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CS-300

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4 April, 2024

Module Five Milestone

// (1) Pseudocode to open file, read data, parse each line, and check for file format errors

START

LOAD file

OPEN file

IF (file not found)

PRINT "Error: File not found"

RETURN

DECLARE courseId, courseTitle, prerequisites

DECLARE courseCount = 0

DECLARE lineNumber = 0

DECLARE errorFound = false

WHILE (NOT end of file)

READ line from file

lineNumber++

PARSE line into courseId, courseTitle, prerequisites

IF (courseId is empty OR courseTitle is empty)

PRINT "Error at line " + lineNumber + ": Course ID or title is missing"

SET errorFound = true

ELSE IF (size of prerequisites < 1)

PRINT "Error at line " + lineNumber + ": At least one prerequisite is required"

SET errorFound = true

ELSE

FOR EACH prerequisite in prerequisites

IF (prerequisite not found in file)

PRINT "Error at line " + lineNumber + ": Prerequisite " + prerequisite + " not found"

SET errorFound = true

IF (errorFound)

CONTINUE to next line

ELSE

INCREMENT courseCount

CLOSE file

// (2) Pseudocode to create course objects and store them in the appropriate data structure

DEFINE Course class

courseId

courseTitle

prerequisites (vector)

CREATE vector to store Course objects

LOAD file

OPEN file

FOR EACH line in file

PARSE line into courseId, courseTitle, prerequisites

CREATE Course object with courseId, courseTitle, prerequisites

ADD Course object to vector

CLOSE file

// (3) Pseudocode to print out course information and prerequisites

DEFINE PrintCourseInformation function

PRINT courseId, courseTitle

FOR EACH prerequisite in prerequisites

PRINT prerequisite

LOAD file

OPEN file

FOR EACH Course object in vector

CALL PrintCourseInformation function

CLOSE file