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. The contract also contains a penalty clause in which you will lose $100 for each day the project takes longer than 15 working days.

Draw a project network given the information below. Complete the forward and backward pass, compute the activity slack, and identify the critical path. Do you expect to receive a bonus or a penalty on this project?

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	Cleanup	I	1

9. You are creating a customer database for the Modesto Nuts minor league baseball team. Draw a project network given the information below. Complete the forward and backward pass, compute activity slack, and identify the critical path.

   How long will this project take?

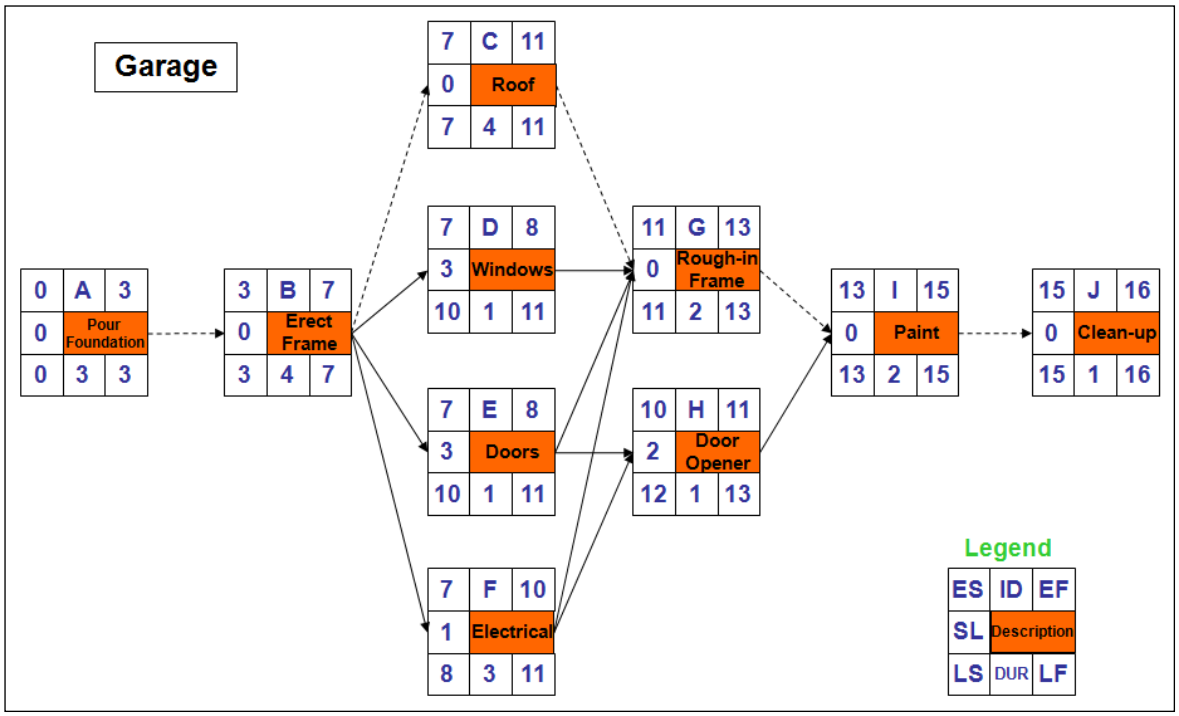
ID	Description	Predecessor	Time (days)
A	Systems design	None	2
B	Subsystem A design	A	1
C	Subsystem B design	A	1
D	Subsystem C design	A	1
E	Program A	B	2
F	Program B	C	2
G	Program C	D	2
H	Subsystem A test	E	1
I	Subsystem B test	F	1
J	Subsystem C test	G	1
K	Integration	H, I, J	2
L	Integration test	K	1

10. J. Wold, project manager of Print Software, Inc., wants you to prepare a project network; compute the early, late, and slack activity times; determine the planned project duration; and identify the critical path. His assistant has collected the following information for the Color Printer Drivers Software Project:

