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CSS 342

HW6\_SkiSchool

**Project Description:**

This project uses a multi-node tree to hold Teachers and Students. Each node is an element that holds a pointer to a person object and a STL list of elements. When inserting either a teacher or a student the pointer is adjusted by assigning either a teacher or a student address to the Pointer. The insert function follows the 1-5 round robin, increment one teacher 5-8 before advancing and round robin after 8 students. I created an abbreviated display function for testing the first three scenarios and then use printSchoolList for the demonstration. The following required methods have been included:

§ Insert instructor - void insertTeacher(string nm);

§ Insert a student without specifying instructor - void insertStudent(string nm);

§ Insert a student with specifying instructor - void insertStudentFor(string teachName, string stuName);

§ Remove student - void removeStudent(string nm);

§ Remove Instructor - void removeTeacher(string nm);

§ Find Given the teacher’s name - bool findTeacher(string nm, element& pt)

§ Find Given the student’s name - string findStudentsTeacher(string nm);

* “Display” function – “prints” out all teachers with all - void printSchoolList();

**Project Instructions:**

There is no input for this project.

The first three print outs are the insert scenarios:

* 5 Teachers, 5 Students = {1, 1, 1, 1, 1}
* 3 Teachers, 20 Students = {8, 7, 5}
* 3 Teachers, 28 Students = {9, 9, 10}

The next section is the demonstration.

* 3 Teachers, 19 Students = {8, 6, 5}

A teacher is removed, and the students are redistributed.

* 2 Teachers, 19 students = {10, 9}

Then a student is attempted to be added to a teacher that does not exist at which point an error message is output per method design.

The final print out tests the Find a teacher method which finds a teacher for a given student.

Project Output: (note print out is missing final test for Find a teacher given a students name)

