LAB221Assignment

Type:	**Long Assignment**
Code:	**J2.L.P0003**
LOC:	**500**
Slot(s):	**N/A**

Title

Product Management

Background

N/A

Program Specifications

In this assignment, you are required to build product management application, in the form of a desktop application. The program has basic functions: login, add - update - delete product and category 's information. You are required to use the basic components to design interfaces, use the tabbed pane to organize product management and category management on the one screen. The Microsoft SQL Server must be used to store the database.

Program organization must clearly separate functions according to MVC model.

Database name: **ProductManagement**

TblUsers

Field Name	Type
userID	**varchar(10) (Primary Key)**
fullName	nvarchar(50)
password	varchar(50)
status	bit

TblCategories

Field Name	Type
categoryID	**varchar(10) (Primary Key)**
categoryName	nvarchar(50)
description	nvarchar(200)

TblProducts

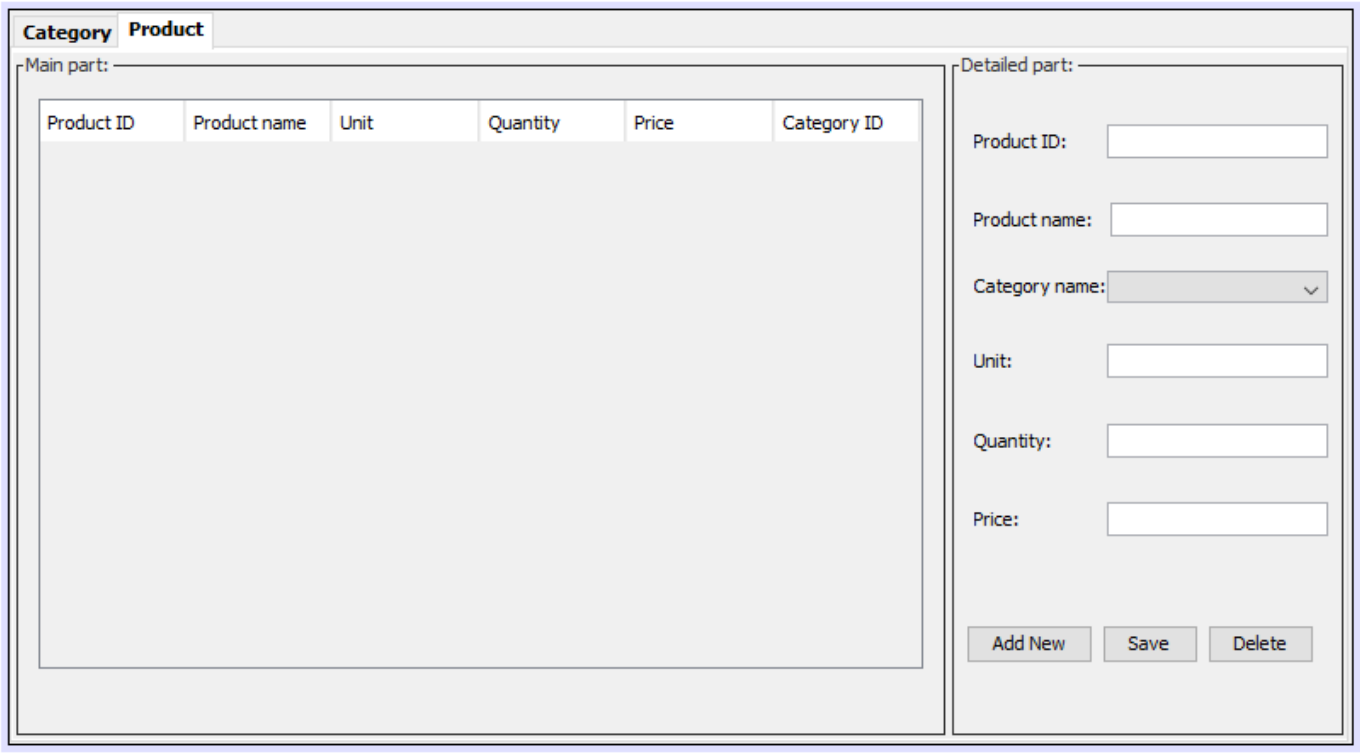
Field Name	Type
productID	**varchar(10) (Primary Key)**
productName	nvarchar(50)
unit	varchar(50)
price	float
quantity	integer
categoryid	varchar(10) (Foreign Key)

