

COMP 1451 Lab 2-a

This lab is meant to be done with a partner.

Create a class called **StudentDatabase**. This class has one instance variable:

```
private HashMap<String, int[]> quizMarks;
```

The keys to the map will be student names, and the values will be an array of int containing that student's quiz marks. The names will be formatted with the first letter in upper case and the rest in lower. Initialize the instance variable in the constructor, as usual. You DO NOT need to create a Student class for this lab.

Use these constants:

```
public static final int NUM_QUIZZES = 10;  
public static final int MIN_GRADE = 0;  
public static final int MAX_GRADE = 100;
```

Provide the following methods:

```
/** @return the properly-formatted name. */  
private String formatName(String name)  
  
/** Add a student to the database and create a new array to hold that  
student's quiz marks ( NUM_QUIZZES quizzes). These marks will by default  
be set to MIN_GRADE. */  
public void addStudent(String studentName)  
  
/** @return the array of quiz marks for this student. */  
public int[] getQuizzes(String student)  
  
/** Change the mark for the specified student. This method ensures the  
student exists in the database. It also ensures the quiz to be changed  
is valid, and the mark is within the range MIN_GRADE to MAX_GRADE. If  
anything is not valid it displays an appropriate error message. */  
public void changeQuizMark(String studentName, int whichQuiz,  
int newMark)  
  
/** Display the quiz marks for all students in the database. */  
public void showQuizMarks()
```

Sample display:

```
Quiz marks for: Bullwinkle 10  
9 10 0 0 0 0 0 0 0
```

```
Quiz marks for: Rocky 9 10 10  
0 0 0 0 0 0 0
```

Create a Driver Class to run the program by testing the various methods above..