

Day22 Assignment

By

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Project:

Create a Employee Management Application:

With three Layers

- a. Data Access Layer
- b. Business Logic Layer
- c. Business Management client app
 1. Employee name
 2. Employee age
 3. Employee salary
 4. Employee ID

Code: Data Access Layer

```
using System;
using System.Collections.Generic;
using System.IO;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace DataAccessLayer
{
    //Data Access Layer for data storing
    public class EmployeeDAL
    {
        public static string filepath = "C:\\\\NBHtraining\\\\Day22
Assignment\\\\Employee.txt";

        /// <summary>
        /// This method is used for adding employee data
        /// </summary>
        /// <param name="Id"></param>
        /// <param name="Name"></param>
        /// <param name="Salary"></param>
        /// <param name="Age"></param>
        /// <returns></returns>
        public static bool AddEmployee(int Id, string Name, int Salary, int Age)
        {
            try
            {
                string textcontent = string.Concat(Id, ",", Name, ",", Salary,
",", Age);
                File.AppendAllText(filepath, textcontent + Environment.NewLine);
                return true;
            }
            catch (Exception ex)
            {
                return false;
            }
        }
        /// <summary>
        /// This method is used for searching employee data by ID
```

```

    /// </summary>
    /// <param name="ID"></param>
    /// <returns></returns>
    public static List<string> GetEmployeeById(int ID)
    {
        var allEmployees = File.ReadAllLines(filepath);
        bool isFound = false;

        List<string> employeeFound = new List<string>();
        foreach (string employee in allEmployees)
        {
            var empDetails = employee.Split(',');
            if (Convert.ToInt32(empDetails[0]) == ID)
            {
                isFound = true;
                employeeFound.Add(employee);
                break;
            }
        }
        return employeeFound;
    }
    /// <summary>
    /// This method is used for Search employee data by name
    /// </summary>
    /// <param name="Name"></param>
    /// <returns></returns>
    public static List<string> GetEmployeeByName(string Name)
    {
        var allEmployees = File.ReadAllLines(filepath);

        List<string> employeeFound = new List<string>();
        foreach (string employee in allEmployees)
        {
            var empDetails = employee.Split(',');
            if (empDetails[1].Contains(Name))
            {
                employeeFound.Add(employee);
            }
        }
        return employeeFound;
    }
    /// <summary>
    /// This method is used for displaying all employee data
    /// </summary>
    /// <returns></returns>
    public static string[] GetAllEmployees()
    {
        var allEmployees=File.ReadAllLines(filepath);
        return allEmployees;
    }
}

```

Code for Business Logic Layer:

```
using DataAccessLayer;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace BusinessLogicLayer
{
    //Business Logic Layer
    public static class EmployeeBLL
    {
        /// <summary>
        /// This method is for adding employee data
        /// </summary>
        /// <param name="ID"></param>
        /// <param name="Name"></param>
        /// <param name="Salary"></param>
        /// <param name="Age"></param>
        /// <returns></returns>
        public static bool AddEmployee(int ID, string Name, int Salary, int Age)
        {
            //to do Validations
            var result = EmployeeDAL.AddEmployee(ID, Name, Salary, Age);
            return result;
        }

        /// <summary>
        /// This method is used for getting employee data by entering ID
        /// </summary>
        /// <param name="ID"></param>
        /// <returns></returns>
        public static List<string> GetEmployeeByID(int ID)
        {
            var result = EmployeeDAL.GetEmployeeById(ID);
            return result;
        }

        /// <summary>
        /// This method is used for searching employee data by entering name
        /// </summary>
        /// <param name="Name"></param>
        /// <returns></returns>
        public static List<string> GetEmployeeByName(string Name)
        {
            var result = EmployeeDAL.GetEmployeeByName(Name);
            return result;
        }

        /// <summary>
        /// This method is used displaying all employees data
        /// </summary>
        /// <returns></returns>
        public static string[] GetAllEmployees()
        {
            var result = EmployeeDAL.GetAllEmployees();
            return result;
        }
    }
}
```

