Create a Text-file Based System For Storing and Updating Teacher Records

1. Introduction

In this project, we developed a program that facilitates the storage and updating of teacher records using a text file. The program was built in C# within a Visual Studio Project and leverages text files to store teacher information. Additionally, we implemented features for adding, updating, and displaying teacher data. The source code for this project was hosted on GitHub to enable version control and collaboration.

2. Project Setup

We initiated a new Visual Studio project named "ConAppStoreUpdateInTextFile" with a console application template in C#. This project serves as the foundation for our teacher data storage and update program.

3. Data Format

Teacher data is stored in a text file named "TeacherRecord.txt" using a structured format. Each line in the file represents a teacher's information, including their ID, Name, and ClassSection. The data format adheres to the following structure:

ID, Name, ClassSection

4. Coding the Program

We defined a Teacher class to encapsulate teacher information, including their ID, Name, and ClassSection. The TeacherManager class handles operations related to teacher data, such as adding, updating, and displaying records. The program utilizes StreamReader and StreamWriter to interact with the text file.

5. Teacher Data Management

Adding Teacher: The AddTeacher method appends teacher data to the text file by utilizing StreamWriter. It takes inputs for ID, Name, and ClassSection, creating a new teacher record.

Updating Teacher: The UpdateTeacher method searches for a teacher record by ID and updates the corresponding information using StreamWriter. This enables teachers' details to be modified and saved back to the text file.

Displaying Teachers: The DisplayTeachers method reads the text file using StreamReader and displays all teacher records to the console.

6. Testing the Program

To test the program, we built and executed it within Visual Studio. The "TeacherRecord.txt" file was placed in the project directory, ensuring that the path was correctly specified in the code. The program successfully allowed interaction with teacher data.

7. GitHub Repository

Create a new GitHub repository branch named "TeacherDataManagement"

Initialize a Git repository in the local project folder:

git init

git add .

git commit -m "Teacher Data Management Project"

git branch -M master

git remote add origin https://github.com/PrashastVats1/PlayerTeamManagementProject

git push -u origin master

GitHub Repository Link: https://github.com/PrashastVats1/PlayerTeamManagementProject/tree/TeacherDataManagement

8. Conclusion

In this project, we designed a program to store, update, and display teacher records using a text file. The program's source code was managed via a GitHub repository, ensuring version control and collaboration. By adhering to this approach, we provide Rainbow Schools with an efficient way to manage and manipulate teacher data.