

EECS 183 Winter 2017 Lab 2

Free Response Practice

1. At the University of Michigan, undergraduate students' class standing is determined by the number of credits they have completed as follows:

Credits	Class Standing
Between 0 and 24 inclusive	First Year
Between 25 and 54 inclusive	Sophomore
Between 55 and 84 inclusive	Junior
More than 84	Senior

For the following question, you will write a function that gets a student's name from the user. After that, you will fill in missing parts of a **main** function that determines the class standing of the student using the two functions provided on the next page. The function that you will write is described on the next page, along with the function you assume is written for you. Remember to carefully read and reference the function RMEs as you complete this question.

A. Write the **definition** of the `getStudentFullName` function in the box below.

```
/**
 * Note: You will write this function only.
 *
 * Requires: Nothing
 * Modifies: cin
 * Effects: Prompts the user to enter a name by printing the prompt:
 *           Enter student's name:
 *           Then the function returns all user input up to the next newline
 *           as a string.
 */
string getStudentFullName();
```

The following function will also be used to complete part B. You will not implement this function but can assume in Part B that it has been implemented correctly for you.

```
/**
 * Requires: numCredits >= 0
 * Modifies: Nothing.
 * Effects: Returns a string containing the student's class standing based
 *           off the value in numCredits, an integer variable representing
 *           the number of credits completed.
 *           For example, classStanding(0) would return "First Year".
 *           You do not need to worry about magic numbers.
 */
string classStanding(int numCredits);
```

B. Complete the following main function that determines the name and class standing of a student. You must use the `getStudentFullName()` and `classStanding()` functions whenever appropriate. You can assume they were implemented correctly according to their respective RMEs.

```
int main(void) {
    string student;

    // Get the name of the student and store in the student variable

    // Declare an integer variable named numCred and initialize to 0.

    cout << "Enter the number of credits for " << student << ": ";

    // Read in value for numCred1 from the user. There is
    // NO need to validate the input or handle cin failure.

    // Fill the empty spaces with the correct function calls to print out
    // the student's class standing:

    cout << student << " is a " << _____ << endl;

    return 0;
}
```