

ASSIGNMENT: MODULE – 01

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TOPIC: Text-file Based System for Storing and Updating Teacher Records

1. Abstract:

The proposed system is a console-based application which can be used to manage teacher's data in a school / college. The user can use command line interface to interact with the application's backend. Whole project is written with C# programming language. The backend uses text file-based approach to store, update and retrieve teacher's data.

2. Software Requirements:

- Visual Studio
- Net Framework
- Windows OS

3. Features Provided:

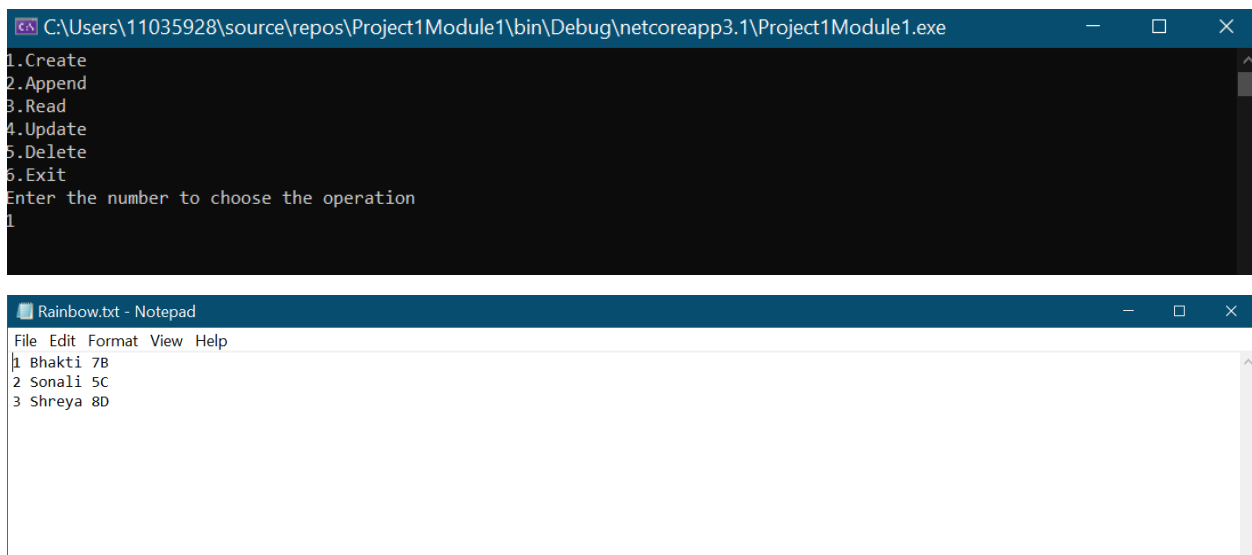
1. Create a text file and write to into it
2. Append a record
3. Read and display a record
4. Update a record
5. Delete a record
6. Exit the program

4. Implementation details:

Once the program is executed a list of options are provided to the user, where the user can make a choice by entering the desired number. Once the operation is completed, the user can go ahead and choose a different operation or exit the program. This continues until the user desires to do so.

4.1 Create a text file and write records to it

This operation enables the user to create a text file and write records to it. Each record contains the teacher's ID, name, class and section. Through this operation we can write multiple records into the text file.



