Database Management System

Interface Design

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Copyright Declaration

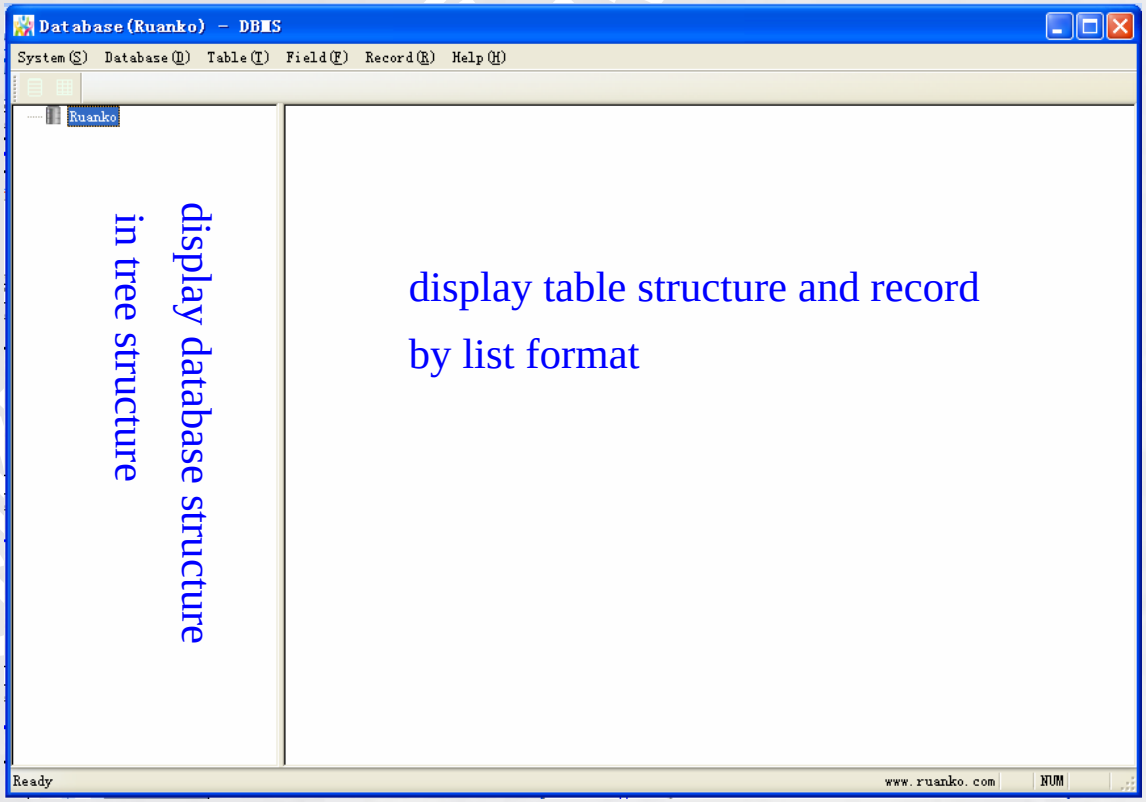
Function

Design main interface of database management systems (DBMS) based on the function of "database management systems (DBMS)". The main interface of Database Management System (DBMS) is a standard form that contains title bar, menu bar, toolbar, and status bar.

In the client area, display database structure in tree structure in the left, and display fields contained by table and record in the table by list format in the right.

1. Main interface

The main interface is shown as follows:



Function

2. Title bar

The format of title bar text is “document title-window title”, the window title is the project name “database management system (DBMS)”, and the document title is default as “no database”.

