CISP 360: Programming Assignment #7

Write a program that demonstrates various gradebook utilities. The program should first create a two-dimensional array initialized with short values, where each value is a grade in the range 0 through 100. Each row in this array should be treated as all the grades for a particular student, and each column in this array should be treated as all the grades for a particular assignment. Then the program should demonstrate using that array with each of the following functions:

* **printGradeScores**: This function should accept a two-dimensional array as its argument and print the contents of the array to the screen as numeric grades in a report formatted like this:
  + Student #1: 74 59 91 11 94
  + Student #2: 48 67 4 68 92
  + Student #3: 92 71 83 80 100
* **printGradeLetters**: This function should accept a two-dimensional array as its argument and print the contents of the array to the screen as letter grades in a report formatted like this:
  + Student #1: C F A F A
  + Student #2: F D F D A
  + Student #3: A C B B A

where A=90-100, B=80-89, C=70-79, D=60-69, F=0-59

* **getStudentTotalScores**: This function should accept a two-dimensional array and a student number(valid values start at 1) as its arguments and return the sum of all this student's scores.
* **getStudentAverageScore**: This function should accept a two-dimensional array and a student number(valid values start at 1) as its arguments and return the average assignment score for this student.
* **getStudentAverageLetter**: This function should accept a two-dimensional array and a student number(valid values start at 1) as its arguments and return the average assignment letter grade for this student, using the letter grade scale above(see printGradeLetters).
* **getAssignmentTotalScores**: This function should accept a two-dimensional array and an assignment number(valid values start at 1) as its arguments and return the sum of all scores earned for the assignment.
* **getAssignmentAverageScore**: This function should accept a two-dimensional array and an assignment number(valid values start at 1) as its arguments and return the average of all scores earned for the assignment.
* **getAssignmentMaxScore**: This function should accept a two-dimensional array and an assignment number(valid values start at 1) as its arguments and return the maximum score earned for the assignment.
* **getAssignmentMinScore**: This function should accept a two-dimensional array and an assignment number(valid values start at 1) as its arguments and return the minimum score earned for the assignment.

**NOTE:** All these functions should validate the information provided to them, and either return -1 or print an error to the screen if it is invalid.

Save this program in a file named gradebook.cpp and submit it.