**Vector Pseudocode**

struct Course {

String courseNumber

String courseTitle

List<String> prerequisites

}

function loadDataFromFile(fileName):

open file fileName for reading

initialize an empty vector called courses

for each line in the file:

split the line by commas into tokens

if the length of tokens is less than 2:

print "Error: Line does not contain enough data"

continue

courseNumber = tokens[0]

courseTitle = tokens[1]

prerequisites = an empty list

if the length of tokens is greater than 2:

for each token in tokens[2:]:

prerequisites.append(token)

// Create Course object

course = new Course(courseNumber, courseTitle, prerequisites)

// Validate prerequisites

for each prerequisite in prerequisites:

if the prerequisite does not exist as a courseNumber in courses:

print "Error: Prerequisite " + prerequisite + " not found for course " + courseNumber

continue

// Add course object to courses vector

courses.append(course)

function searchCourse(Vector<Course> courses, String courseNumber):

for each course in courses:

if course.courseNumber == courseNumber:

// Print course information

print "Course Number: " + course.courseNumber

print "Course Title: " + course.courseTitle

// Print prerequisites if any

if prerequisites is not empty:

print "Prerequisites:"

for each prereq in course.prerequisites:

// Search for the prerequisite course and print information

print " - " + prereq + ": " + getCourseTitle(prereq, courses)

return

print "Error: Course not found"

function getCourseTitle(String courseNumber, Vector<Course> courses):

for each course in courses:

if course.courseNumber == courseNumber:

return course.courseTitle

return "Course Not Found"