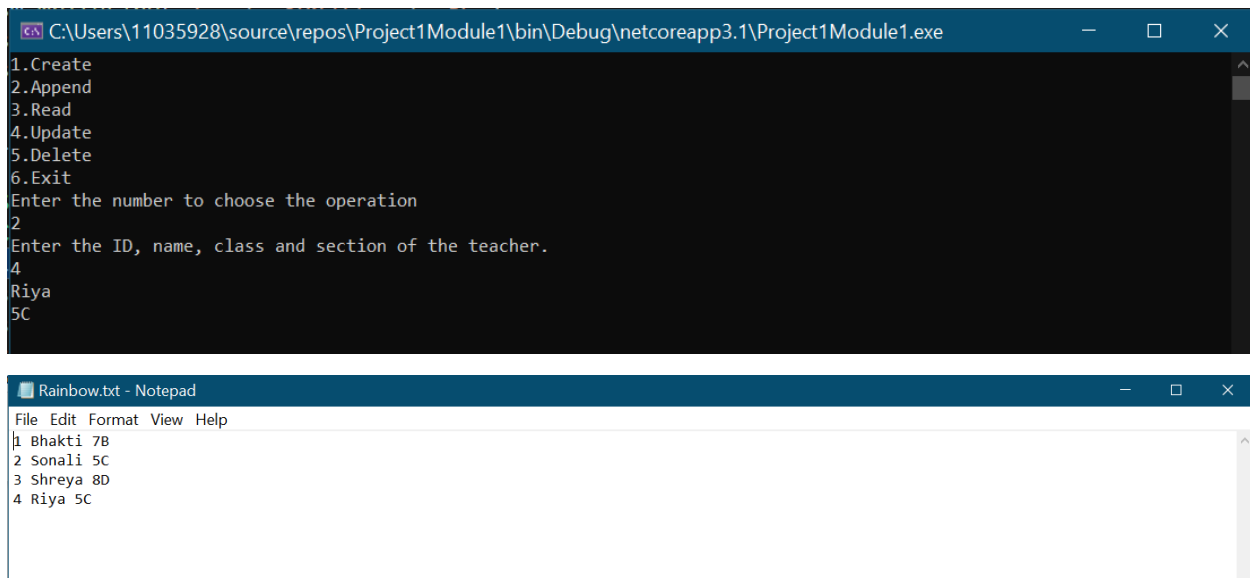
The screenshot displays two windows. The top window, titled 'C:\Users\11035928\source\repos\Project1Module1\bin\Debug\netcoreapp3.1\Project1Module1.exe', shows a command-line interface with a menu of options: 1.Create, 2.Append, 3.Read, 4.Update, 5.Delete, and 6.Exit. It prompts the user to 'Enter the number to choose the operation' and shows the number '1' entered. The bottom window, titled 'Rainbow.txt - Notepad', shows the contents of the created text file, which are three records: '1 Bhakti 7B', '2 Sonali 5C', and '3 Shreya 8D'.

```
C:\Users\11035928\source\repos\Project1Module1\bin\Debug\netcoreapp3.1\Project1Module1.exe
1.Create
2.Append
3.Read
4.Update
5.Delete
6.Exit
Enter the number to choose the operation
1
```

```
File Edit Format View Help
1 Bhakti 7B
2 Sonali 5C
3 Shreya 8D
```

4.2 Append a record

This operation allows the user to append/add a record into the same text file. So the user has to enter the record that he wants to add, and the same record will reflect in the text file. The user can continue adding records by choosing this operation multiple times.



