### Module 3 Milestone

I added color to certain keywords in this file (for, if, while, etc.) to help follow along with indentation.

### Function: validateFile

START function: void validateFile(string filePath)

CREATE file parser

FOR all rows, r, in file

GET row size

IF row size is less than 2

OUTPUT course name and “ missing course name.”

ELSE IF row size is greater than 2

FOR each prerequisite, p

SET c to first course in file

WHILE c is not null

IF p’s ID matches c’s ID

BREAK from while loop

ELSE

SET c to next course

END IF

ELSE

OUTPUT “Prerequisite, p, not found in course catalog”

END WHILE

END FOR

END IF

END FOR

END function

### Function createCourse

START function: vector createCourse(string filePath, vector courseVector)

CREATE file parser

FOR each row, r, in file

CREATE Course object, “course”

GET row size, s

SET course ID to r column 0

SET course name to r column 1

IF s > 1

FOR indices, i, from 2 through s

APPEND r column i value to course prerequisite vector

END FOR

END IF

PUSHBACK courseVector with course object

END FOR

RETURN courseVector

END function

### Function printCourseInformation

START function: void printCourse(vector<Course> courseVector, string, courseId)

CREATE Vector, sortedCourseVector

QUICKSORT courseVector, return to sortedCourseVector

SET variable, high, to sortedCourseVector size – 1

SET variable, low, to 0

WHILE high is greater than low

SET mid to the average of high and low

IF sortedCourseVector’s courseId at index mid is less than courseId

SET low to mid + 1

ELSE IF sortedCourseVector’s courseId at index mid is greater than courseId

SET high to mid – 1

ELSE

OUTPUT sortedCourseVector’s information and prerequisites at index mid

IF curNode’s course’s prerequisite list is not null

FOR each item in the prerequisite list

OUTPUT current prerquisite’s course’s course ID

END FOR

END IF

RETURN

END IF

END WHILE

OUTPUT “no course found with course ID, courseId”

END function