BEGIN

DEFINE STRUCT Course

courseNumber : STRING

name : STRING

prerequisites : LIST OF STRING

INITIALIZE Vector<Course> courses

FUNCTION loadCourses(fileName)

OPEN file fileName

IF file cannot be opened

PRINT "Error opening file"

EXIT

FOR each line in file

SPLIT line by commas into tokens

IF tokens.size < 2

PRINT "Invalid line format"

CONTINUE

courseNumber = tokens[0]

name = tokens[1]

prerequisites = tokens[2...end]

CREATE new Course with these values

ADD course to courses

END FOR

CLOSE file

FOR each course in courses

FOR each prereq in course.prerequisites

IF prereq NOT FOUND in courses.courseNumber

PRINT "Error: prerequisite " + prereq + " not found"

END IF

END FOR

END FOR

END FUNCTION

FUNCTION printCourse(courseNumber)

FOR each course in courses

IF course.courseNumber == courseNumber

PRINT course.courseNumber + ": " + course.name

PRINT "Prerequisites: "

IF course.prerequisites is empty

PRINT "None"

ELSE

FOR each prereq in course.prerequisites

PRINT prereq

END FOR

END IF

RETURN

END IF

END FOR

PRINT "Course not found"

END FUNCTION

MAIN

CALL loadCourses("courses.txt")

INPUT searchNumber

CALL printCourse(searchNumber)

END MAIN

END