3. Menu bar

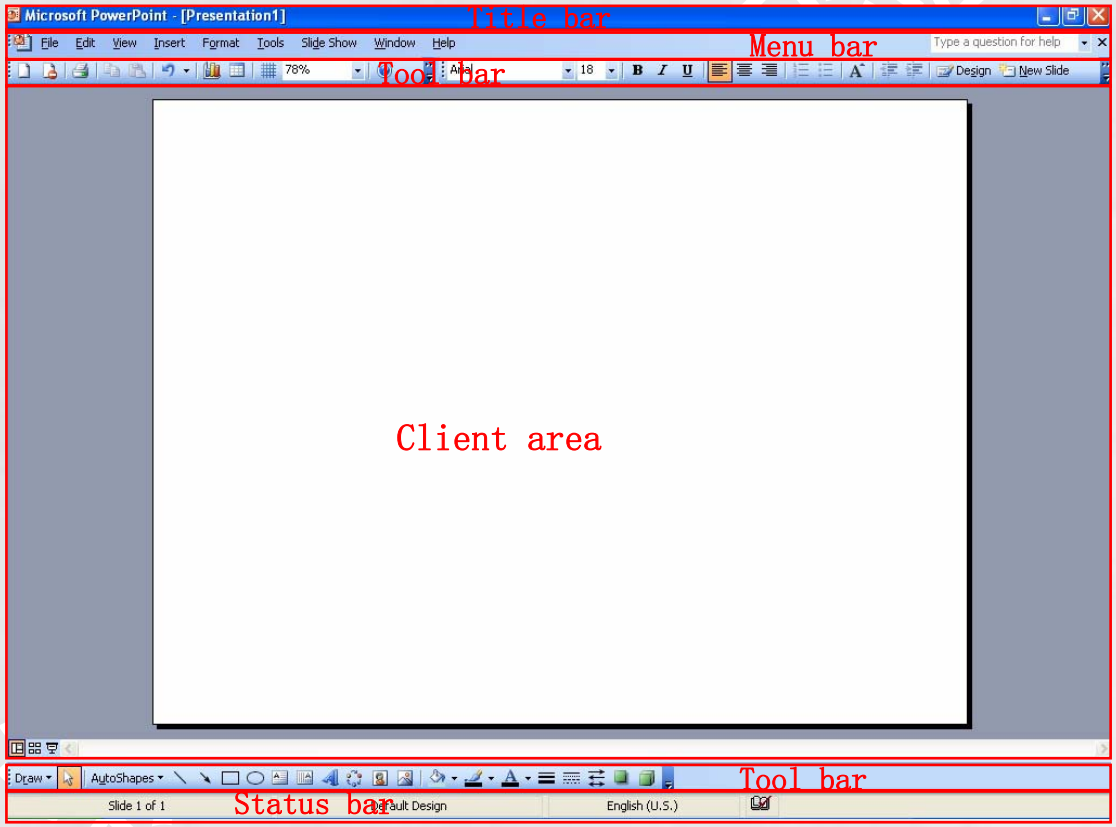
The content of menu bar is as follows:

Menu	Menu item			
System	Exit			
Database	Create Database		Open database	
Table	Create Table	Alter Table	Drop Table	
Field	Add Field	Modify Field	Drop Field	
Record	Insert Record	Select Record	Update Record	Delete Record
Help	About DBMS			

Design

Iterative development based on the “create project”.

Main window of the program is a standard window which includes: title bar, menu bar, toolbar, client area and status bar.



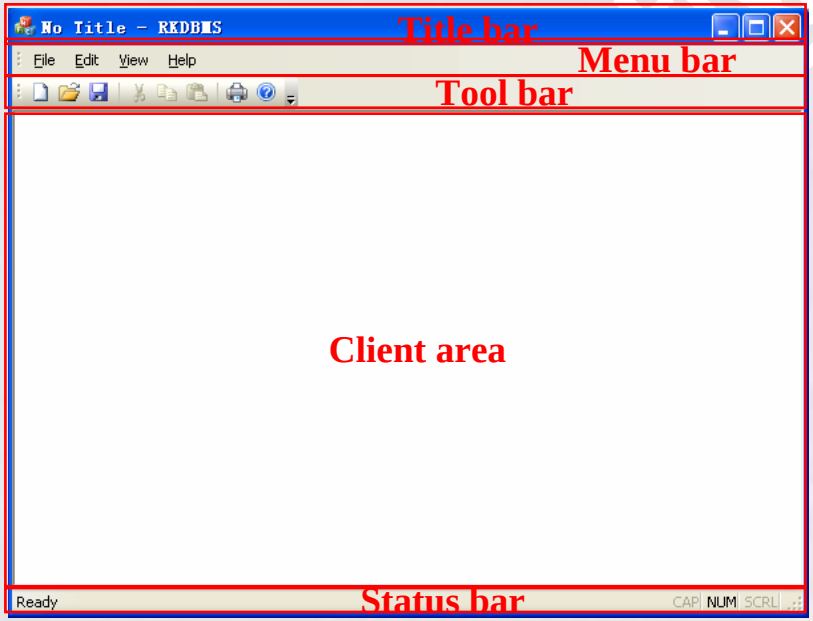
Design

In MFC SDI application, the main interface is also a standard window which includes title bar, menu bar, tool bar, client area and status bar. A MFC SDI application is consist of document, framework and view 3 three parts.

Framework: Includes title bar, menu bar, tool bar, status bar and view. A framework can contain multiple views.

View: corresponds to the client area in standard window. In MFC SDI application, client area is to use view to show the content.

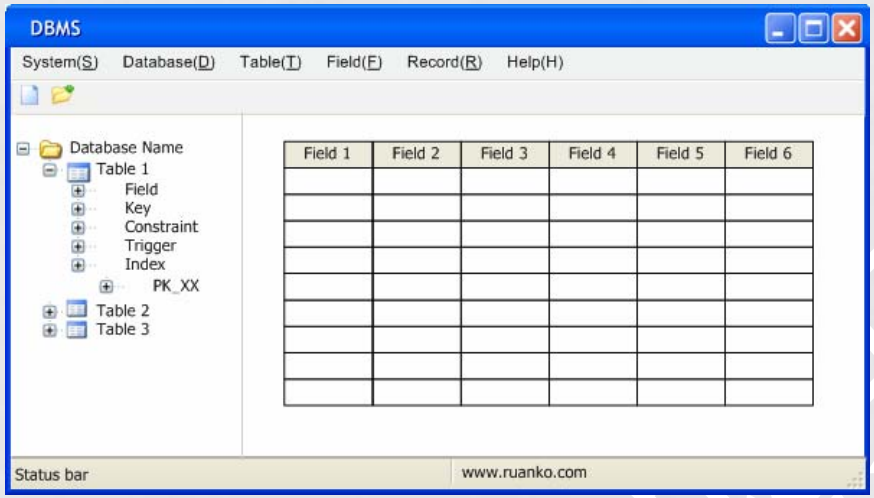
Document: Provides data interaction for the frame and view.



