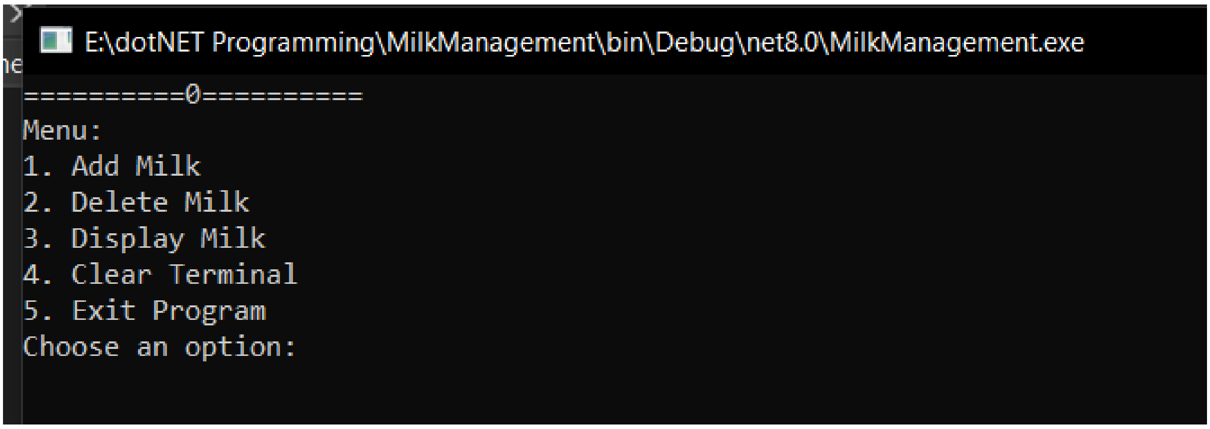
21110324 - Lương Đăng Khôi

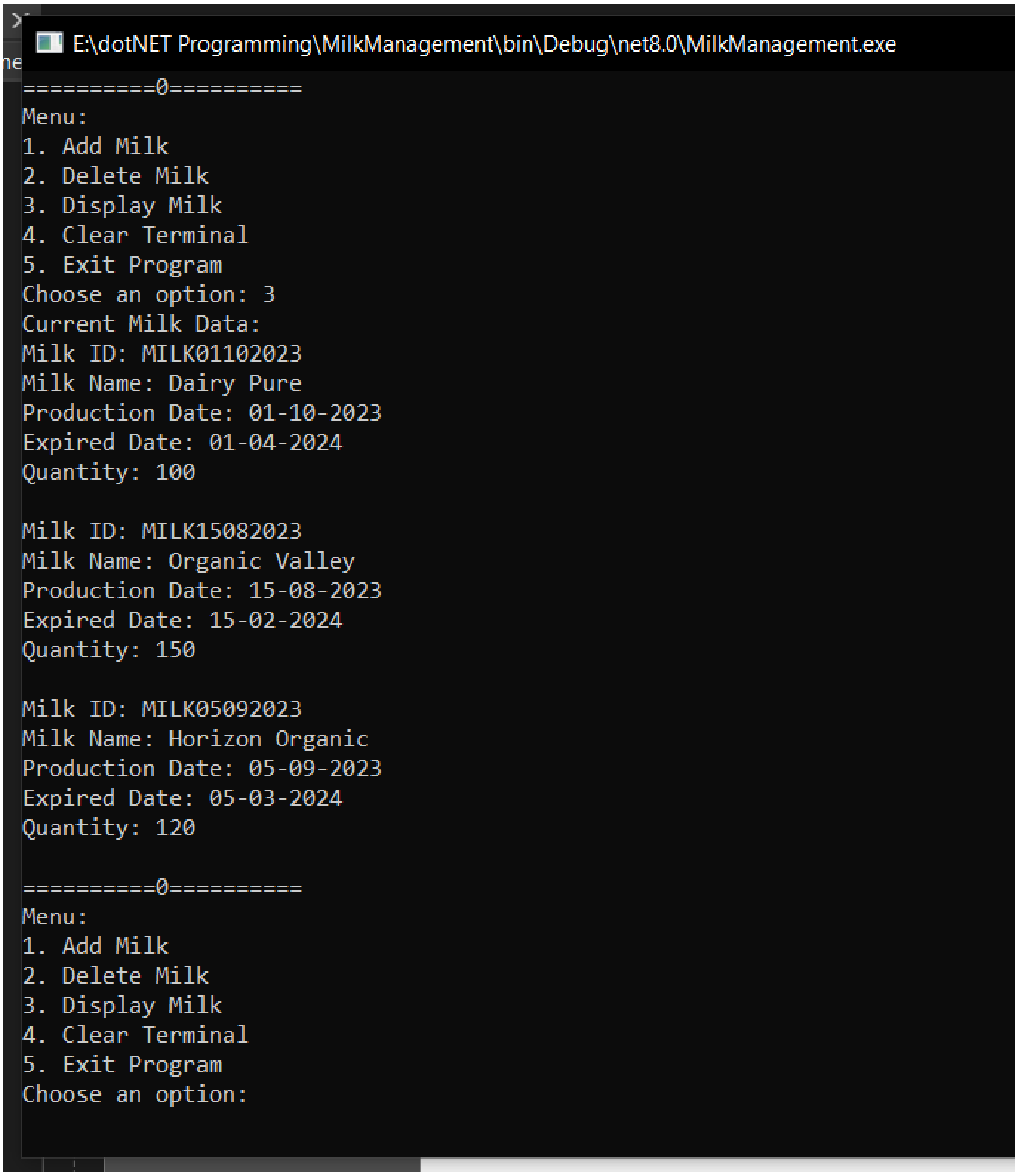
Màn hình menu:



E:\dotNET Programming\MilkManagement\bin\Debug\net8.0\MilkManagement.exe

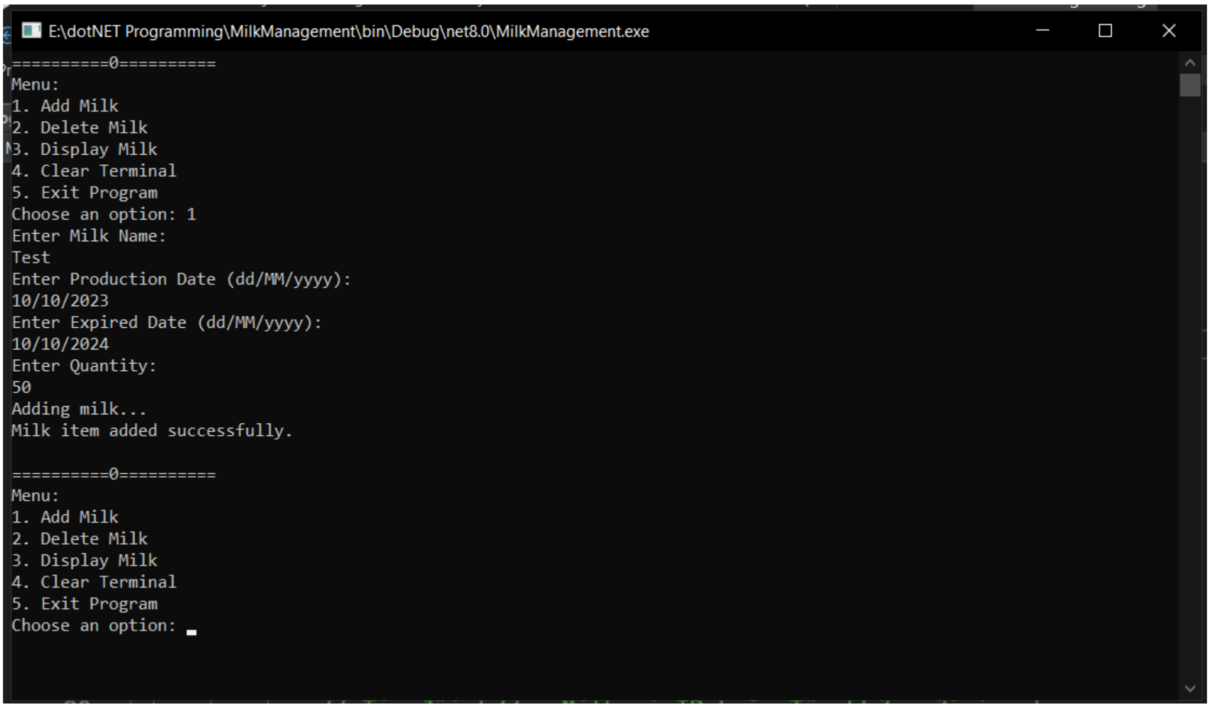
```
==========0==========
Menu:
1. Add Milk
2. Delete Milk
3. Display Milk
4. Clear Terminal
5. Exit Program
Choose an option:
```

Chức năng các option:

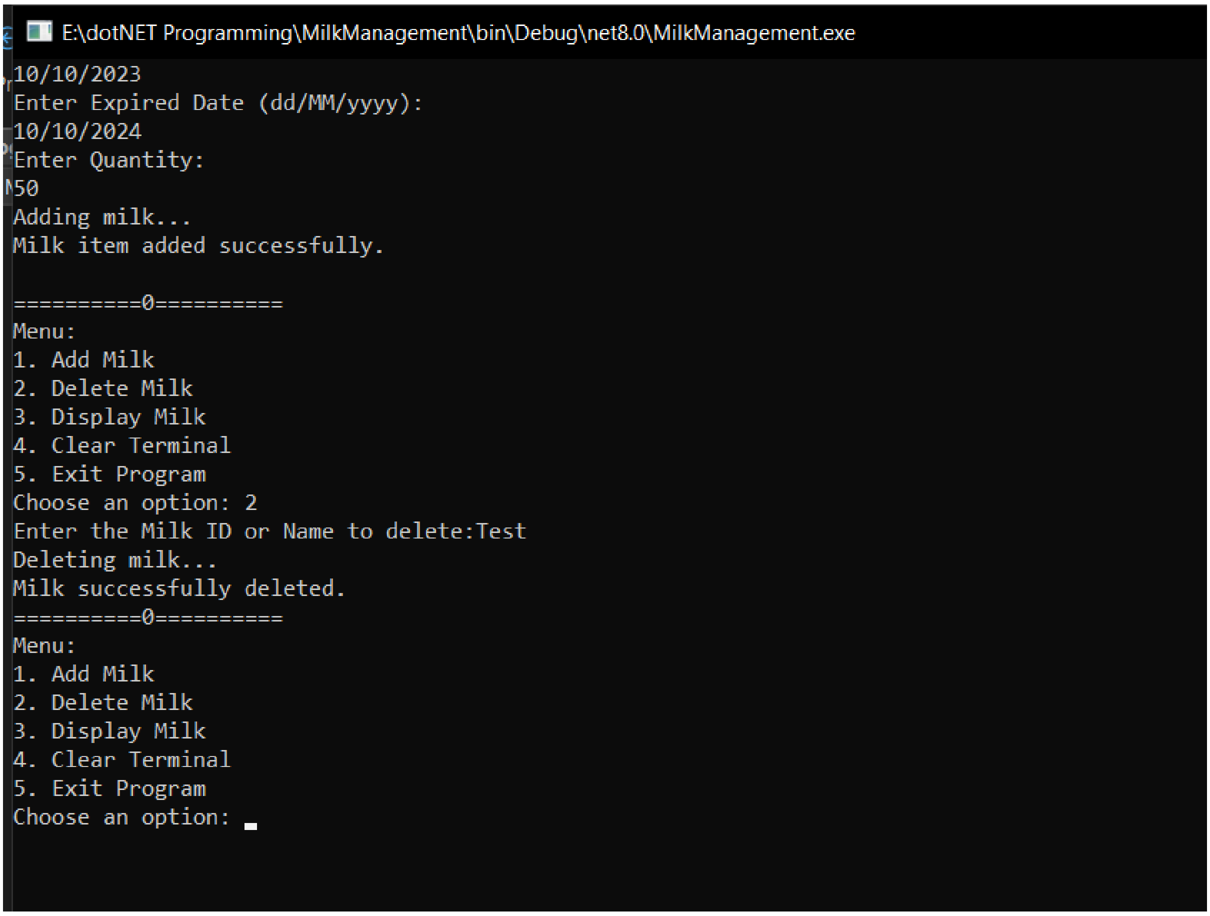


E:\dotNET Programming\MilkManagement\bin\Debug\net8.0\MilkManagement.exe

