

4Write a complete Java program to do the following:

The main program reads in a series of three bowling scores: **score1**, **score2**, and **score3** from a file ("**scores.txt**"), then calls a series of methods to process and print these scores:

The method **validGroup()** determines if this set of three values forms a valid group. The method receives four parameters (the 3 scores and the **PrintWriter** object). **For the group to be valid, each number must range from 0 to 300 (the possible scores in a bowling game)**. If the group is valid, the method prints a message saying so. If one or more of the numbers is negative or greater than 300, the method prints an overall message that the group is invalid. In addition, for each invalid value, the method prints the score and a message about why the score is invalid. The method returns a boolean value (true or false) as a signal indicating the validity of the group. (Hint: use six "if" statements.)

**If the group is not valid, the main program skips processing and simply goes on to the next group of three scores.**

**If the group is valid**, the main program calls a method **oneGameScore()**, sending it **two parameters, the value score1, and the PrintWriter object**. This score is an integer from 0 to 300 (how can we be sure of this?). The method converts the score into a rating, using the following system:

- **250 to 300 is a professional game**
- **200 to 249 is an excellent game**
- **140 to 199 is a very good game**
- **100 to 139 is a good game**
- **50 to 99 is a poor game**
- **below 50 is a horrible game**

The method **prints a message with the original score and the bowler's rating**.

Then the main program repeats this process for **score2** and **score3**.

Next, the main program calls a method **avg3Scores()**, sending it **three parameters: the three scores**. The method **avg3Scores()** **finds the average (as an integer) of the three scores and sends it back**.

**The main program prints the average.**

Finally, **the main program calls oneGameScore() again, sending it the resulting average from the method avg3Scores()**.

The main program then prints three blank lines.

Then the main program goes on to the next group of three values.

When the main program runs out of groups, it prints the final values of three counters it has been keeping track of:

- **the total number of groups processed**
- **the number of valid groups**
- **the number of invalid groups**