

NAME: _____

CS232 Lab5
sp2015
streller

PROBLEM STATEMENT:

using 2-3 trees

CODE:

Compile and run the program created by the tree23.cpp file.
Then do the following exercises.

On the separate sheet of paper, draw the 2-3-Tree after the number 2 has been added.
Show all the fields of each node, except for the parent pointer field.

On the separate sheet of paper, draw the final 2-3-Tree after all the numbers
have been added at the end of the program.

Sections of the program have been labeled with the labels shown below.
For each labeled section, state the purpose of the section:

ADD: CASE 1 _____

ADD: CASE 2 _____

ADD: CASE 3 _____

ADD: CASE 4 _____

ADD: CASE 5 _____

ADD BRANCH CASE 1 _____

ADD BRANCH CASE 2 _____

ADD BRANCH CASE 3 _____

ADD BRANCH CASE 4 _____

ACTION AT PARENT A _____

ACTION AT PARENT B _____

ACTION AT PARENT C _____

ACTION AT PARENT D _____

Fill in the following table showing a trace of the execution of the program for each number added to the 2-3-Tree and the associated actions performed.

First column: fill in the integer that is added to the tree.

Second column: fill in the label number for the code section of the add function that is executed for the addition of the particular integer (one of the following labels: ADD CASE 1, ADD CASE 2, ADD CASE 3, ADD CASE 4, ADD CASE 5).

Third column: fill in the value of the variable 'middle' used in the split function, if any.

Fourth column: fill in the label number for the code section of the split function that is executed in the 'add branch' part of the function.

Fifth column: fill in the label number for the code section of the split function that is executed in the portion of the function that performs actions at the parent node level.

[illegible]

DELIVERABLES:

hard :
these sheets with trees stapled

Due Date : 8:00am Tuesday 3 March 2015