Percent of Grades

I want to know the percentage of students who earned various grades in CPT 234. I am interested in:

- The percentage of 'A' students (out of the number of students who were still on the roll at the end of the semester)
- The percentage of 'A and 'B' students (out of the total number of students who registered for the class)
- The percentage of students who may have to repeat the course (who earned a 'D', 'F', 'W', or 'FA') (out of the total number of students who registered for the class, except for the students who were dropped)
- The percentage of students who failed the class (both 'F' and 'FA' students) (out of the number of students who were still on the roll at the end of the semester)
- The percentage of students who were dropped from the class (out of the total number of students who registered for the class)

The program needs to ask how many students earned the following grades:

- 'A', 'B', 'C', 'D', 'F', 'W', 'FA', and how many were dropped from the class

Then the program needs to calculate the various amounts that will be used in the calculations and displayed on screen. Create a constant to hold the value of 100 – it will be used to display the percentages as percentages (and not as a decimal)

Finally, the program needs to display the output. The output should show the percentages of each of the above bullet points, formatted to 1 decimal place. I also need to see the total number of students who registered for the class, and the total number of students who were still on the roll at the end of the semester (the 'A', 'B', 'C', 'D' and 'F' students).

FYI: If you register for a class but never attend, you get dropped and the class doesn't appear on your transcript (and you get a 100% refund of your tuition). If you withdraw from a course, a grade of 'W' shows on your transcript, but it is not used in GPA calculations. If you are removed from the roll after the last day to withdraw, you get a grade of 'FA' (Failure due to Absences), which converts to an 'F' at the end of the semester

Hints:

- Follow the 3 steps of the Information Processing Cycle – Input, Processing, and Output
- Have a blank line between the inputs and the output, another blank line before the percentages, and another blank line at the end (before the "Press any key…")
- Use "%%" to display the percent sign

And remember:

- All variable names must be at least 2 words and in lower camelCase
- Constant names are written in ALL_CAPS
- Format all percentages to 1 decimal place, and don't forget the percent signs
- Separate your program output from the "Press any key…" with a blank line

Example Run:
(**bold** type is what is entered by the user)

```
Enter the number of students who earned a grade of 'A': 8
Enter the number of students who earned a grade of 'B': 12
Enter the number of students who earned a grade of 'C': 18
Enter the number of students who earned a grade of 'D': 5
Enter the number of students who earned a grade of 'F': 12
Enter the number of students who were withdrawn: 14
Enter the number of students who failed due to excessive absences: 1
Enter the number of students who were dropped: 4

The total number of students who registered was: xx
The total number of students on the roll at the end was: xx

The percentage of students who registered and were dropped was x.x%
The percentage of students who earned an 'A' was: xx.x%
The percentage of students who did not earn at least a 'C' was xx.x%
The percentage of students who earned an 'F' or 'FA' was: xx.x%
The percentage of students who earned at least a 'B' was: xx.x%
```

The example run shows **EXACTLY** how your program input and output will look.

Submission:
Name BOTH the project and the source code "Percent of Grades". Check your program using the supplied rubric to insure that you have completed everything correctly.

When you are finished with your assignment, take all the files and folders that make-up your project and compress them (ZIP it – do not use any other file compression utility) so that ALL of the files and folders necessary to open and run the program are contained in 1 folder. Then, open the corresponding assignment page in Blackboard. In Section 2 ASSIGNMENT SUBMISSION, click the "Browse My Computer" button to locate the compressed file (*.zip) you created, and attach the file to the assignment. Optionally, add any comments to the assignment. Finally, click the "Submit" button to submit the assignment.