```
==========0==========
Menu:
1. Add Milk
2. Delete Milk
3. Display Milk
4. Clear Terminal
5. Exit Program
Choose an option: 3
Current Milk Data:
Milk ID: MILK01102023
Milk Name: Dairy Pure
Production Date: 01-10-2023
Expired Date: 01-04-2024
Quantity: 100

Milk ID: MILK15082023
Milk Name: Organic Valley
Production Date: 15-08-2023
Expired Date: 15-02-2024
Quantity: 150

Milk ID: MILK05092023
Milk Name: Horizon Organic
Production Date: 05-09-2023
Expired Date: 05-03-2024
Quantity: 120

==========0==========
Menu:
1. Add Milk
2. Delete Milk
3. Display Milk
4. Clear Terminal
5. Exit Program
Choose an option:
```



```
E:\dotNET Programming\MilkManagement\bin\Debug\net8.0\MilkManagement.exe
==========0==========
Menu:
1. Add Milk
2. Delete Milk
3. Display Milk
4. Clear Terminal
5. Exit Program
Choose an option: 1
Enter Milk Name:
Test
Enter Production Date (dd/MM/yyyy):
10/10/2023
Enter Expired Date (dd/MM/yyyy):
10/10/2024
Enter Quantity:
50
Adding milk...
