Assignment

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Create a precedence activity network using the following details:

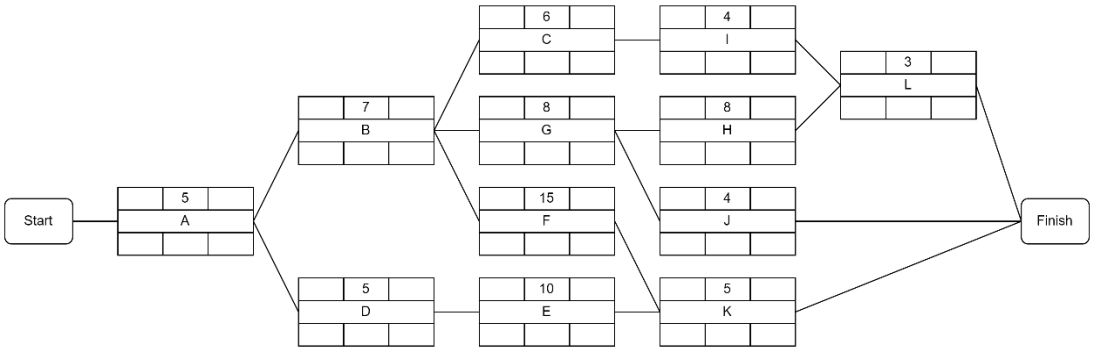
Activity	Depends on	Duration (days)
A		5
B	A	7
C	B	6
D	A	5
E	D	10
F	B	15
G	B	8
H	G	8
I	C	4
J	G	4
K	E,F	5
L	I,H	3

Calculate the earliest, latest start and end dates and the float associated with each activity in the network you have created above. From this identify the critical path.

To solve this problem, we need to create a precedence activity network, calculate the earliest start (ES), earliest finish (EF), latest start (LS), latest finish (LF), and float for each activity, and then identify the critical path.

Step 1: Create the Precedence Activity Network

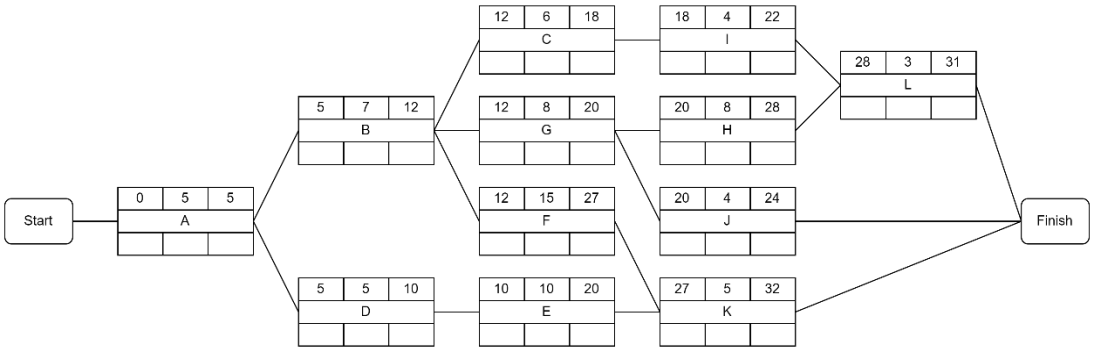
The activities and their dependencies are as follows:



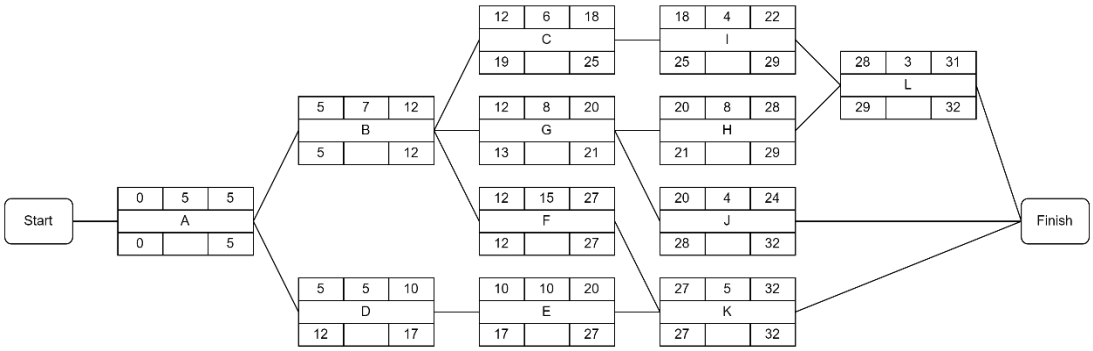
Step 2: Calculate ES, EF, LS, LF, and Float

We will calculate the earliest start (ES), earliest finish (EF), latest start (LS), latest finish (LF), and float for each activity.

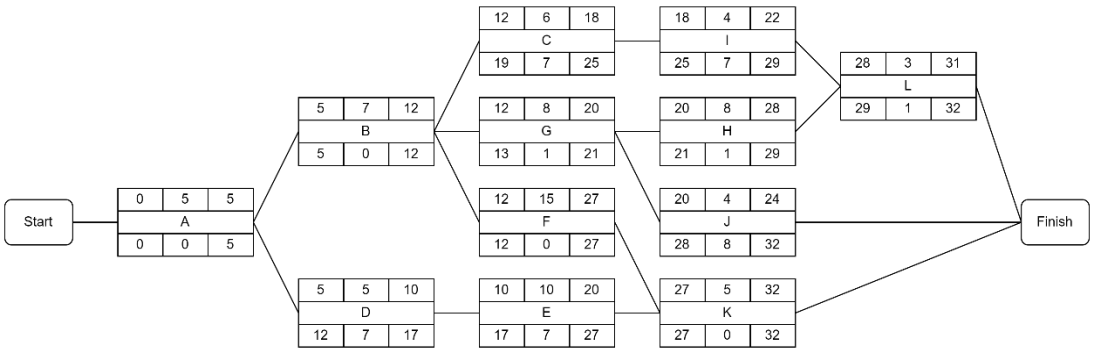
Forward Pass (Calculate ES and EF):



Backward Pass (Calculate LS and LF):

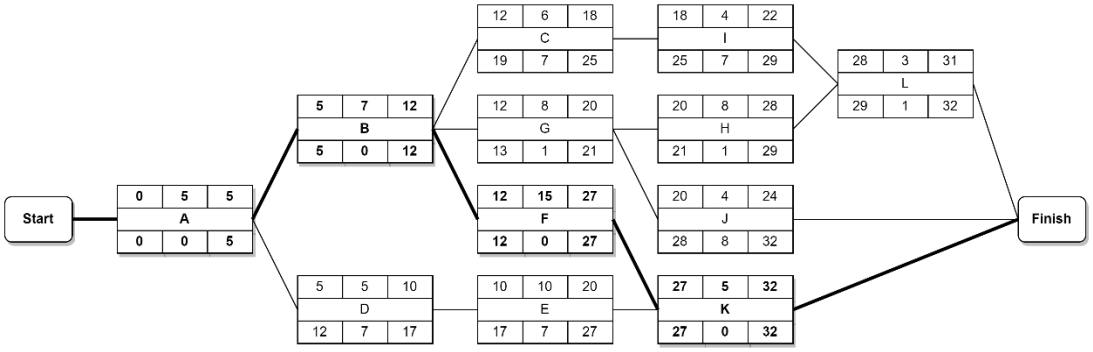


Calculate Float:



Step 3: Identify the Critical Path

The critical path consists of activities with zero float:



Critical Path: A → B → F → K