Critical Path Exercise

By

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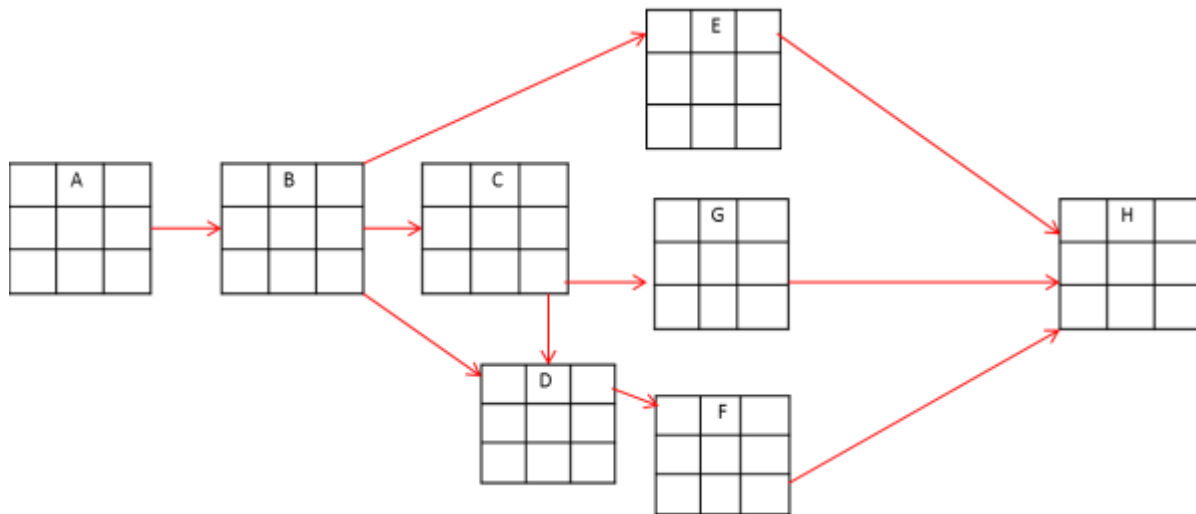Embry-Riddle Aeronautical University Worldwide

PMGT 690

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4. Draw the network from the following information.

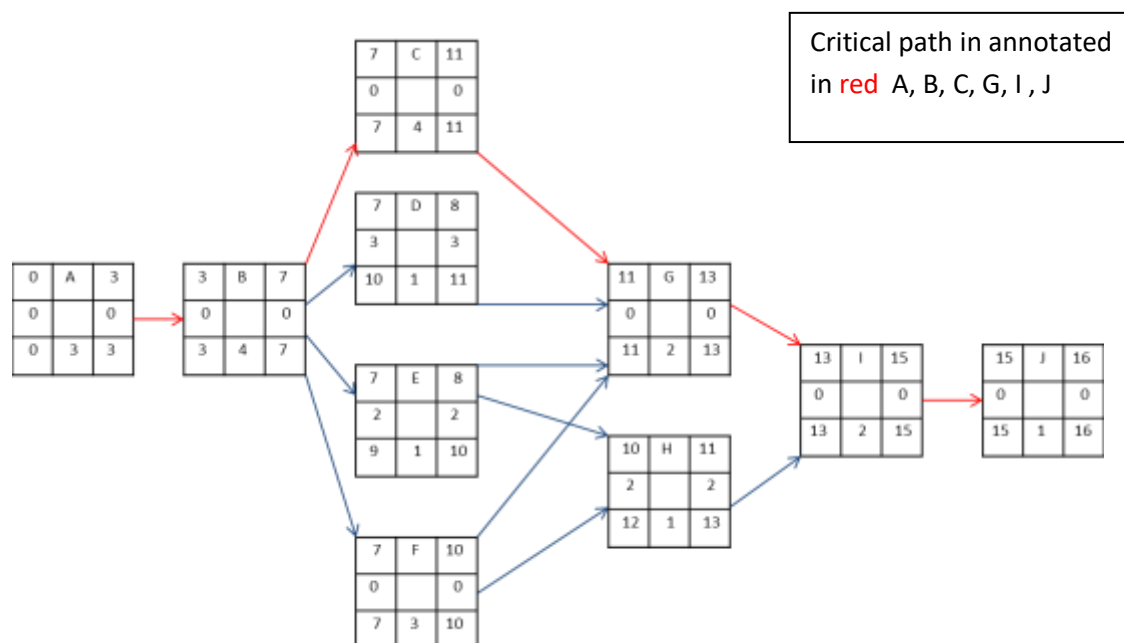| ID	Description	Predecessor
A	Contract signed	NONE
B	Survey designed	A
C	Target Market identified	B
D	Data collection	B, C
E	Develop Presentation	B
F	Analyze results	D
G	Demographics	C
H	Presentation	E, F, G