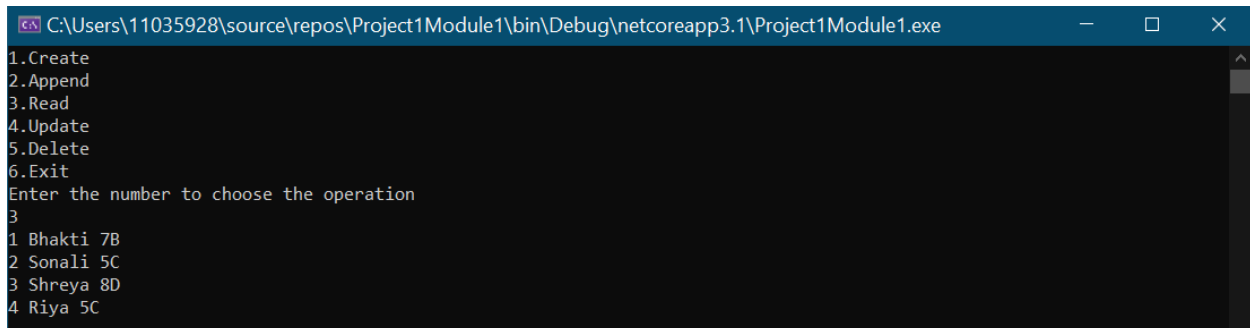
The image shows two windows. The top window is a console application titled 'C:\Users\11035928\source\repos\Project1Module1\bin\Debug\netcoreapp3.1\Project1Module1.exe'. It displays a menu with options 1 through 6, followed by a prompt to enter a number. The user has entered '2'. Then, it prompts for 'ID, name, class and section of the teacher.' and the user has entered '4', 'Riya', and '5C'. The bottom window is a Notepad file named 'Rainbow.txt'. It contains a list of four records: '1 Bhakti 7B', '2 Sonali 5C', '3 Shreya 8D', and '4 Riya 5C'.

```
C:\Users\11035928\source\repos\Project1Module1\bin\Debug\netcoreapp3.1\Project1Module1.exe
1.Create
2.Append
3.Read
4.Update
5.Delete
6.Exit
Enter the number to choose the operation
2
Enter the ID, name, class and section of the teacher.
4
Riya
5C

Rainbow.txt - Notepad
File Edit Format View Help
1 Bhakti 7B
2 Sonali 5C
3 Shreya 8D
4 Riya 5C
```

4.3 Read and display a record

This operation reads all the contents in the text file and then display them to the user. After appending or updating this method will enable the user to see the necessary changes.

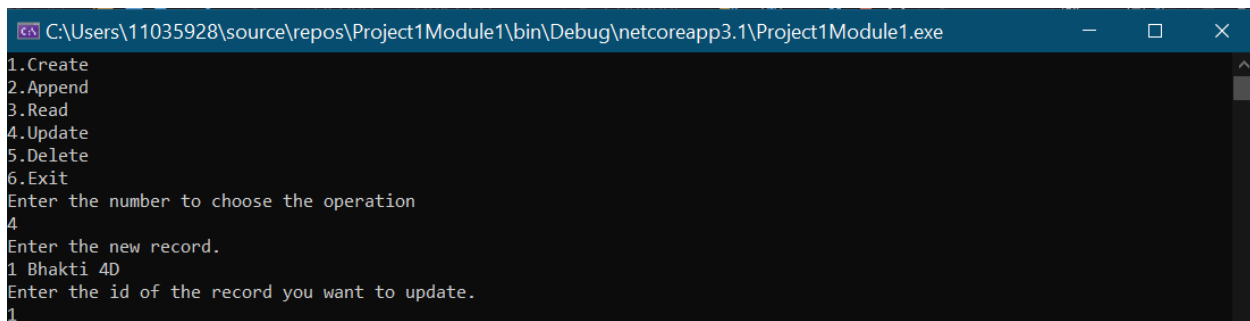


The image shows the console application window. The user has selected option '3' (Read). The application then displays the contents of the text file: '1 Bhakti 7B', '2 Sonali 5C', '3 Shreya 8D', and '4 Riya 5C'.

```
C:\Users\11035928\source\repos\Project1Module1\bin\Debug\netcoreapp3.1\Project1Module1.exe
1.Create
2.Append
3.Read
4.Update
5.Delete
6.Exit
Enter the number to choose the operation
3
1 Bhakti 7B
2 Sonali 5C
3 Shreya 8D
4 Riya 5C
```

