

Ankara University
Computer Engineering Department
COM267 HW 6

Due Date: 12.12.2018 23:59

Write a program that sorts the grades of students registered in a data structure course. Let's assume that grades are given out of 100. The number of students registered to the course is not known in advance. Student IDs and grades are given in input.txt. Your program will output the sorted list of the student grades with student ids (Assume for this lab study, student grades are distinct). Use binary search tree in your program.

input.txt

123 70

546 90

456 50

445 60

677 80

121 40

-1 -1

Your output will be the sorted list of student grades with their ids **(In-order walk on the binary search tree produce the sorted list)**.

121 40

456 50

445 60

123 70

677 80

546 90

Your program should also print the binary search tree in the following way (First number represents the student id, second number displays the grade and the number in parenthesis shows the parent node. L represents left child and R represents right child).

123 70

456 50 (70 L) 546 90 (70 R)

121 40 (50 L) 445 60 (50 R) 677 80 (90 L)

Your compiled code will be executed using command line:

./a.out<input.txt

Output:

121 40

456 50

445 60

123 70

677 80

546 90

123 70

456 50 (70 L) 546 90 (70 R)

121 40 (50 L) 445 60 (50 R) 677 80 (90 L)