What activity(s) is a burst activity? Both B and C are Burst activities.

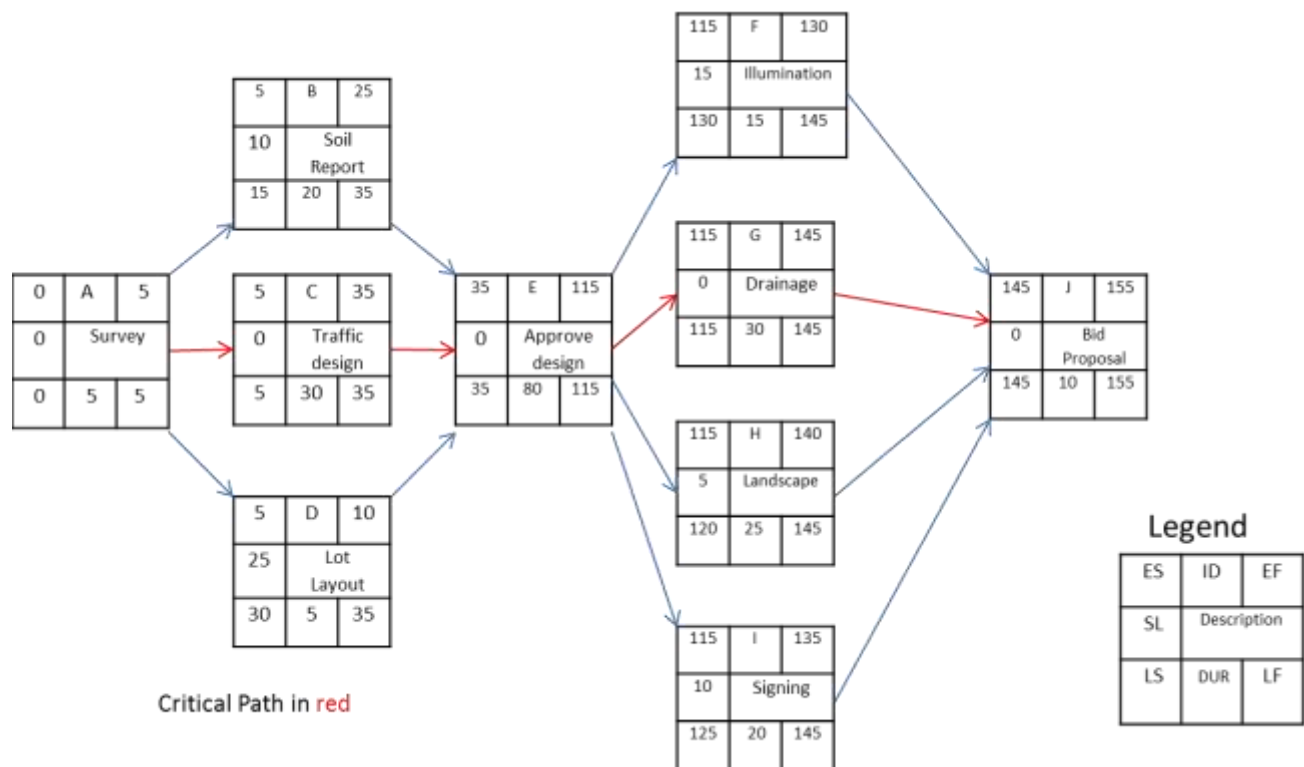**What is activity is a merge activity?** Activities E, G, F merge on activity H.