Milk item added successfully.

==========0==========
Menu:
1. Add Milk
2. Delete Milk
3. Display Milk
4. Clear Terminal
5. Exit Program
Choose an option:
```



```
E:\dotNET Programming\MilkManagement\bin\Debug\net8.0\MilkManagement.exe
10/10/2023
Enter Expired Date (dd/MM/yyyy):
10/10/2024
Enter Quantity:
50
Adding milk...
Milk item added successfully.

==========0==========
Menu:
1. Add Milk
2. Delete Milk
3. Display Milk
4. Clear Terminal
5. Exit Program
Choose an option: 2
Enter the Milk ID or Name to delete:Test
Deleting milk...
Milk successfully deleted.
==========0==========
Menu:
1. Add Milk
2. Delete Milk
3. Display Milk
4. Clear Terminal
5. Exit Program
Choose an option:
```

Source Code:

```
using System;

using System.Globalization;

using System.Collections.Generic;
using AttributeData;
using System.Runtime.InteropServices;
using System.Threading;

delegate void MilkActionDelegate();

namespace MilkManagement
{
    using MainData;

    class Program
    {
        [DllImport("User32.dll", CharSet = CharSet.Auto)]
        public static extern int MessageBox(int hWnd, string text, string caption, int options);

        static List<Milk> milkList = new List<Milk>
        {
            new Milk("Dairy Pure", "01/10/2023", "01/04/2024", 100),
            new Milk("Organic Valley", "15/08/2023", "15/02/2024", 150),
            new Milk("Horizon Organic", "05/09/2023", "05/03/2024", 120)
        };

        static void Main(string[] args)
        {
            bool isRunning = true;

            while (isRunning)
            {
                // Menu options
                Console.WriteLine("==========0==========");
                Console.WriteLine("Menu:");
                Console.WriteLine("1. Add Milk");
                Console.WriteLine("2. Delete Milk");
                Console.WriteLine("3. Display Milk");
                Console.WriteLine("4. Clear Terminal");
                Console.WriteLine("5. Exit Program");
                Console.Write("Choose an option: ");

                string choice = Console.ReadLine();

                switch (choice)
                {
                    case "1":
                        AddMilk();
                        break;
                    case "2":
                        DeleteMilk();
                        break;
                    case "3":
                        // Display current Milk objects
                        Console.WriteLine("Current Milk Data:");
                        foreach (var milk in milkList)
                        {
                            milk.MilkInfoOutput();
                        }
                        break;
                    case "4":
                        ClearTerminal();
                        break;
                    case "5":
                        // Exit the program
                        isRunning = false;
                        break;
                    default:
```

```
                        Console.WriteLine("Invalid option. Please try again.");
                        isRunning = false;
                        break;
                }
            }
        }

        public static void AddMilk()
        {
            var newMilk = new Milk();
            newMilk.MilkInfoInput();
            milkList.Add(newMilk);
            Console.WriteLine("Adding milk...");
            Thread.Sleep(1);
            Console.WriteLine("Milk item added successfully.\n");
        }

        public static void DeleteMilk()
        {
            Console.Write("Enter the Milk ID or Name to delete:");
            string input = Console.ReadLine();

            // Tìm đối tượng Milk có ID hoặc Tên khớp với input
            Milk milkToDelete = milkList.Find(m => m.ValMilkID.Equals(input,
StringComparison.OrdinalIgnoreCase) ||
                                                   m.ValMilkName.Equals(input,
StringComparison.OrdinalIgnoreCase));

            if (milkToDelete != null)
            {
                milkList.Remove(milkToDelete);
