

## Source Code for Phase 1 Project:

```
using System;
using System.Collections.Generic;
using System.Text;
using System.IO;

namespace Phase1_Project
{
    class project
    {
        class Teacher
        {
            public int id { get; set; }           //class elements: Teacher's Id
            public string name { get; set; }       // Teacher's Name
            public int std { get; set; }          // Teacher's
Standard      public char sec { get; set; }      // Teacher's
Section
        }
        class TeacherData
        {
            // Method for Adding Teachers details
            static public void GetData(Teacher t, List<Teacher> teacher_list)
            {
                Console.WriteLine("\nEnter number of Teacher's Data to be added\n");
                int n = int.Parse(Console.ReadLine());

                for (int i = 0; i < n; i++)
                {
                    Console.WriteLine("\nEnter Teacher's Id :\n");
                    int ID = int.Parse(Console.ReadLine());

                    Console.WriteLine("\nEnter Teacher's Name :\n");
                    string NAME = Console.ReadLine();

                    Console.WriteLine("\nEnter Standard :\n");
                    int STD = int.Parse(Console.ReadLine());

                    Console.WriteLine("\nEnter Section :\n");
                    char SEC = char.Parse(Console.ReadLine());
                    // Object (t) for class (Teacher) and list of object (teacher_list)
to store teachers details
                    t = new Teacher();
                    t.id = ID;
                    t.name = NAME;
                    t.std = STD;
                    t.sec = SEC;
                    teacher_list.Add(t);
                }
            }
        }
    }
}
```

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// Method for Updating the existing teacher's details
static public void UpdateData(List<Teacher> teacher_list)
{
    Console.WriteLine("\nEnter Teacher's Id for updation :\n");
    int u = int.Parse(Console.ReadLine());
    // To FIND Id
    int i = teacher_list.FindIndex(x => x.id == u);
    // If Id NOT FOUND!!
    if (i < 0)
    {
        Console.WriteLine("\nInvalid Id!!\n");
    }
    // If Id FOUND!!
    else
    {
        Console.WriteLine("\nEnter Name:\n");
        string a = Console.ReadLine();
        teacher_list[i].name = a;
        Console.WriteLine("\nEnter Standard:\n");
        int b = int.Parse(Console.ReadLine());
        teacher_list[i].std = b;
        Console.WriteLine("\nEnter Section:\n");
        char c = Console.ReadLine()[0];
        teacher_list[i].sec = c;
    }
}

// Method to Delete Teacher's Details
static public void RemoveData(List<Teacher> teacher_list)
{
    Console.WriteLine("\nEnter Id of Teacher whose Data to be deleted\n");
    int d = int.Parse(Console.ReadLine());
    // Search of Id
    int i = teacher_list.FindIndex(x => x.id == d);
    // If Id NOT FOUND!!
    if (i < 0)
    {
        Console.WriteLine("\nInvalid Id!!\n");
    }
    // If Id FOUND!!
    else
    {
        Console.WriteLine("\nTeacher's Name : " + teacher_list[i].name +
            "\n\nStandard : " + teacher_list[i].std + "\n\nSection : " + teacher_list[i].sec + "\n");
        Console.WriteLine("\nDATA DELETED!!");
        teacher_list.RemoveAt(i);
    }
}

// Method to Display Teacher's Details
static public void DisplayData(Teacher t, List<Teacher> teacher_list)
{
    for (int i = 0; i < teacher_list.Count; i++)
    {
        Console.WriteLine("\nTeacher's ID = " + teacher_list[i].id +
            "\n\nTeacher's Name = " + teacher_list[i].name + "\n\nStandard = " + teacher_list[i].std
            + "\n\nSection = " + teacher_list[i].sec + "\n");
    }
    // If the list is EMPTY!!
    if (teacher_list.Count == 0)

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        Console.WriteLine("\nEmpty List\n");
    }
    // Method to Store Teacher's Details in Text File
    static public void StoreData(List<Teacher> teacher_list)
    {
        string p = @"E:\VS_C#_Programs\Teacher_Data.txt";
        string q = "";
        // To Store list into Text File
        for (int i = 0; i < teacher_list.Count; i++)
        {
            q+= teacher_list[i].id + " " + teacher_list[i].name + " " +
teacher_list[i].std + " " + teacher_list[i].sec + "\n";
        }

        File.WriteAllText(p, q);
        Console.WriteLine("\nTeachers Details STORED in Text File!\n");
    }
    static void Main(string[] args)
    {
        // Creating list (teacher_list) for class Teacher
        List<Teacher> teacher_list = new List<Teacher>();
        Teacher t = null;
        int e = 1;
        do
        {
            Console.WriteLine("\n=====Teacher's
Data=====\\n");
            Console.WriteLine("\nEnter the Operation to be performed:-\\n\\n1. ADD
Teacher's Data\\n\\n2. UPDATE Teacher's Data\\n\\n3. DELETE Teacher's Data\\n\\n4. DISPLAY
Teacher's Data\\n\\n5. STORE Teacher's Data\\n\\n6. EXIT\\n");

            int x = int.Parse(Console.ReadLine());

            switch (x)
            {
                case 1: // To ADD teachers Details
                    GetData(t, teacher_list);

                    Console.WriteLine("\n=====*****=====\\n");
                    break;

                case 2: // To UPDATE teachers Details
                    UpdateData(teacher_list);

                    Console.WriteLine("\n=====*****=====\\n");
                    break;

                case 3: // To DELETE teacher's Details
                    RemoveData(teacher_list);

                    Console.WriteLine("\n=====*****=====\\n");
                    break;

                case 4: // To DISPLAY teacher's Details
                    DisplayData(t, teacher_list);

                    Console.WriteLine("\n=====*****=====\\n");
                    break;
            }
        }
    }
}

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        case 5: // To STORE teacher's Details in Text File
            StoreData(teacher_list);

Console.WriteLine("\n=====*****=====\n");
            break;

        case 6: // To EXIT from loop
            e = 0;
            break;

        default: // For INVALID choice
            Console.WriteLine("\nInvalid Operation...\n");
            break;
    }
} while (e != 0);
}
}
```