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CS300:DSA - Module Five Milestone – Pseudocode

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//global declarations

DOUBLE strToDouble(string str, char ch) //forward declaration

STRUCT course //Define a structure to hold course information

STRING courseNumber //use string incase course’s numbers have letters in them

STRING courseTitle

STRING prerequisites

NewCourse function

CLASS BinarySearchTree // create binary search tree class

PRIVATE

DEFINE private functions

PUBLIC

DEFINE public functions

BinarySearchTree::BinarySearchTree function // default constructor

Root is equal to nullptr

BinarySearchTree::~ BinarySearchTree function //Destructor

Erase nodes beginning

DEFINE BinarySearchTree::Insert(Course course) function

IF root equal to nullptr

Root is equal to the new node course

Else

Add root node and course

COURSE BinarySearchTree::Search(string courseID) function

SET current node equal to rool

While look downwards until bottom reached to courseID match found

IF match found

RETURN current course

ELSE IF smaller than current node

TRAVERSE left

ELSE Traverse Right

RETURN course

COURSE BinarySearchTree::inOrder(Node\* node) function

IF node is not equal to nullptr

InOrder the left

PRINT courseTitle and prerequisites

InOrder the right

DEFINE loadCourseCSV function

INITIALIZE csv parser with csv path

TRY

IF line has at least 2 elements

FOR loop to read through file

course.courseNumber = to csv location

course.courseTitle = to csv location

course.prerequisites = to csv location to end of line

CATCH

ERROR if files wont open or read

DEF main fuction

WHILE loop for menu

SWITCH function

CASE1 //load course csv

loadCourseCSV function

BREAK

CASE2 //add new course

BinarySearchTree::Insert(Course course) function

BREAK

CASE3 //search courses and print out

BinarySearchTree::Search(string courseID) function

IF match returns

PRINT what was found

ELSE

ERROR message

BREAK

CASE4 //Print all courses and prerequisites out

BinarySearchTree::inOrder function

BREAK

RETURN