Design

1. Main interface design

Design main interface in the interface design. The effect is shown as follow:



(1) Title bar design

Title bar includes system logo, title bar text, Window button (minimize, maximum and close buttons)

System icon: system icon is the system logo, here we use ruanko logo, with size of 16*16, the icon format is.ico.

Title bar text: Default as “no database-database management system (DBMS)”

Modify system icon via replacing “RKDBMS.ico” file under project directory; in the code, modify title bar text by calling CWnd::SetTitle().

Design

(2) Menu bar design

The menu in the menu bar: system, database, table, filed, record and help.

Implement menu bar by modifying default menu bar resource IDR_MAINFRAME of MFC SDI application.

(3) Tool bar design

Tool bar button includes: open database and create table.

Implement tool bar by modifying default tool bar resource IDR_MAINFRAME of MFC SDI application.

(4) Client area design

Client area need to display the database structure and table structure & record. The client area is divided into two parts: the left is database structure in tree form (tree view), and right is the table structure or record in list form (list view).

The view width in left is 200, and its height is changed according to the size of the window. The view width in right is the client area width minus the left view width, and its height is changed according to the size of the window.

This iteration just divide the client area into left and right 2 parts, the later iteration will improve client area gradually.

Implement window split by CSpliterWnd class

(5) Status bar design

The status bar displays operation and author information (www.ruanko.com).

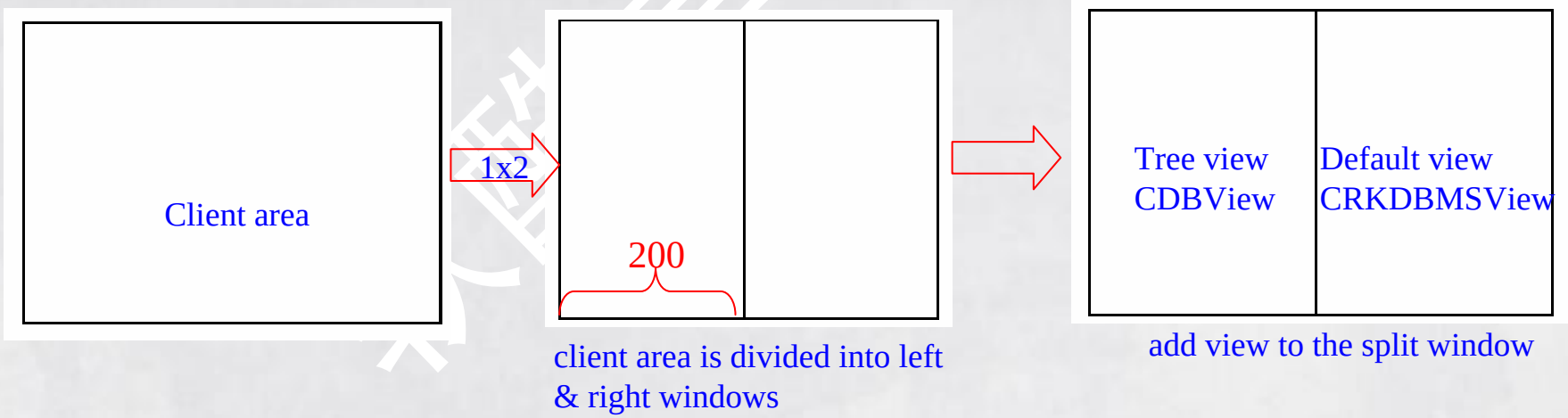
Implement by modifying static array indicators in the MainFrm.cpp file.

2. Split window

In MFC document/view structure, a frame window can contain multiple views. **And can use CSpliterWnd to split window.**

(1) Use CSpliterWnd::CreateStatic() function to divide client area into left & right parts. The width of left view is 200, its height is changed according to the size of frame window.

(2) Call CSpliterWnd::CreateView(), Add tree view CDBView to the left window, and add default view CRKDBMSView to the right window.



Implementation

Iterative developed based on the “create project”. The steps are as follows:

Step 1: import solution

Step 2: edit title bar

Step 3: edit menu bar

Step 4: edit tool bar

Step 5: edit client area

Step 6: edit status bar

www.ruanko.com

Thanks

Interface design