

Windows Application Development using ASP.Net MVC

Project 1: Small Business Management System

Name of Project: Small Business Management System

Type of application: Windows Application

Technology Stack: C#, MVC, MS SQL Server, **Must Implement Layer Architecture**

Team will be scored using following scoring benchmark.

| SL# | Story Name | Score |
|-----|---|-----------|
| 1 | Product Catalog Module (Category) | 2 |
| 2 | Product Catalog Module (Product) | 2 |
| 3 | Party Module (Customer) | 2 |
| 4 | Party Module (Supplier) | 2 |
| 5 | Purchase Module | 3.5 |
| 6 | Sales Module | 3.5 |
| 7 | Stock Module (Search/View) | 3 |
| 8 | Stock Module (Stock Out) | 3 |
| 9 | Stock Module (Stock Re-Order) | 3 |
| 10 | Reporting Module (Periodic Income Expense Report on Sales) | 3 |
| 11 | Reporting Module (Periodic Income Expense Report on Purchase) | 3 |
| | Total | 30 |

Each member score (50) = Team Score (30) + Individual Score (20)

Individual score will be counted as your contribution.

Every team member must contribute equally. During project presentation, everyone will be asked about his/her contribution and score accordingly. During presentation, you will run your application and will show what you have completed so far. We will ask you about the source code and code quality, database design and data quality, member's contribution (github & trello). Your git repository, trello and release phases are the verification of your work. Note that before final presentation every one must complete all release phases (contains marks) works.

Please note that if any members don't write any code or fails to complete release phases will get score zero and it will also affect your group score.

Description of Project:

ABC Company is a small retail company, they purchase their products and sale the products with a profit margin. Currently they are managing their business manually, for that reason ABC Company is suffering to manage their stocks and sale management information, also the purchase information's on their products as they needed more time to summarize the result.

So, ABC wants an automation system which will manage their small business, and they will be able to manage their products, purchases, stocks and sales, with which they could have right data on time and with less effort.

What ABC Company Needs?

1. To Manage their Purchases
2. To Manage their Stock
3. To Manage Their Sales
4. To Track Loss or Profit

So we could divide the solution into various Modules

1. Product Catalog Module.
2. Purchase Module
3. Stock Module
4. Sales Module
5. Party Module (Customer/Supplier)
6. Reporting Module

Module Details:

1. Product Catalog
 - a. Product Category Setup (View, Entry, Edit, Search)
 - b. Product Setup with Category (View, Entry, Edit, Search)
2. Party Module
 - a. Customer Setup (View, Entry, Edit, Search)
 - b. Supplier Setup (View, Entry, Edit, Search))
3. Purchase Module
 - a. Purchase Entry
 - b. Purchase Edit
 - c. Purchase View and Search
4. Sales Module
 - a. Sales Entry
 - b. Sales Edit
 - c. Sales View and Search
5. Stock Module
 - a. Periodical Stock Report (From - To Date, Opening Balance, In, Out, Closing Balance of Product Quantity)
 - b. Find Re-Order Product & Expired Product.

c. Stock-Out Damaged and Lost Product

6. Reporting Module

- a. Periodic Income Expense / Profit Report on Sales
- b. Periodic Projected Income Expense / Profit Report on Purchase

STORY

1. Product Catalog Setup

a. Product Category Setup

As a Admin

I want to Manage (Save, Modify and View/Search) Categories (Name, Code)

So that I can manage Products as per their Category

Category

Code

Name

| Sl | Code | Name | Action |
|----|------|-------------|--------|
| 1 | 0001 | Electronics | Edit |
| 2 | 0002 | Mobile | Edit |

Acceptance Criteria:

Initially show available records

Data can be added or modified any time

Each data (Name, Code) must be uniquely identified (unique)

Must provide all data (Name, Code)

