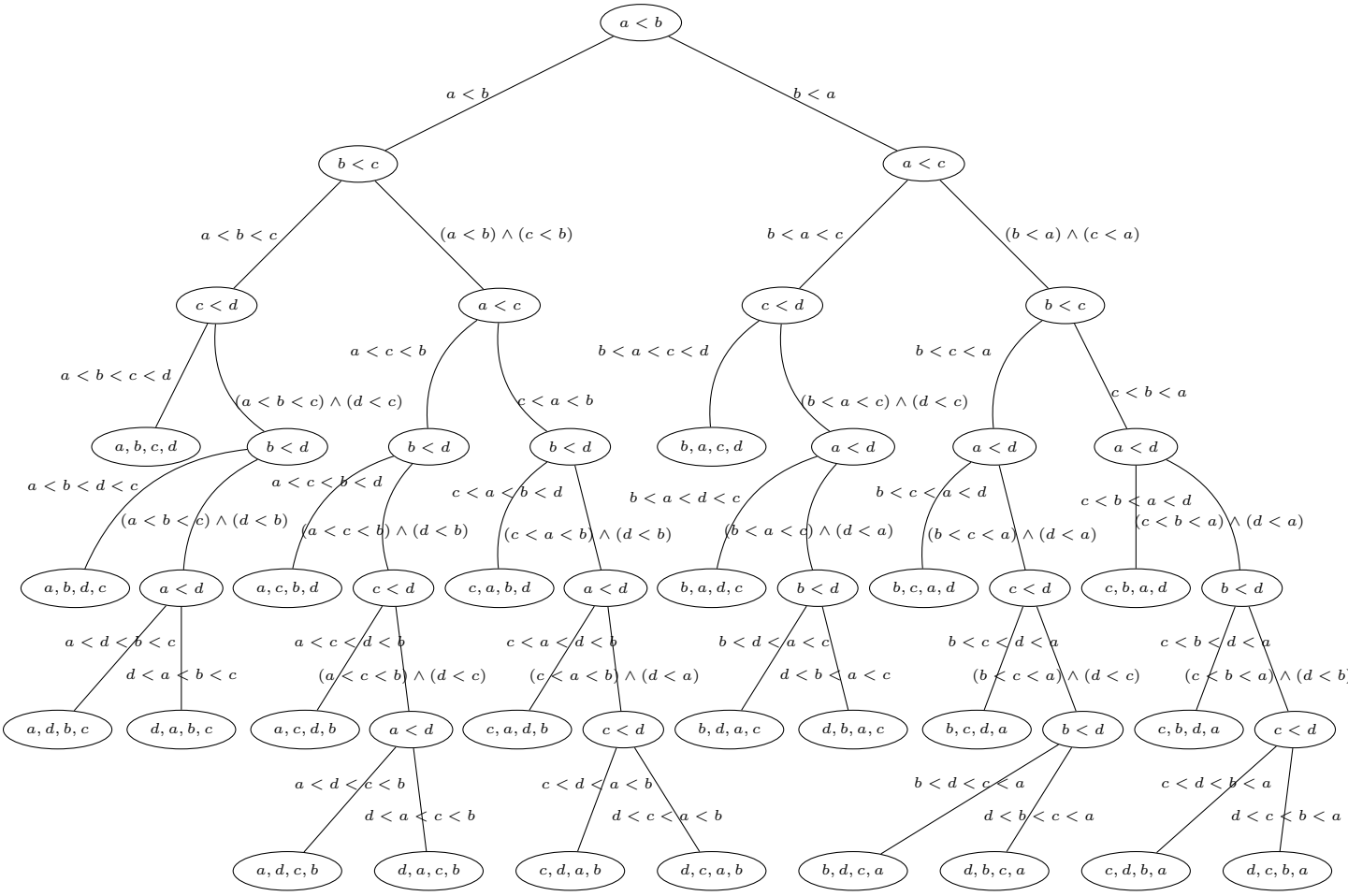
Teamwork 3

Mengxiang Jiang
CSEN 5303 Foundations of Computer Science

October 25, 2022

Problem (Decision Tree). Consider a set of four distinct integers a, b, c, and d.

1. Give the decision tree for insertion sort operating on integers a, b, c, and d.



2. How many comparisons does your algorithm do in the worst case? On the average?

The worst case number of comparisons is 6.
On average the number of comparisons is
$\frac{2*3+6*4+8*5+8*6}{24} = \frac{118}{24} = \frac{59}{12} \approx 4.9$.