



Cognizant Academy

Pharma Management System (PMS)

C#, ADO.NET and SQL Server

Integrated Capability Test (ICT)

Version 0.1

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1.0 Introduction

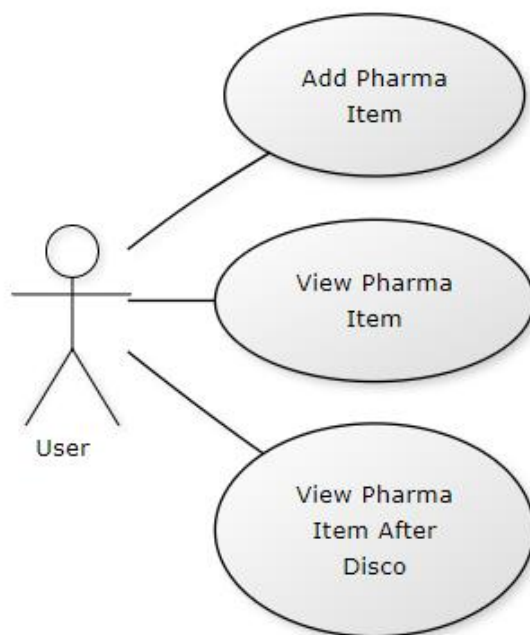
1.1 Purpose of this document

The purpose of this document is to define the scope and requirement of the Pharma Management System application.

1.2 Project Overview

The project involves creating a pharma management system. A user can enter the details of pharmaceutical items which will be stored in the database. Details of the items stored can be viewed from the database.

1.2.1 Use Case Diagram



1.3 Scope

Creation of an application for Pharma management system

1.4 Software Requirement

Tools/APIs	.Net Framework 4.6 ADO.NET Framework SQL Server 14.x
Server	Embedded

2.0 Technical Guidelines

The Pharma Management application consists of three projects.

2.1 A console application named **PharmaManagement.Client**.

This console application contains a Program class with the following static methods apart from the Main method.

Method Name	Input Argument	Return Type	Description
AddNewPharmaItem	N/A	N/A	To add a pharma item to the database
ViewPharmaItems	N/A	N/A	To view pharma items
ViewProductsAfterDiscount	decimal cost, double discount	N/A	To get the discounted price details of the pharma items which has a price greater than the cost that is provided

2.2 A class library project named **PharmaManagement.Model**.

This class library project should contain the following classes with properties given below in the tables.

2.2.1 PharmaItem

Property Name	Data Type
Id	string
Name	string
Cost	double
QuantityInStock	int

2.2.2 PharmaItemType

Property Name	Data Type
Id	int
Name	string

2.2.3 Supplier

Property Name	Data Type
Id	string
Name	string
Address	string

2.3 A class library project named **PharamaManagement.DAL**.
This class library project consists of a class named **PharmaDAL**
with the following methods.

Method Name	Input Arguments		Return Type	Description
InsertPharmaItem	Name	Type	bool	Inserts a new pharma item
	name	string		
	cost	double		
	quantityIn Stock	int		
	typeId	int		
	supplierId	string		
GetPharmaItemDetails	N/A		List<PharmaItem>	Gets all pharma item details
GetPharmaTypes	N/A		List<PharmaItemT ype>	Gets all PharmaItemT ype
GetSuppliers	N/A		List<Supplier>	Gets all supplier details
GetPharmaItemDetails AfterDiscount	Nam e	Type	List<PharmaItem>	Gets all Pharma Items whose cost is greater than the input cost and then return the
	cost	decimal		
	disco unt	double		

			cost after applying the discount. For example, if the cost is 1000 and discount is 13 display all pharma items whose cost is greater than 1000 and return them after applying the discount of 13 % on cost.
--	--	--	---

Note :

- The Project structure for “CLIENT”, “DAL” and “MODEL” is already created in the Tekstac platform.
- This is only applicable for local machine.
- You are only required to implement the class given in the requested files.

3.0 Design for adding new Pharmaceutical items to the database

On launching the application, the user will be asked to enter one of the following options.

1. Add Pharmaceutical Items
2. View Pharmaceutical items
3. View Items on Discount
4. Exit

3.1 Steps for adding pharmaceutical items to database

3.1.1 Accept input from user from the screen

- 3.1.2 Choose option 1 for adding new Pharmaceutical item details and then enter name, cost, and items in stock.
- 3.1.3 Choose a pharma item type from the listed item type
- 3.1.4 Choose supplier id from the given list.
- 3.1.5 Display the message **“Pharmaceutical Item is inserted successfully”**.

```
Menu
1. Add Pharmaceutical Items
2. View Pharamaceutical Items
3. View Items on Discount
4. Exit

Enter Your Choice : 1

Pharma Item Name : Cefixime IP 100 mg
Price : 200
Quantity In Stock : 23

Pharma Item Types

Id   Name
1    Tablet
2    Syrup
Choose a Type Id : 1

Pharma Item Suppliers

Id   Name
AMH  AM Healthcare Private Limited
CMB  CM Biological
ESB  ES Biotech
Choose a Supplier Id : AMH

Pharmaceutical Item Inserted Successfully

Menu
1. Add Pharmaceutical Items
2. View Pharamaceutical Items
3. View Items on Discount
4. Exit

Enter Your Choice :
```