Code must be 4 characters in length

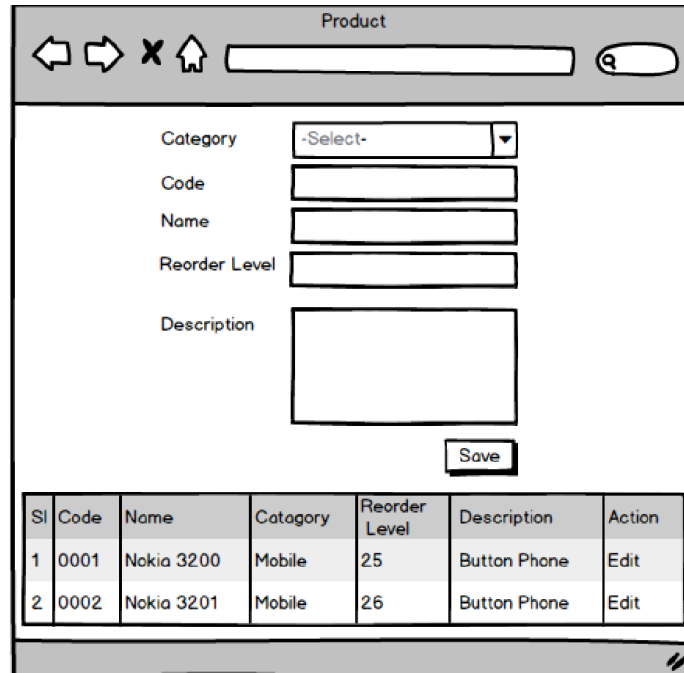
User can search by Name, Code

b. Product Setup with Category

As a Admin

I want to Manage (Save, Modify and View/Search) Products (Name, Code, Reorder Level, Category and Description)

So that Purchase and Sales Team can use the Products



The image shows a web application interface for product management. At the top is a header bar with navigation icons (back, forward, close, home) and a search bar. Below the header is a form titled 'Product' with the following fields: 'Category' (a dropdown menu currently showing '-Select-'), 'Code' (a text input), 'Name' (a text input), 'Reorder Level' (a text input), and 'Description' (a larger text area). A 'Save' button is located below the form fields. At the bottom of the interface is a table displaying a list of products.

| Sl | Code | Name | Category | Reorder Level | Description | Action |
|----|------|------------|----------|---------------|--------------|--------|
| 1 | 0001 | Nokia 3200 | Mobile | 25 | Button Phone | Edit |
| 2 | 0002 | Nokia 3201 | Mobile | 26 | Button Phone | Edit |

Acceptance Criteria:

Initially show available records

Data can be added or modified any time

Each data (Name, Code) must be uniquely identified (unique)

Must provide all data (Category, Name, Code, Reorder Level)

Code must be 4 characters in length

Initially Reorder Level should be 10 or as per user (but only positive number allowed)

User can search by Category, Name and Code

2. Party Module

a. Customer Entry, Edit, Search

As a Admin

I want to Manage (Save, Modify and View/Search) Customers (Name, Code, Address, Contact, Email, and Loyalty Point)

So that I can gain profit Customers

The screenshot shows a web application titled "Customer". At the top, there is a navigation bar with icons for back, forward, close, and home, followed by a search bar with a magnifying glass icon. Below the navigation bar, there is a form for adding or editing a customer. The form contains the following fields: Code, Name, Address, Email, Contact, and Loyalty Point (with a default value of 0). A "Save" button is located below the Loyalty Point field. At the bottom of the form, there is a table displaying a list of customers.

| Sl | Code | Name | Address | Email | Contact | Loyalty Point | Action |
|----|------|------|---------|-------|---------|---------------|--------|
| 1 | | | | | | | Edit |
| 2 | | | | | | | Edit |

Acceptance Criteria:

Initially show available records

Data can be added or modified any time

Code, Contact, Email must be uniquely identified (unique)

Must provide Code, Name, Contact and Email

Code must be 4 characters in length

Initially Loyalty Point should be 0 or as per user provides

User can search by Name, Contact and Email

b. Supplier Entry, Edit, Search

As a Admin

I want to Manage (Save, Modify and View/Search) Supplier (Name, Code, Address, Contact Person and Email)