Features:

This system contains the following functions:

- **Function 1: Login - 50 LOC**
  - In order to access the product and category management, an authentication is required.
  - The actor enters userID and password, the function checks if the userID with the password is in the available user list, then grant the access permission. If not, a message would appear notify that user is not found.
  - If login is successful, then go directly to the management screen.
- **Function 2: Display category – 50 LOC**
  - The screen is divided into 2 parts: main information and detailed information.

- Main part: this part lists all available categories with their information (categoryID, category name, description) in the system.
- Detailed part: when you click a row on the table, the details of the respective category are displayed some information such as categoryID (disable), category name, description.
- In this detailed part, three buttons are shown to perform following functions such as Add new, Save and Delete.



- **Function 3: Add new category – 50 LOC**
  - The user presses the Add New button to clear the information at detailed part, and system prepares for new data entry.
  - The user inputs new information of category. Then user clicks the Save button.
  - The program checks the validity of data, if data is not valid then display an error message, otherwise system inserts new category into the database.
  - The category table must be refreshed after new data has been successfully inserted.
- **Function 4: Update category – 50 LOC**
  - The user clicks on the category that she wants to modify on the category table.
  - The details of the respective category are displayed.
  - The user changes the information of category (not allow modify the categoryID). Then user clicks the Save button.
  - The program checks the validity of data, if data is not valid then display an error message, otherwise system updates category information.

- The category table must be refreshed after data has been successfully updated.

- **Function 5: Delete category – 50 LOC**
  - The user clicks on the category that she wants to delete on the category table. Then user clicks the Delete button.
  - The program must display a message to confirm the deletion. If the user confirms, system will delete the selected category.
  - The category table must be refreshed after data has been successfully deleted.
  - **Note**: if the selected category is containing at least one product, system cannot delete it.

- **Function 6: Display products – 100 LOC**
  - The screen is divided into 2 parts: main information and detailed information.
  - Main part: this part shows all available products with their information (productID, product name, unit, quantity, price, categoryID)
  - Detailed part: when you click a row on the table, the details of the respective product are displayed some information such as productID (disable), product name, category name, unit, quantity, price. The categories are displayed in a combo box (choice) component. All available categories are loaded into the category combo box as Category ID – Category name format.
  - In this detailed part, three buttons are shown to perform following functions such as , Add new, Save and Delete.

- **Function 7: Add new product – 50 LOC**
  - The user presses the Add New button to clear the information at detailed part and system preparies for new data entry.
  - The user inputs new information product. Then user clicks Save button.
  - The program checks the validity of data, if data is not valid then display an error message, otherwise system will insert new product into the database.
  - The product table must be refreshed after new data has been successfully inserted.

- **Function 8: Update product – 50 LOC**
  - The user clicks on the product that she wants to modify on the product table.
  - The details of the respective product are displayed.
  - The user changes the information of the product (not allow modify the productID). Then user clicks the Save button.
  - The program checks the validity of data, if data is not valid then display an error message, otherwise system will update product information.
  - The product table must be refreshed after data has been successfully updated.

- **Function 9: Delete product – 50 LOC**

- The user clicks on the product that she wants to delete on the product table. Then user clicks the Delete button.
- The program must display a message to confirm the deletion. If the user confirms, system will delete the selected product.
- The product table must be refreshed after data has been successfully deleted.

- The above specifications are only basic information; you must perform a requirements analysis step and build the application according to real requirements.
- The lecturer will explain the requirement only once on the first slot of the assignment.