Lab 16

Instructions: Complete the steps below. Be sure to show your code to one of the lab TAs before you leave, so that you can receive credit for this lab. You must also upload a copy of all your source code (.java) files to the link on Blackboard by **11:59 PM on Wednesday October 28, 2020 for L01, L02, L03, L05 and by 11:59 PM on Tuesday October 27, 2020 for L06, L07, L08 and L09**.

1. Write a program that reads student scores, gets the best score, and then assigns grade based on the following scheme:
   Grade is A if score is >= best -10;
   Grade is B if score is >= best -20;
   Grade is C if score is >= best -30;
   Grade is D if score is >= best -40;
   Grade is F otherwise.
   The program prompts the user to enter the total number of students, then prompts the user to enter all the scores, and concludes by displaying the grades. Here is a sample run:
   Enter the number of students: ***4***
   Enter 4 scores: ***40 55 70 58***
   Student 0 score is 40 and grade is ***C***
   Student 1 score is 55 and grade is ***B***
   Student 2 score is 70 and grade is ***A***
   Student 3 score is 58 and grade is ***B***

2. Write a program that reads the integers between 1 and 100 and counts the occurrences of each. Assume the input ends with 0. Here is a sample run of the program:
   Enter the integers between 1 and 100: **2 5 6 5 4 3 23 43 2 0**
   2 occurs 2 times
   3 occurs 1 time
   4 occurs 1 time
   5 occurs 2 times
   6 occurs 1 time
   23 occurs 1 time
   43 occurs 1 time

Grading Guidelines: This lab is graded on a scale of 0-6 points, assigned as follows:

- **0 points:** Student is absent or does not appear to have completed any work for the lab
- **2 point (2*1):** Student has written the program, but it has errors.
- **4 points (2*2):** Student has written the program it compiles without error, but it does not produce the correct output.
- **6 points (2*3):** Student has written the program and it compiles and runs correctly, without any errors.