So that I can save Supplier

The interface is titled "Supplier". It features a header bar with navigation icons (back, forward, close, home) and a search bar. Below the header is a form with the following fields: Code, Name, Address, Email, Contact, and Contact Person. A "Save" button is located below the form. At the bottom, there is a table with the following columns: SI, Code, Name, Address, Email, Contact, Contact Person, and Action. The table contains two rows of data, both with an "Edit" action link.

| SI | Code | Name | Address | Email | Contact | Contact Person | Action |
|----|------|------|---------|-------|---------|----------------|--------|
| 1 | | | | | | | Edit |
| 2 | | | | | | | Edit |

Acceptance Criteria:

Initially show available records

Data can be added or modified any time

Code, Contact, Email must be uniquely identified (unique)

Must provide Code, Name, Contact and Email

Code must be 4 characters in length

User can search by Name, Contact and Email

3. Purchase Module

Supplier

Date:

Bill/Invoice No:

Supplier:

Products

Category: Quantity:

Products: Unit Price (Tk):

Code: Total Price (Tk):

Available Quantity: Previous Unit Price (Tk):

Manufactured Date: Previous MRP (Tk):

Expire Date: MRP (Tk):

Remarks:

Add

| Sl | Products(Code) | Manufactured Date | Expire Date | Quantity | Unit Price (Tk) | Total Price (Tk) | MRP (Tk) | Remarks | Action |
|----|----------------|-------------------|-------------|----------|-----------------|------------------|----------|---------|-------------|
| | | | | | | | | | Edit Delete |

Submit

As an Admin / Purchase Manager

I want to Manage (Save, Modify And View/Search) purchase (Code, Date, Bill/Invoice number, Supplier, Category, Product, Code, Available Quantity, Manufactured Date, Expire Date, Purchased Quantity, Unit price, Remarks)

So that Business Owner, Purchase team can have up-to-date purchase information

Acceptance Criteria:

[Initially show available records](#)

Purchase code will be automatically generated as 2019-0001

Product is selected as per Category

Data can be added or modified any before submit

Bill/Invoice number must be uniquely identified (unique)

User can search by Code, Date and View details

[MRP Calculation Formula: $MRP = \text{Unit Cost} + 25\% \text{ of Unit Cost}$]

On purchase (Submit) stock quantity will be increased

4. Sales Module

As a Sales man

I want to Manage (Save, Modify and View/Search) Sales (Code, Customer, Date, Product, Quantity and Price)

So that Business Owner, Purchase team can have final up-to-date sales information and give discount/offer on loyalty point.

| Sl | Product | Quantity | MRP (Tk) | Total MRP (Tk) | Action |
|----|---------|----------|----------|----------------|-------------|
| 1 | | | | | Edit/Delete |
| 2 | | | | | Edit/Delete |
| 3 | | | | | Edit/Delete |
| 4 | | | | | Edit/Delete |

Grand Total (Tk) <View>

Discount (%) <View>

Discount Amount (Tk) <View>

Payable Amount (Tk) <View>

Submit

Acceptance Criteria:

Data can be added or modified until it is submitted

Sales code will be automatically generated as 2019-0001

User can search by Sales Code, Date and Customer

Stock quantity will be decreased on sales

On purchase price customer will gets loyalty point

[Loyalty Point Calculation Formula: Loyalty Point will be increased by [Grand Total/1000] Point(s)]

On loyalty point customer will gets discount

[Discount (%) Calculation Formula: Loyalty Point/10 and Reset Loyalty Point]

[Reset Loyalty Point: Loyalty Point - Loyalty Point/10]

Product should be sold by following FIFO (First in First out) method.

