Assignment 1 – Source Code

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

namespace Simplilearn_Assignement1_WCP
{
    class aboutTeacher
    {
        public int ID { get; set; }
        public string Name { get; set; }
        public int classNum { get; set; }
        public char section { get; set; }
    }

    class teacher_opearations
    {
        static public void addTeacherRecord(List<aboutTeacher> teacherRecordList, aboutTeacher newTeacherRecord)
        {
            Console.WriteLine("How many teacher record you want to add?");
            int number = int.Parse(Console.ReadLine());
            Console.WriteLine("\n");

            for(int i=0; i<number; i++)
            {
                newTeacherRecord = new aboutTeacher();

                Console.WriteLine("Enter teacher's ID number : ");
                int id = int.Parse(Console.ReadLine());
        Console.WriteLine("Enter teacher's Name : ");
        string name = Console.ReadLine();

        Console.WriteLine("Enter teacher's Class they handle : ");
        int clas = int.Parse(Console.ReadLine());

        Console.WriteLine("Enter teacher's section they assigned to : ");
        char secn = Console.ReadLine()[0];

        Console.WriteLine();

        newTeacherRecord.ID = id;
        newTeacherRecord.Name = name;
        newTeacherRecord.classNum = clas;
        newTeacherRecord.section = secn;
        teacherRecordList.Add(newTeacherRecord);
    }

    Console.WriteLine("All datas are added successfully.");
    Console.WriteLine("\n");

    saveFiles(teacherRecordList);
}

static public void deleteTeacherRecord(List<aboutTeacher> teacherRecordList)
{
    Console.WriteLine("How many teacher record you want to delete?");
    int number = int.Parse(Console.ReadLine());
    Console.WriteLine();

    if(teacherRecordList.Count>=number)
```

```
            {
                for(int i=0; i<number; i++)
                {
                    Console.WriteLine("Enter teacher's ID to delete the record in the file: ");
                    int deleteID = int.Parse(Console.ReadLine());
                    int index = teacherRecordList.FindIndex(x => x.ID == deleteID);

                    if(index >= 0)
                    {
                        Console.WriteLine("The data that will be deleted is: ");
                        Console.WriteLine(teacherRecordList[index].ID + " " + teacherRecordList[index].Name + " " + teacherRecordList[index].classNum + " " + teacherRecordList[index].section);
                        teacherRecordList.RemoveAt(index);
                    }
                    else
                    {
                        Console.WriteLine("The entered ID cannot be found to delete the record.");
                    }

                    Console.WriteLine("\n");

                }

                Console.WriteLine("Datas are successfully deleted from files.");
                Console.WriteLine("\n");

                saveFiles(teacherRecordList);
            }
            else
            {
                Console.WriteLine("File does not consists of " + number + " records.");
                Console.WriteLine("\n");
            }
```

```
        }

        static public void updateTeacherRecord(List<aboutTeacher> teacherRecordList)
        {
            Console.WriteLine("How many teacher records you want to update? ");
            int number = int.Parse(Console.ReadLine());
            Console.WriteLine("\n");

            if (teacherRecordList.Count >= number)
            {
                for (int i = 0; i < number; i++)
                {

                    {
                        Console.WriteLine("Enter teacher's ID to update Record : ");
                        int updateID = int.Parse(Console.ReadLine());

                        int index = teacherRecordList.FindIndex(x => x.ID == updateID);

                        if (index >= 0)
                        {
                            Console.WriteLine("The data that will be modified is as below:");
                            Console.WriteLine(teacherRecordList[index].ID + " " + teacherRecordList[index].Name + " " +
teacherRecordList[index].classNum + " " + teacherRecordList[index].section);
                            Console.WriteLine("What data you need to update? ");
                            Console.WriteLine("1. ID   2. Name   3. Class   4. Section");

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

                            switch (ch)
                            {
                                case 1:
```

```
        Console.WriteLine("Enter new \"ID\" which you want to replace: ");
        int newID = int.Parse(Console.ReadLine());
        teacherRecordList[index].ID = newID;
        break;

    case 2:
        Console.WriteLine("Enter new \"Name\" which you want to replace: ");
        string newName = Console.ReadLine();
        teacherRecordList[index].Name = newName;
        break;

    case 3:
        Console.WriteLine("Enter new \"Class\" which you want to replace: ");
        int newClass = int.Parse(Console.ReadLine());
        teacherRecordList[index].classNum = newClass;
        break;

    case 4:
        Console.WriteLine("Enter new \"Section\" which you want to replace: ");
        char newSection = Console.ReadLine()[0];
        teacherRecordList[index].section = newSection;
        break;

    default:
        Console.WriteLine("Enter the correct choice.");
        break;
}