Code for Client app:

```
using BusinessLogicLayer;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace EmployeeManagementApplication
{
    public class Program
    { //Author:Narala Praveen
      //Purpose:Client app for Business Management
      static void Main(string[] args)
      { int p;
        string choice;
        do
        {
            Console.WriteLine("::::::::::::::::::::::::::::::::::::");
            Console.WriteLine("Employee Management Application");
            Console.WriteLine("::::::::::::::::::::::::::::::::::::");
            Console.WriteLine("1. Add Employee:");
            Console.WriteLine("2. Search Employee by ID:");
            Console.WriteLine("3. Search Employee by Name:");
            Console.WriteLine("4. Display All Employees:");
            Console.WriteLine("Enter Your Choice:");
            p =Convert.ToInt32(Console.ReadLine());

            switch(p)
            {
                case 1:
                    AddEmployee();
                    break;

                case 2:
                    SearchEmployee();
                    break ;

                case 3:
                    SearchEmployeeByName();
                    break ;

                case 4:
                    DisplayAllEmployee();
                    break;

                default:
                    Console.WriteLine("Invalid Option");
                    break;
            }
            Console.WriteLine("Do you Wish to continue(y/n)");
            choice = Console.ReadLine();
        } while (choice.Equals("y"));
      }
```

```

}
/// <summary>
/// This method is for add employee data
/// </summary>
public static void AddEmployee()
{
    int ID, Salary, Age;
    string Name;
    Console.WriteLine("Enter ID:");
    ID = Convert.ToInt32(Console.ReadLine());
    Console.WriteLine("Enter Salary:");
    Salary = Convert.ToInt32(Console.ReadLine());
    Console.WriteLine("Enter Age:");
    Age = Convert.ToInt32(Console.ReadLine());
    Console.WriteLine("Enter Name:");
    Name = Console.ReadLine();

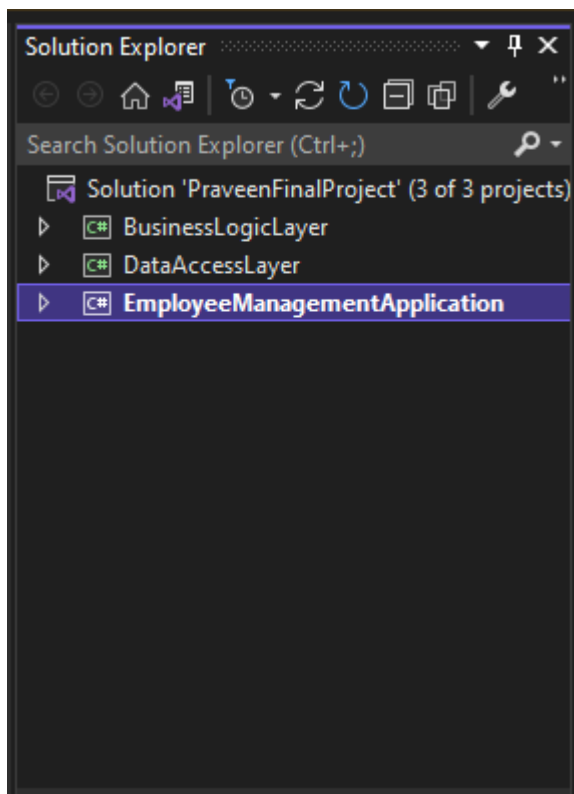
    //Call BLL method
    var result=EmployeeBLL.AddEmployee(ID,Name,Salary,Age);

    if(result)
        Console.WriteLine("Employee Details Saved Successfully");
    else
        Console.WriteLine("Some Error Occured");
}
/// <summary>
/// This method is used for Search employee data by ID
/// </summary>
public static void SearchEmployee()
{
    int ID;
    Console.WriteLine("Enter ID:");
    ID=Convert.ToInt32(Console.ReadLine());
    var result = EmployeeBLL.GetEmployeeByID(ID);
    if(result.Count==0)
        Console.WriteLine("No Records Exists with these ID");
    else
    {
        result.ForEach(e => Console.WriteLine(e));
    }
}
/// <summary>
/// This method is used for Serach employee data by name
/// </summary>
public static void SearchEmployeeByName()
{
    string Name;
    Name= Console.ReadLine();
    Console.WriteLine("Enter Name:");
    var result = EmployeeBLL.GetEmployeeByName(Name);
    if (result.Count==0)
    {
        result.ForEach(e => Console.WriteLine(e));
    }
    else
    {
        Console.WriteLine("No Records found on these Name");
    }
}
/// <summary>

```

```
/// This method is used displaying all employees data
/// </summary>
public static void DisplayAllEmployee()
{
    var result = EmployeeBLL.GetAllEmployees();
    result.ToList().ForEach(k => Console.WriteLine(k));
}
}
```

Screenshot for solution explorer:



Output:

```
C:\NBHtraining\Day21 Assignment\PraveenFinalProject\EmployeeManagementApplication\bin\Debug\EmployeeManagementApplication.exe
Employee Management Application
1. Add Employee:
2. Search Employee by ID:
3. Search Employee by Name:
4. Display All Employees:
Enter Your Choice:
1
Enter ID:
107
Enter Salary:
39000
Enter Age:
32
Enter Name:
Prasad
Employee Details Saved Successfully
Do you Wish to continue(y/n)
y
Employee Management Application
1. Add Employee:
2. Search Employee by ID:
3. Search Employee by Name:
4. Display All Employees:
Enter Your Choice:
2
Enter ID:
106
106,Ramraj,28000,28
Do you Wish to continue(y/n)
y
Employee Management Application
1. Add Employee:
2. Search Employee by ID:
3. Search Employee by Name:
4. Display All Employees:
Enter Your Choice:
4
101,Narala Praveen,25000,25
```

```
C:\NBHtraining\Day21 Assignment\PraveenFinalProject\EmployeeManagementApplication\bin\Debug\EmployeeManagementApplication.exe
2. Search Employee by ID:
3. Search Employee by Name:
4. Display All Employees:
Enter Your Choice:
4
101,Narala Praveen,25000,25
102,Ande Manohar,35000,35
103,Ram Charan,45000,45
104,Vinay,55000,55
105,Sai ram,58000,58
106,Ramraj,28000,28
107,Prasad,39000,32
Do you Wish to continue(y/n)
y
Employee Management Application
1. Add Employee:
2. Search Employee by ID:
3. Search Employee by Name:
4. Display All Employees:
Enter Your Choice:
3
Prasad
Enter Name:
107,Prasad,39000,32
107,Prasad,39000,32
Do you Wish to continue(y/n)
```


C:\NBHtraining\Day21 Assignment\PraveenFinalProject\EmployeeManagement/

```
Employee Management Application
1. Add Employee:
2. Search Employee by ID:
3. Search Employee by Name:
4. Display All Employees:
Enter Your Choice:
3
Sai
Enter Name:
105,Sai ram,58000,58
108,Sai prasad,36000,28
Do you Wish to continue(y/n)
y
Employee Management Application
1. Add Employee:
2. Search Employee by ID:
3. Search Employee by Name:
4. Display All Employees:
Enter Your Choice:
3
Raj
Enter Name:
No Records found on these Name
Do you Wish to continue(y/n)
```