

NPTEL

NPTEL ONLINE CERTIFICATION COURSE

**Discrete Mathematics
Recurrence Relation**

Door knock example and Merge sort

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What is happening? Why do we even worry about such useless examples? Who cares, who knocks on whose door? How many knocks happen? Why do so much of math with equations and arriving at a final conclusion and saying oh so many knocks on the door, how does it matter if I do it or if I don't do it, I just gave you a simpler example while the actual example that you should have known by this time is how do you analyze a computer algorithm, a very popular computer algorithm that is taught at the first level is what is called a sorting algorithm, and of all the sorting algorithms the simplest and the easiest, and the first one that we generally teach is what is called a bubble sort.

What I just now taught about knocks on the door is very, very analogous to what happens in a bubble sort algorithm, you may want to look into it and then come back and understand in what way is knocks on the door example at all related to bubble sort.

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