Console.WriteLine("Datas are updated successfully");
Console.WriteLine("\n");

saveFiles(teacherRecordList);
```

```
                }
                else
                {
                    Console.WriteLine("The entered ID is not found to update record.");
                    Console.WriteLine("\n");
                }
            }
        }
    }
    else
    {
        Console.WriteLine("Teacher record is not consisting " + number + " records.");
        Console.WriteLine("\n");
    }
}

static public void displayTeacherRecord()
{
    Console.WriteLine("=============================================");
    Console.WriteLine("ID  Name   Class Section");
    Console.WriteLine("=============================================");

    string filePath = @"C:\Training\Phase1-Agile,git,basics_of_C#\Final_Project\teacherRecordTextFile.txt";

    var fileRead = File.ReadAllLines(filePath);
    var lines = new List<string>(fileRead);

    foreach(string eachLine in lines)
    {
        Console.WriteLine(eachLine);
    }
```

```
            Console.WriteLine("========================================");
            Console.WriteLine("\n");
        }


        static public void getTeacherByID(List<aboutTeacher> teacherRecordList, aboutTeacher
newTeacherRecord)
        {
            Console.WriteLine("Enter the ID to display teacher record : ");


            int displayID = int.Parse(Console.ReadLine());
            int index = teacherRecordList.FindIndex(x => x.ID == displayID);


            if (index >= 0)
            {
                Console.WriteLine("=================================");
                Console.WriteLine("ID  Name   Class Section");
                Console.WriteLine("=================================");
                Console.WriteLine(teacherRecordList[index].ID + " " + teacherRecordList[index].Name + " " +
teacherRecordList[index].classNum + " " + teacherRecordList[index].section);
                Console.WriteLine("=================================");
                Console.WriteLine("\n");
            }
            else
            {
                Console.WriteLine("ID was not found in the record. ");
                Console.WriteLine("\n");
            }
        }


        static public void saveFiles(List<aboutTeacher> teacherRecordList)
        {
            string filePath = @"C:\Training\Phase1-Agile,git,basics_of_C#\Final_Project\teacherRecordTextFile.txt";
            string saveFile = "";
            for (int i = 0; i < teacherRecordList.Count; i++)
            {
                saveFile += teacherRecordList[i].ID + " " + teacherRecordList[i].Name + " " + teacherRecordList[i].classNum + " " + teacherRecordList[i].section + "\n";
            }

            File.WriteAllText(filePath, saveFile);
        }

        static void Main(string[] args)
        {
            List<aboutTeacher> teacherRecordList = new List<aboutTeacher>();
            aboutTeacher newTeacherRecord = null;

            string filePath = @"C:\Training\Phase1-Agile,git,basics_of_C#\Final_Project\teacherRecordTextFile.txt";
            string[] lines = File.ReadAllLines(filePath);
            string[] filesData;

            for (int i = 0; i < lines.Length; i++)
            {
                newTeacherRecord = new aboutTeacher();
                filesData = lines[i].Split(' ');

                newTeacherRecord.ID = int.Parse(filesData[0]);
                newTeacherRecord.Name = filesData[1];
                newTeacherRecord.classNum = int.Parse(filesData[2]);
                newTeacherRecord.section = filesData[3][0];
                teacherRecordList.Add(newTeacherRecord);
            }

            bool value = true;
            while (value)
```

```
{
    Console.WriteLine("Please enter your choice for the operations: ");
    Console.WriteLine("1. To add teacher record. \n2. Delete teacher record.");
    Console.WriteLine("3. Update teacher record. \n4. Display teacher record.");
    Console.WriteLine("5. Get teacher by ID. \n6. Exit from the operations.");
    Console.WriteLine("\n");

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

    switch (ch)
    {
        case 1:
            addTeacherRecord(teacherRecordList, newTeacherRecord);
            break;

        case 2:
            deleteTeacherRecord(teacherRecordList);
            break;

        case 3:
            updateTeacherRecord(teacherRecordList);
            break;

        case 4:
            displayTeacherRecord();
            break;

        case 5:
            getTeacherByID(teacherRecordList, newTeacherRecord);
            break;

        case 6:
```

```
                        value = false;
                        break;

                    default:
                        Console.WriteLine("Enter the correct choice. Thank you");
                        break;

                }
            }
        }
    }
}
```