User will be notified if quantity goes below the Reorder level

5. Stock Module

a) Periodical Stock Report (From - To, Opening Balance, In, Out, Closing Balance)

The screenshot shows a web application titled "Stock". It has a search bar at the top with navigation icons. Below the search bar, there are input fields for "Product", "Category", "Start Date", and "End Date". There are also checkboxes for "Re-Order Level", "Expired", "Damage", and "Lost". A "Search" button is located to the right of these fields. Below the search form is a table with the following data:

| Sl | Code | Name | Category | Reorder Level | Expired Date | Expired Qty | Opening Balance | In | Out | Closing Balance |
|----|------|------------|----------|---------------|--------------|-------------|-----------------|-----|-----|-----------------|
| 1 | 001 | Nokia 3200 | Mobile | 25 | 1/1/2020 | 10 | 100 | 100 | 50 | 150 |
| 2 | 002 | Nokia 3200 | Mobile | 25 | 1/1/2020 | 0 | 500 | 500 | 600 | 400 |

As a Inventory Manager

I want to track Available Products/ Re-Order Products/ Expired Products and Stock out

Lost or Damaged Products

So that I can get clear idea about stock.

Acceptance Criteria:

By default Low Reorder Level product & closely expired product will be shown on top

b) Order Product

The screenshot shows a web application titled "Order Product". It has a search bar at the top with navigation icons. Below the search bar, there are input fields for "Product", "Category", "Product", "Code", "Order Date", "Delivery Date", "Available Quantity", "Reorder Level", "Status", "Supplier", "Quantity", "Last CP (Tk)", "Total Price (Tk)", and "Remarks". There are also dropdown menus for "Category", "Product", and "Supplier". An "Add" button is located to the right of the "Remarks" field. Below the form is a table with the following data:

| Sl | Code | Name | Category | Supplier | Order Qty | CP (TK) | Total Price (TK) |
|----|------|------------|----------|----------|-----------|---------|------------------|
| 1 | 0001 | Nokia 3200 | Mobile | Nokia | 10 | 1000 | 10000 |
| 2 | 0002 | Nokia 3100 | Mobile | Nokia | 15 | 3000 | 45000 |

As a Inventory Manager
I want to reorder the products
So that products never runs out and loss can be minimized

Acceptance Criteria:
Already ordered cannot be reordered
Order can be searched
When order is purchased its status should be changed.

c) Stock Out Expired, Damage or Lost Product

| Sl | Code | Name | Catagory | Supplier | Out Qty | CP (TK) | Total Price (TK) |
|----|------|------------|----------|----------|---------|---------|------------------|
| 1 | 0001 | Nokia 3200 | Mobile | Nokia | 10 | 1000 | 10000 |
| 2 | 0002 | Nokia 3100 | Mobile | Nokia | 15 | 3000 | 45000 |

As a Inventory Manager
I want to reorder the products
So that products never runs out and loss can be minimized.

Acceptance Criteria:
Order can be searched

6. Reporting Module

a. Periodic Income Expense Report on Sales

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Periodic Income Expense Report on Sales

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Start Date End Date

| Sl | Code | Name | Catagory | Sold Qty | CP (TK) | Sales Price (TK) | Profit (Tk) |
|----|------|------------|----------|----------|---------|------------------|-------------|
| 1 | 0001 | Nokia 3200 | Mobile | 10 | 1000 | 1500 | 500 |
| 2 | 0002 | Nokia 3100 | Mobile | 15 | 3000 | 5500 | 2500 |

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As an Owner

I want to find out my periodic profit on sales

So that I can track my business growth

b. Periodic Income Expense Report on Purchase

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Periodic Income Expense Report on Purchase

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Start Date End Date

| Sl | Code | Name | Catagory | Available Qty | CP (TK) | MRP (TK) | Profit (Tk) |
|----|------|------------|----------|---------------|---------|----------|-------------|
| 1 | 0001 | Nokia 3200 | Mobile | 10 | 1000 | 1500 | 500 |
| 2 | 0002 | Nokia 3100 | Mobile | 15 | 3000 | 5500 | 2500 |

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As an Owner

I want to find out my expected profit on purchased items (Available Item)

So that I can track my future business growth