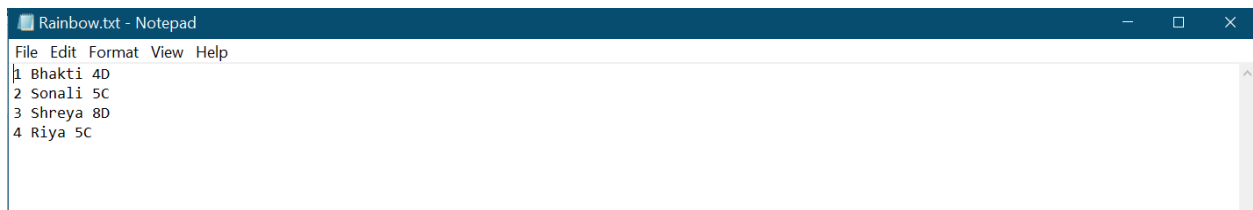
4.4 Update a record

This operation enables the user to make changes in the existing records. In case the class and section of the teacher changes, the user can easily update the record through this operation as many times as he/she desires.



The image shows the console application window. The user has selected option '4' (Update). The application prompts for 'Enter the new record.' and the user has entered '1 Bhakti 4D'. Then, it prompts for 'Enter the id of the record you want to update.' and the user has entered '1'.

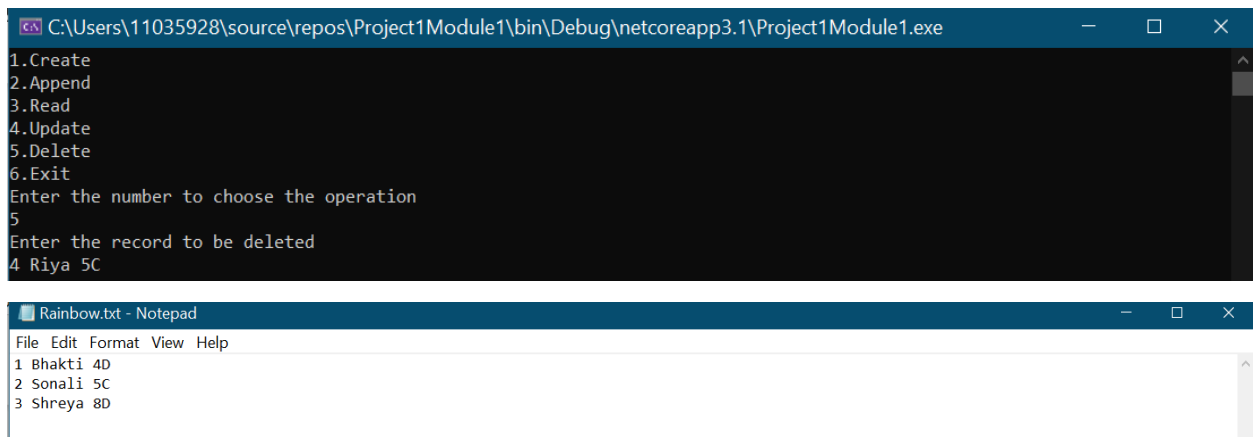
```
C:\Users\11035928\source\repos\Project1Module1\bin\Debug\netcoreapp3.1\Project1Module1.exe
1.Create
2.Append
3.Read
4.Update
5.Delete
6.Exit
Enter the number to choose the operation
4
Enter the new record.
1 Bhakti 4D
Enter the id of the record you want to update.
1
```



```
File Edit Format View Help
1 Bhakti 4D
2 Sonali 5C
3 Shreya 8D
4 Riya 5C
```

4.5 Delete a record

This operation is used to delete a record from the text file. The user can delete as many records as he/she desires. In case a teacher leaves the school, this method will be extremely helpful. This will be reflected in the text file.



```
C:\Users\11035928\source\repos\Project1Module1\bin\Debug\netcoreapp3.1\Project1Module1.exe
1.Create
2.Append
3.Read
4.Update
5.Delete
6.Exit
Enter the number to choose the operation
5
Enter the record to be deleted
4 Riya 5C

File Edit Format View Help
1 Bhakti 4D
2 Sonali 5C
3 Shreya 8D
```

4.6 Exit the program

This option enables the user to exit from the program.

5. Conclusion:

Through this project I have learnt how to use and understand CRUD operations in C# on the Visual Studio platform. I have gained a better understanding of data management and categorization.