Project: Storing and retrieving and updating the teachers data in text file

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

namespace StoringTeacherData
{
    class Teacher
    {
        public int ID { get; set; }
        public string Name { get; set; }
        public string ClassSection { get; set; }
    }

    class Program
    {
        private const string FilePath =
"C:\\Mphasis\\StoreTeacherPrjct\\Teacher.txt";

        static void Main()
        {
            List<Teacher> teachers = LoadData();

            while (true)
            {
                Console.WriteLine("1. View Teacher Data");
                Console.WriteLine("2. Add New Teacher");
                Console.WriteLine("3. Update Teacher Data");
                Console.WriteLine("4. Retrieve Teachers Data by ID");
                Console.WriteLine("5. Exit");

                Console.Write("Enter your choice: ");
                int choice = int.Parse(Console.ReadLine());

                switch (choice)
                {
                    case 1:
                        ViewTeacherData(teachers);
                        break;
                    case 2:
                        AddNewTeacher(teachers);
                        break;
                    case 3:
                        UpdateTeacherData(teachers);
                        break;
                    case 4:
                        RetrieveTeachersById(teachers);
                        break;
                    case 5:
                        SaveData(teachers);
                        Environment.Exit(0);
                        break;
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                    default:
                        Console.WriteLine("Invalid choice. Please try again.");
                        break;
                }
            }
        }

         static void RetrieveTeachersById(List<Teacher> teachers)
        {
            Console.Write("Enter Teacher Id to retrieve:");
            int IdToRetrieve =int.Parse(Console.ReadLine());
            Teacher teacher=teachers.Find(t=>t.ID == IdToRetrieve);
            if(teacher!=null)
            {
                Console.WriteLine($"\nteacher Data for
ID{teacher.ID}:\nID:{teacher.ID},Name:{teacher.Name},class and
section:{teacher.ClassSection}\n");


            }
            else
            {
                Console.WriteLine("teacher not found.\n");
            }
        }

        static List<Teacher> LoadData()
        {
            List<Teacher> teachers = new List<Teacher>();

            if (File.Exists(FilePath))
            {
                string[] lines = File.ReadAllLines(FilePath);

                foreach (string line in lines)
                {
                    string[] fields = line.Split(',');
                    Teacher teacher = new Teacher
                    {
                        ID = int.Parse(fields[0]),
                        Name = fields[1],
                        ClassSection = fields[2]
                    };
                    teachers.Add(teacher);
                }
            }

            return teachers;
        }

        static void ViewTeacherData(List<Teacher> teachers)
        {
            Console.WriteLine("\nTeacher Data:");

            foreach (Teacher teacher in teachers)
            {
                Console.WriteLine($"ID: {teacher.ID}, Name: {teacher.Name}, Class
and Section: {teacher.ClassSection}");
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            }
            Console.WriteLine();
        }

        static void AddNewTeacher(List<Teacher> teachers)
        {
            Console.Write("Enter Teacher ID: ");
            int id = int.Parse(Console.ReadLine());

            Console.Write("Enter Teacher Name: ");
            string name = Console.ReadLine();

            Console.Write("Enter Class and Section: ");
            string classSection = Console.ReadLine();

            Teacher newTeacher = new Teacher { ID = id, Name = name, ClassSection =
classSection };
            teachers.Add(newTeacher);

            Console.WriteLine("Teacher added successfully.\n");
        }

        static void UpdateTeacherData(List<Teacher> teachers)
        {
            Console.Write("Enter Teacher ID to update: ");
            int idToUpdate = int.Parse(Console.ReadLine());

            Teacher teacherToUpdate = teachers.Find(t => t.ID == idToUpdate);

            if (teacherToUpdate != null)
            {
                Console.Write("Enter new Name: ");
                teacherToUpdate.Name = Console.ReadLine();

                Console.Write("Enter new Class and Section: ");
                teacherToUpdate.ClassSection = Console.ReadLine();

                Console.WriteLine("Teacher data updated successfully.\n");
            }
            else
            {
                Console.WriteLine("Teacher not found.\n");
            }
        }

        static void SaveData(List<Teacher> teachers)
        {
            List<string> lines = new List<string>();

            foreach (Teacher teacher in teachers)
            {
                string line = $"{teacher.ID},{teacher.Name},{teacher.ClassSection}";
                lines.Add(line);
            }

            File.WriteAllLines(FilePath, lines);
        }
    }
```

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}
```