
```

Implementation

Iterative development based on the “create database”. Create dialog box CNewTableDlg and enter table name. Generate table description information and to be saved to “Ruanko.tb” file, then displayed in the tree view CDBView.

The implementation steps are as follows:

Step 1: define table data structure

Step 2: create dialog CNewTableDlg

Step3: create table in the view layer

Step 4: create table in the business logic layer

Step 5: create table in the data access layer

www.ruanko.com

Thanks

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