- 3.1.6 If an error occurs, exception message should be displayed in the console.

```

Menu
1. Add Pharmaceutical Items
2. View Pharamaceutical Items
3. View Items on Discount
4. Exit

Enter Your Choice : 1

Pharma Item Name : Forcan Tablets, 1X4
Price : Hundred and Twenty
Input string was not in a correct format.

Menu
1. Add Pharmaceutical Items
2. View Pharamaceutical Items
3. View Items on Discount
4. Exit

Enter Your Choice :

```

4.0 Design for viewing pharmaceutical items

4.1 Requirement flow

Steps for viewing pharmaceutical items

- 4.1.1 Accept input from user from the screen
- 4.1.2 Choose option 2 for viewing pharmaceutical items
- 4.1.3 Display the Id, name, cost and quantity in stock of the pharmaceutical item.

```

Menu
1. Add Pharmaceutical Items
2. View Pharamaceutical Items
3. View Items on Discount
4. Exit

Enter Your Choice : 2

Id          Name                      Cost    Quantity In Stock
1           Cefixime IP 100 mg                200      23
2           Allopurinol 100 Mg               390     100

Menu
1. Add Pharmaceutical Items
2. View Pharamaceutical Items
3. View Items on Discount
4. Exit

Enter Your Choice :

```

- 4.1.4 If no records are found display “No Records Found” in the console.

5.0 Design for viewing pharmaceutical Items after discount

5.1 Requirement flow

Steps for viewing pharmaceutical items after discount

- 5.1.1 Accept input from the user from the screen.
- 5.1.2 Choose option 3 for viewing the pharma items after discount.
- 5.1.3 Accept first cost and then discount as input
- 5.1.4 Display the Id, name, cost and quantity in stock of the pharmaceutical item.

```
Menu
1. Add Pharmaceutical Items
2. View Pharamaceutical Items
3. View Items on Discount
4. Exit

Enter Your Choice : 3

Enter Cost : 300
Enter Discount : 10

Id      Name      Price After Discount  Quantity In Stock
2      Allopurinol 100 Mg  351                100

Menu
1. Add Pharmaceutical Items
2. View Pharamaceutical Items
3. View Items on Discount
4. Exit

Enter Your Choice :
```

- 5.1.5 If no records found, display “No Records Found” in the console.

```
Menu
1. Add Pharmaceutical Items
2. View Pharamaceutical Items
3. View Items on Discount
4. Exit

Enter Your Choice : 3

Enter Cost : 1000
Enter Discount : 10

No Records Found

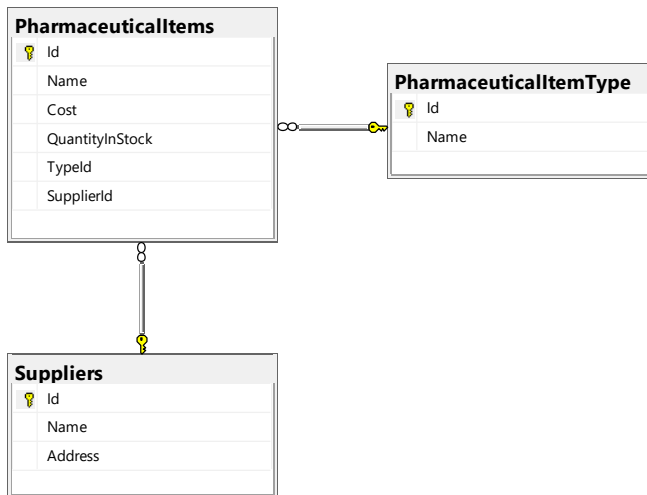
Menu
1. Add Pharmaceutical Items
2. View Pharamaceutical Items
3. View Items on Discount
4. Exit

Enter Your Choice :
```

6.0 Database schema.

- 6.1 The following data base schema is used for the application.

Use the same datatype mentioned in the respective model



6.2 Configuring connection string in App.config

Create a connection string section in the App.config of the application. Connection string name should be named as **PMSCConnection**. The sample given below can be used as reference.

```

<connectionStrings>
<add name="PMSCConnection" connectionString="Data Source=localhost; Initial
Catalog=PharmaDb;Integrated Security=True"/>
</connectionStrings>
  
```

7.0 Standards and Guidelines

- 7.1 Appropriate naming conventions should be following while naming the different types in the application.
- 7.2 Use exception handling in the data access layer and client project
- 7.3 Connection string should be set in the App.config file

8.0 Change Log

	Changes Made			
V1.0.0	Initial baseline created on <date> by <author>			
	<Please refer the configuration control tool / change item status form if the details of changes are maintained separately. If not, the template given below needs to be followed>			
	Section No.	Changed By	Effective Date	Changes Effected