                Console.WriteLine("Deleting milk...");
                Thread.Sleep(1);
                Console.WriteLine("Milk successfully deleted.");
            }
            else
            {
                Console.WriteLine("Milk not found.");
            }
        }

        public static void ClearTerminal()
        {
            Console.Clear();
        }
    }
}

namespace MainData
{
    //public delegate void MilkActionDelegate();

    interface IMilkAction
    {
        void MilkInfoInput();
        void MilkInfoOutput();
    }

    public class Milk : IMilkAction
    {
        private string MilkName;
        private string MilkID;
        private DateTime ProductionDate;
        private DateTime ExpiredDate;
        private int Quantity;
        //public MilkActionDelegate InputDelegate;
        //public MilkActionDelegate OutputDelegate;

        public Milk(string milkName = "N/A", string productionDate = "01/01/1010", string expiredDate = "01/01/1010", int quantity = 0)
        {
            this.MilkName = milkName;
            this.ProductionDate = DateTime.ParseExact(productionDate, "dd/MM/yyyy", CultureInfo.InvariantCulture);
            this.ExpiredDate = DateTime.ParseExact(expiredDate, "dd/MM/yyyy", CultureInfo.InvariantCulture);
            this.MilkID = String.Format("MILK{0}", this.ProductionDate.ToString("ddMMyyyy"));
            this.Quantity = quantity;

            MilkActionDelegate InputDelegate = new MilkActionDelegate(MilkInfoInput);
            MilkActionDelegate OutputDelegate = new MilkActionDelegate(MilkInfoOutput);

            //InputDelegate = MilkInfoInput;
            //OutputDelegate = MilkInfoOutput;
        }

        public void MilkInfoInput()
        {
            Console.WriteLine("Enter Milk Name: ");
            ValMilkName = Console.ReadLine();

            Console.WriteLine("Enter Production Date (dd/MM/yyyy): ");
            ValProductionDate = Console.ReadLine();

            Console.WriteLine("Enter Expired Date (dd/MM/yyyy): ");
            ValExpiredDate = Console.ReadLine();
```

```
    Console.WriteLine("Enter Quantity: ");
    ValQuantity = int.Parse(Console.ReadLine());
}

public void MilkInfoOutput()
{
    string output = $"Milk ID: {ValMilkID}\n" +
        $"Milk Name: {ValMilkName}\n" +
        $"Production Date: {ValProductionDate}\n" +
        $"Expired Date: {ValExpiredDate}\n" +
        $"Quantity: {ValQuantity}\n";
    Console.WriteLine(output);
}

public string ValMilkID => MilkID; // this method get only

public string ValMilkName
{
    get { return MilkName; }
    set { MilkName = value; }
}

public string ValProductionDate
{
    get { return ProductionDate.ToString("dd/MM/yyyy"); }
    set
    {
        ProductionDate = ParseDate(value);
        MilkID = String.Format("MILK{0}", ProductionDate.ToString("ddMMyyyy"));
    }
}
```

```
        public string ValExpiredDate
        {
            get { return ExpiredDate.ToString("dd/MM/yyyy"); }
            set { ExpiredDate = ParseDate(value); }
        }

        public int ValQuantity
        {
            get { return Quantity; }
            set { Quantity = value; }
        }

        private DateTime ParseDate(string dateStr)
        {
            DateTime result;
            string[] formats = { "dd/MM/yyyy" };
            if (DateTime.TryParseExact(dateStr, formats, CultureInfo.InvariantCulture,
DateTimeStyles.None, out result))
            {
                return result;
            }
            else
            {
                throw new FormatException($"'{dateStr}' is invalid.");
            }
        }
    }
}

namespace AttributeData
{
    [AttributeUsage(AttributeTargets.All, AllowMultiple = true)]
    public class MilkMoreInfo : System.Attribute
    {
        public string Manufacturer { get; set; }
        public string CompanyName { get; set; }

        public MilkMoreInfo(string manuFacturer = "", string companyName = "")
        {
            this.Manufacturer = manuFacturer;
            this.CompanyName = companyName;
        }
    }
}
```