

## Challenge Question 2

Using the following variables (DO NOT CREATE ANY NEW ONES):

```
// Variables for Student data:
int studentID;
int birthYear;
int birthMonth;
float gradePercent;

// Variables for logic and data input
const int maxGrades = 3;
float gradeInput;
int studentCount = 0, moreStudents, gradeCount;
int i; // Note: 'i' is typically used in iterating (for loop counter)
int validGrade; // control variable for grade input validation routine
```

Create a program that will...

1. Process student data for an UNLIMITED # of student records
2. Will get user input for studentID, birthYear, birthMonth, gradePercent
  - gradePercent represents an average of entered grades (min:1, up to max:3)
3. birthMonth value must be validated to be within the range 1 to 12. Continue to prompt until a valid value is entered.
4. Number of grades entered must be at least 1 grade, but no more than 3 may be entered. If fewer than 3 grades is to be entered, the user can enter a negative value.
  - each time a grade is entered, you must validate it's between 0.0-100.0 (if valid, accumulate it)
  - AFTER all the grades are entered; calculate the average
5. Display the average grades
6. Display the equivalent grade letter
7. Prompt the user if another student record is to be entered
  - 1=YES, 0=NO
  - Validate so only a 1 or 0 value is entered, otherwise, prompt again
8. After all student records are entered, display the # of records entered during the execution session.

*(See next page for sample output)*

Here's a sample execution:

```
Student Information System
-----

Enter student-1's information...
Student ID           : 11111
Birth Year           : 2003
Birth Month (1-12)   : 0
Birth Month (1-12)   : 13
Birth Month (1-12)   : 10
-----

Enter grade(s) 0.0 to 100.0,
Minimum of 1 to a maximum of 3 grades,
Enter a negative # to stop!
-----

Enter grade-1        : -5
Enter grade-1        : 0.0
Enter grade-2        : 75.5
Enter grade-3        : 90.2
The average grade is  : 55.2
The equivalent grade letter is: D+

Enter data for another student (1=YES, 0=NO): 9
Enter data for another student (1=YES, 0=NO): -1
Enter data for another student (1=YES, 0=NO): 2
Enter data for another student (1=YES, 0=NO): 1

Enter student-2's information...
Student ID           : 22222
Birth Year           : 1997
Birth Month (1-12)   : 4
-----

Enter grade(s) 0.0 to 100.0,
Minimum of 1 to a maximum of 3 grades,
Enter a negative # to stop!
-----

Enter grade-1        : 72.8
Enter grade-2        : 84.7
Enter grade-3        : -1
The average grade is  : 78.8
The equivalent grade letter is: B+

Enter data for another student (1=YES, 0=NO): 0

Processed 2 student records!
```