3-3 Milestone: Vector Data Structure Pseudocode

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CS-300

// initialize variables

Initialize class Course {

string courseID

string courseName

vector<string> coursePrereqs

};

Initialize vector<Course> courses;

Initialize string line variable for file navigation;

// load file and place data into courses vector

Open file into file variable using ifstream;

while going through each line in the file {

vector<string> courseLine

Course newCourse

parse each line seperated by “,” into courseLine vector

if courseLine.size < 2, return error “invalid data file”

for each element in courseLine {

if element index equals 0, add to newCourse.courseID

if element index equals 1, add to newCourse.courseName

if courseLine.size > 2

if element at index courseLine.size -1 does not equal courses.Course.courseID, return “prerequisites not found”

if element index > 2, pushback to newCourse.course

}

}

pushback newCourse to courses

};

Close file;

// search vector for matching course and print

get string searchID from input

bool courseFound equals false

for every course in courses {

if course.courseID equals searchID {

courseFound equals true

then print

“Course ID: “ << course.courseID

“Course Name: “ << course.courseName

“Prerequisites: “

for every prereq in course.coursePrereqs, print prereq

}

}

if courseFound equals false, print “Course not found”