

A Windows Application to Compute Peer Ratings

As an introduction to Windows Applications in C#.NET you are to write a Windows Forms application to function as follows:

- The program must have a Windows Forms graphical user interface.
- The program must make use of two files. One file will store user names and team assignments. This file may be read by the program, but must not be modified. This file is a file produced in Excel and saved in .csv format as Projec2Teams.csv. It appears when read in Notepad as follows:

```
Brunemann,Kelly,KB129,X  
Campbell,Christopher,CC105,X  
Hendrix,Matthew,MH156,Y  
Houngninou,David,DH99,Y  
Okeze,Eloho,EO11,Z  
Patel,Anantkumar,AP103,Y  
Randall,Mark,MR63,Z  
Sherpa,Pemba,PS47,Z  
Stocker,Teresa,TS69,X
```

Each line represents one row of the Excel worksheet. Your program must read this file for use in this project, but the program itself must allow the user to select the file to be read (in future projects), making use of the OpenFileDialog described in Chapter 18.

- The second file will store the data entered and final results in the form of a report. Its format may be of your choosing, although it should be readable by any text editor and should present the Peer Rating calculations for the project in an easy-to-read format.
- Your program must display the status of data entry, indicating whether a final report can be printed. When all data is available, the user may produce the output file by clicking on a button that will open a SaveFileDialog to allow the user to enter the name of the output file and select the folder where it is to be saved.
- Ratings must be entered by means of radio buttons using the ratings on the “Peer Rating Form” as follows:

```
Excellent  
Very Good  
Ordinary  
Marginal  
Deficient  
Unsatisfactory  
Superficial  
No Show
```

- When all team members’ ratings have been entered, each member’s weighting factor should be computed using the numerical values given on the form, i.e., Excellent = 100, etc., as $\text{Weighting Factor} = \text{individual average} / \text{team average}$.
- Information displayed on the form should include the project number, the semester, the team names and the names of the team members, and the radio buttons used to enter the

ratings. (For teams with three members, each member will have three ratings.) There should also be a place for the user to enter the grade assigned to each team for the project.

- Each team member's score for the project should be computed as team project grade times individual weighting factor and displayed when all the data has been entered.
- You should add any features you feel will add to the utility of the program.
- While the program is running, in-memory storage of data can use a structure of your choosing. Arrays might be one possibility.
- A button may be used to "submit" the final ratings.