

Practice Quiz #2 Programming Fundamentals in Java

Write a JAVA static method called, **averageGrade** which matches the Sample Session(s) shown in Figure 2.

The main program which is shown in Figure 1. is correct and does NOT need you to make any modifications. You are required only to write the static method, **public static double averageGrade (int[] grades, int number)**

which accepts an array of integer grades and an integer variable called, **number** which is the number of student grades contained in the array **grades**. Note: the maximum number of grades allowed in the array is 6. The **averageGrade** method returns a double which is the average grade contained in the array of grades.

```
import java.util.Scanner;

/**
 * This main program reads in at most 6 student grades
 * and then returns the average grade.
 *
 * @author YOUR NAME
 * @version 1.00
 */
public class q2
{
    public static void main(String[] args)
    { //main
        int maxScores = 6;
        int[] grades = new int[maxScores];
        int mark;
        int i=0;
        int numScores=0;
        Scanner keyb = new Scanner(System.in);
        String tempMark = "";
        int numMarks = 0;

        i=0;
        while (true)
        { //w
            System.out.print("Enter a mark (e.g 50 or Q to quit) > ");
            tempMark = keyb.nextLine();
            if (tempMark.length() > 0 && tempMark.toUpperCase().substring(0,1).equals("Q")) break;

            try {
                mark = Integer.parseInt(tempMark);
            } catch (Exception e) {
                System.out.println("Error with input: please re-enter");
                continue;
            }

            if (mark < 0 || mark > 100) {
                System.out.println("Error out-of-range: please re-enter");
                continue;
            }
        }
    }
}
```

```

    grades[i] = mark;
    numScores = numScores + 1;
    i = i + 1;

    if (numScores >= maxScores) break;
} //w

System.out.println(numScores + " student test scores have been read in.");
System.out.println("The averages grade was " + averageGrade(grades, numScores));

} //main

public static double averageGrade(int[] grades, int number)
{

    return 0.0;
}

}

```

Figure 1. The Main Program (you are not required to modify this main program)

Rubric

Practice Quiz #2

QUIZ 2		RUBRIC	DESCRIPTION
	/	3	The static method averageGrade has JAVADOC (including two @param, @return and a one line sentence describing what the method does.
	/	2	The static method averageGrade correctly computes the sum of the grades within the grades array.using a loop
	/	1	The loop iterates the correct <i>number</i> of times.
	/	2	A guard exists checking for possible division by zero. The return value should be 0.0 if number has a value of zero
	/	2	The average is correctly computed and returned. Casting to double has been successfully completed.
0	/	10	Sub total

Sample Sessions

Enter a mark (e.g 50 or Q to quit) > 50
Enter a mark (e.g 50 or Q to quit) > 60
Enter a mark (e.g 50 or Q to quit) > 70
Enter a mark (e.g 50 or Q to quit) > 80
Enter a mark (e.g 50 or Q to quit) > q
4 student test scores have been read in.
The averages grade was 65.0

Figure 2a A Sample Session with Q used to stop entering marks.

Enter a mark (e.g 50 or Q to quit) > 40
Enter a mark (e.g 50 or Q to quit) > 50
Enter a mark (e.g 50 or Q to quit) > 60
Enter a mark (e.g 50 or Q to quit) > 70
Enter a mark (e.g 50 or Q to quit) > 80
Enter a mark (e.g 50 or Q to quit) > 90
6 student test scores have been read in.
The averages grade was 65.0

Figure 2b A Sample Session with the maximum of 6 grades entered.

Enter a mark (e.g 50 or Q to quit) > q
0 student test scores have been read in.
The averages grade was 0.0

Figure 2c A Sample Session with the maximum of 6 grades entered.