8. You have signed a contract to build a garage for the Simpsons. You will receive a $500 bonus for completing the project within 15 working days. There will be a penalty in which you lose $100 for each day the project takes longer than 15 days. Draw a project network given the information below. Complete the forward pass and backward pass, compute the activity slack, and identify the critical path.

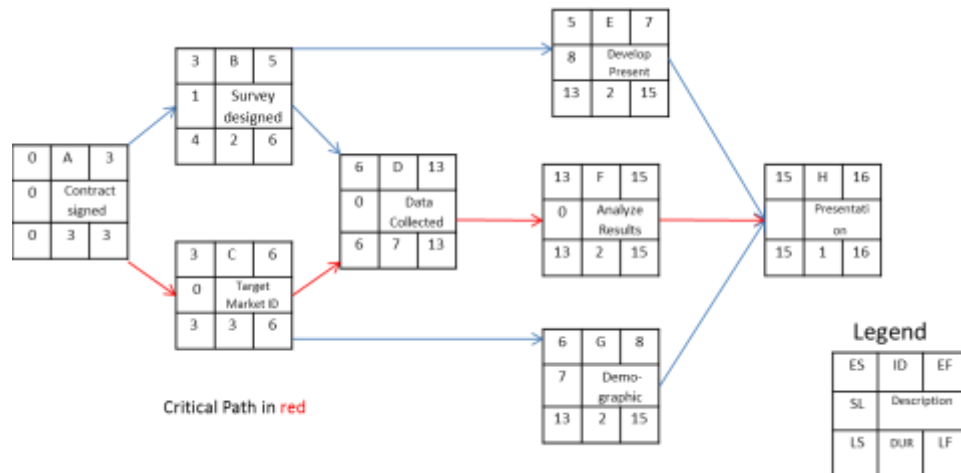| ID	Description	Predecessor	Time (Days)
A	Pour foundation	NONE	3
B	Erect frame	A	4
C	Roof	B	4
D	Windows	B	1
E	Doors	B	1
F	Electrical	B	3
G	Rough in Frame	C, D, E, F	2
H	Door Opener	E, F,	1
I	Paint	G, H	2
J	Clean up	I	1

Critical path in annotated in red A, B, C, G, I , J

Do you expect to receive a bonus or a penalty on this project? As written I expect to receive the penalty of $100. But, if I were able to start clean up one day after the start of painting I could negate that penalty.

11. A large eastern city is requesting federal funding for a park-and-ride project. One of the requirements in the requested application is a network plan for the design phase of the project. Catherin Walker, the chief engineer, wants you to develop a project network plan to meet this requirement. She gathered the activity time estimates and their dependencies shown here. Show you project network with the activity early , late, and slack times mark the critical path.

Critical Path in red

Note: I wrote down the problem numbers incorrectly so I accomplished # 14 also. It was already completed so I figured I'd submit it with the rest. The manual Gantt chart wasn't that hard to do anyway.

14. You are conducting a market research project for FUN Inc. Given the project network that follows complete the forward and backward pass, compute the activity slack, and identify the critical path . Use this Information to create a Gantt chart for the project, be sure to show slack for noncritical activities.

Critical Path in red

Legend

ES	ID	EF
SL	Description	
LS	DUR	LF

Gantt Chart

	0	2	4	6	8	10	12	14	16	
Contract Signed										
Survey designed										
Target Market ID										
Data collection										
Develop Presentation										
Analyze results										
Demographics										
Presentation										

Critical activity	
Non-Critical activity	
Slack	