**5-3 Milestone: Tree Data Structure Pseudocode**

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**Pseudocodes**

**Defining the Program**

START

Open files with fstream

Creating a function with two parameters

Call to open file, WHILE file is not empty

Read data

Parse each line

Check for course title and number

IF file format is free from errors

IF prerequisites exist

Add node as parent node

ELSE BREAK

ELSE put “error” to OUTPUT

Close file

END

**Create Course Objects and Store them into Data Structure**

START

Open file

Check if the file was successfully opened.

Loop through each line in the input file

Initialize variables for the course

Parse line and extract course data

Check for any prerequisites

IF prerequisites exist, put prerequisites to OUTPUT

ELSE put courses to OUTPUT

Close file

END

**Print Out Course Information and Prerequisites**

START

RETRIEVE INPUT

Assign INPUT to key

IF key is found

PRINT course information of current node

IF node has child

FOR each child

PRINT course information

ELSE BREAK

ELSE display course cannot be found to OUTPUT

END