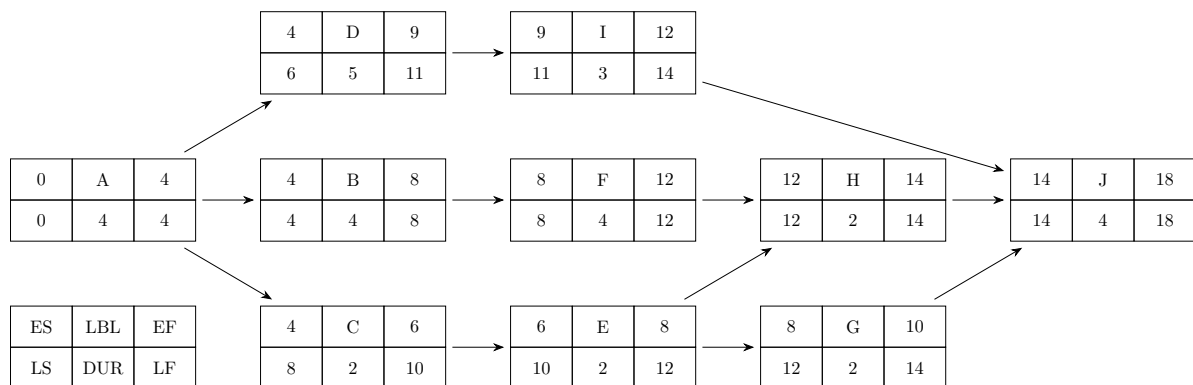


**9.6** Your university is holding a fund-raiser and will be hiring a band to entertain spectators. You have been selected to serve as the event project manager and have created a Work Breakdown Structure and duration estimates for the activities involved in site preparation for the event. Construct a network activity diagram based on the following information:

Activity	Description	Predecessors	Duration (Days)
A	Site selection	None	4
B	Buy concessions	A	4
C	Rent facilities	A	2
D	Build Stands	A	5
E	Generator & wiring installation	C	2
F	Security	B	4
G	Lighting installation	E	2
H	Sound system installation	E, F	2
I	Stage construction	D	3
J	Tear down	G, H, I	4

**a.** Conduct both a forward and backward pass using AON notation. What is the estimated total duration for the project?



from the above diagram, we can see that the estimated time to use is **18 Days**.

**b.** Identify all paths through the network. Which is the critical path? Which activities have slack time?

The path without activities with slack time is the critical path, and for the diagram above, the critical path is:

$$A \rightarrow B \rightarrow F \rightarrow H \rightarrow J$$

And we can have the below table showing the slack time for other activities:

Activity	Days of Slack
C	4
D	2
E	4
G	4
I	2