Tree Pseudocode

1. **Design pseudocode to define how the program opens the file, reads the data from the file, parses each line, and checks for file format errors.**

// initialize variables

Initialize class Course {

Int courseNumber;

string coursed;

string courseName;

vector <string> coursePrereqs;

struct\_tree node\*left;

struct\_tree nide\*right;

tree root = null

}

ReadDataFile Function()

{

Initialize string for fData variable for navigation of file

///Load the file and place the data

Open file using fstream

WHILE file is open

Read file data

Parse the lines

Verify the course name and course number

If root!=null

Verify if it’s a CoursePrereqs

CoursePrereqs go to right node

If course < 2

Add to left node

Else

Display message error

Else

Add CourseName, CourseNumber, and CoursePrereqs to right node

Print Results

File closed

End

1. **Design pseudocode to show how to create course objects and store them in the appropriate data structure**.

Program start

// initialize variables

Initialize class Course {

Int courseNumber;

string coursed;

string courseName;

vector <string> coursePrereqs;

struct\_tree node\*left;

struct\_tree nide\*right;

tree root = null

}

Initialize string for fData variable for navigation of file

///Load the file and place the data

Open file using fstream

WHILE file is open

Read file data

Parse the lines

Verify the course name and course number

IF root == null

Search for COURSE

IF COURSE found

Create object for COURSE;

COURSE is added to right node

IF COURSE not found

Print error

File close

Print Objects

End

1. **Design pseudocode that will print out course information and prerequisites**.

// initialize variables

Initialize class Course {

Int courseNumber;

string coursed;

string courseName;

vector <string> coursePrereqs;

struct\_tree node\*left;

struct\_tree nide\*right;

tree root = null

}

Initialize string for fData variable for navigation of file

///Load the file and place the data

Open file using fstream

WHILE file is open

Read file data

Parse the lines

Verify the course name and course number

IF root == null

Verify courseName and CourseNumber

IF root == null

Look for a CoursePrereqs

CoursePrereqs go to right node

If Course < 2

Add course to left node

Else

Add courseName, CourseNumber, and CoursePrereqs to right node

Print Results

File Close

End