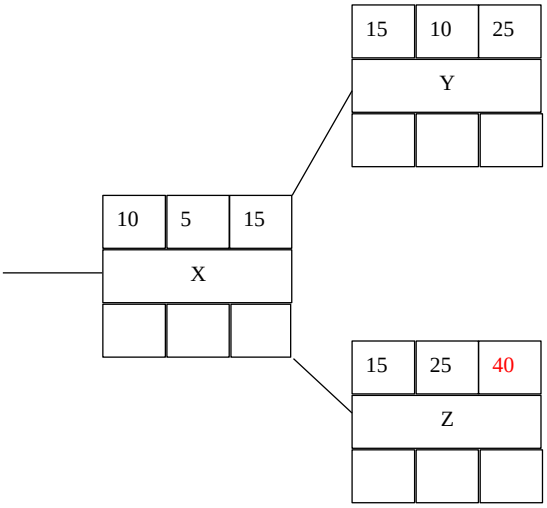
NETWORK ANALYSIS TUTORIAL

ES	D	EF
X		
LS	F	LF

ES = Earliest Start
D = Duration
EF = Earliest Finish
LS = Latest Start
F = Float
LF = Latest Finish



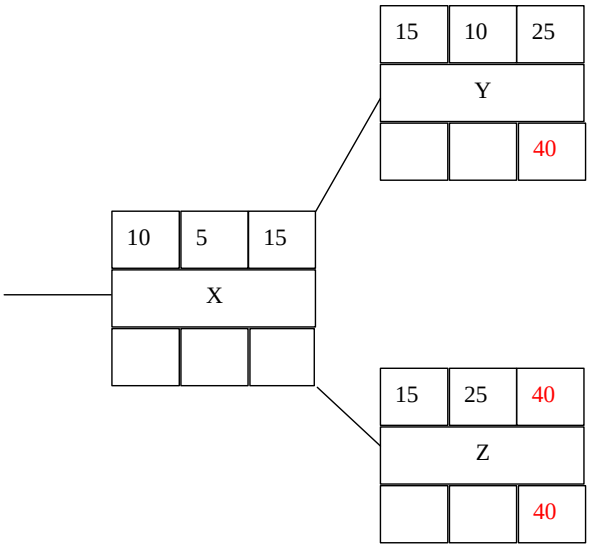
Let's say our project must finish as soon as possible and we have this segment of a network chart.

Problem: To fill in the bottom line of X, Y and Z

Start at the right and work to the left...

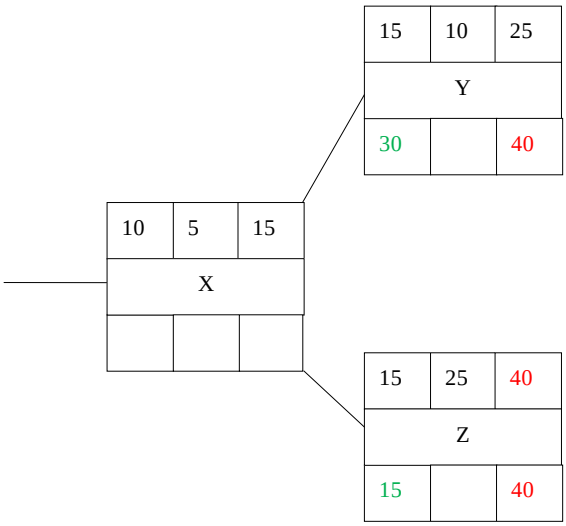
1. We said the project must finish as soon as possible. It must therefore finish on day 40, which is the latest Earliest Finish in the network.

2. That means that the Latest Finish for tasks Y and Z will be 40 as well.

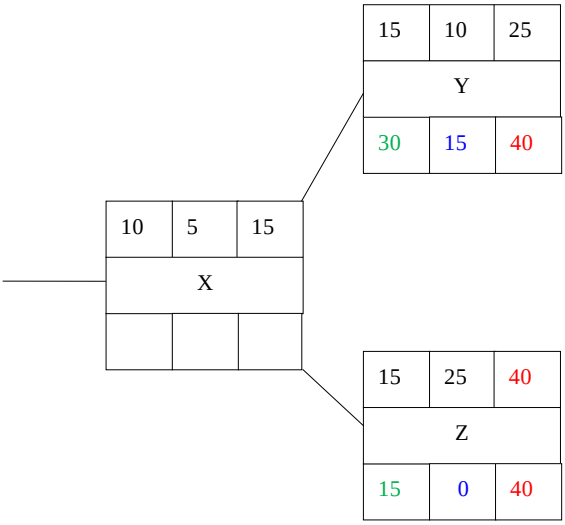


Now working back...

3. For the Latest Start, just subtract the Duration from the Latest Finish. For Y, LS = 40 -10 = 30; for Z, LS = 40 - 25 = 15.

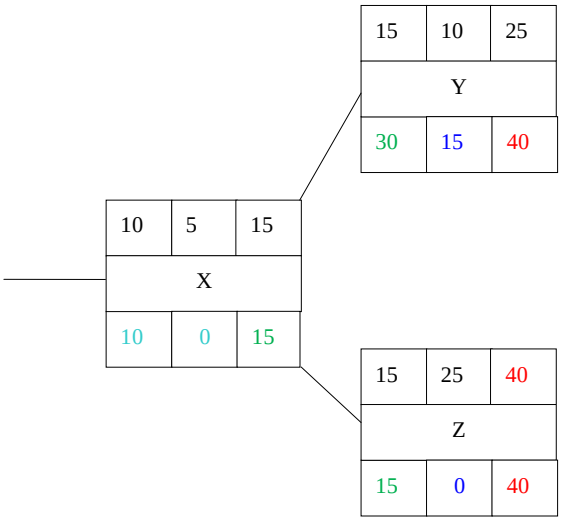


4. Float time (F) will be the difference between EF and LF. In other words how much time you have to spare for that task. For Y, F = 40 - 25 = 15. For Z, F = 40 - 40 = 0.



5. Let us consider Task X next. X must finish in time for Y **and** Z to start by their Latest Start times. So, the Latest Finish for X is day 15. Otherwise Z would be delayed! More formally LF = earliest LS of succeeding tasks in the network.

6. The rest of X is straightforward. LS = 15 - 5 = 10. F = 15 -15 = 0



7. The Critical Path is made up of tasks that have no spare time: their Float = 0. In this case the Critical Path is X – Z.