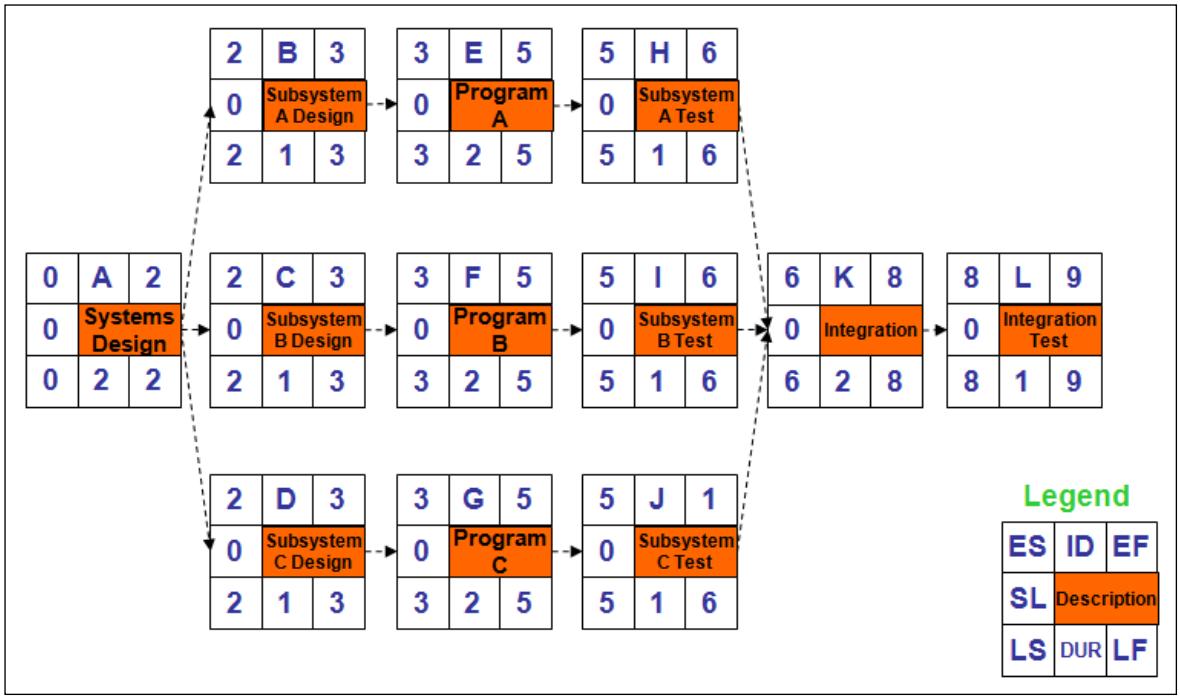
ID	Description	Predecessor	Time
A	External specifications	None	8
B	Review design features	A	2
C	Document new features	A	3
D	Write software	A	60
E	Program and test	B	60
F	Edit and publish notes	C	2
G	Review manual	D	2
H	Alpha site	E, F	20
I	Print manual	G	10
J	Beta site	H, I	10
K	Manufacture	J	12
L	Release and ship	K	3

ANSWERS

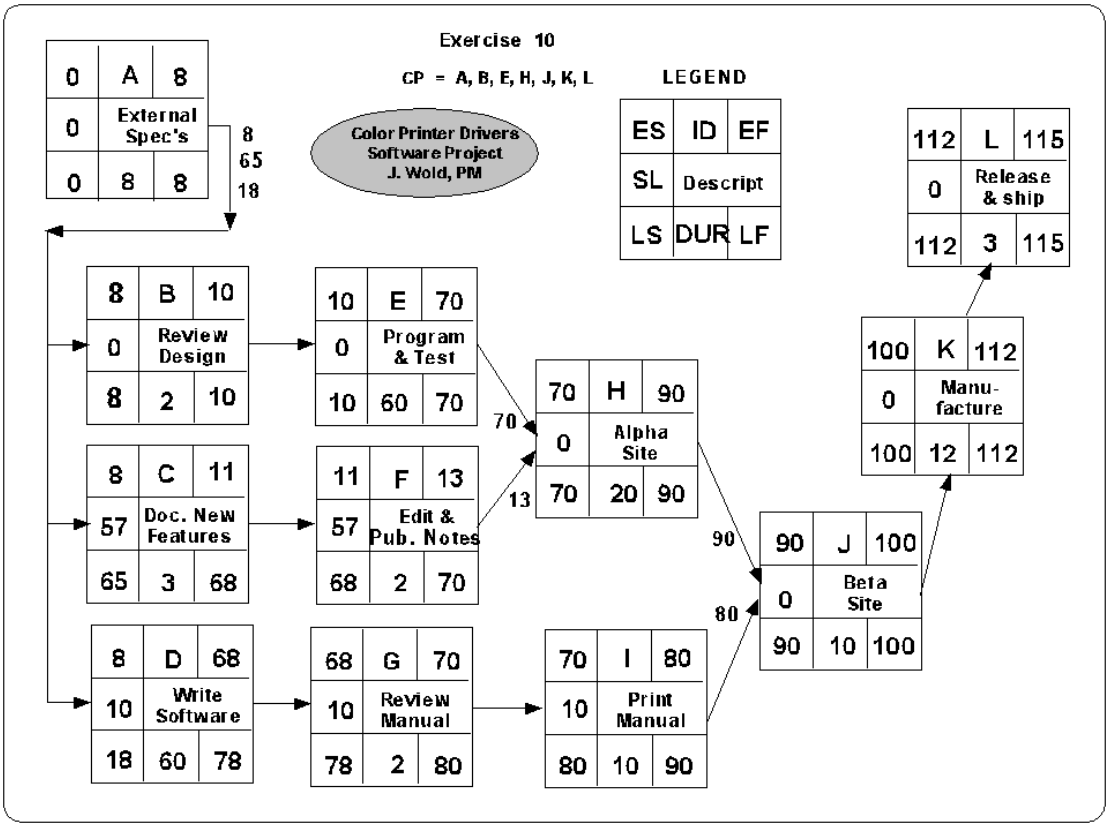
8. We would expect to penalized for one day past the 15 day deadline.



9. The project is expected to take 9 days. The project is very sensitive with 3 interrelated critical paths. None of the activities have slack.


0 A 2
0 Systems Design 0 2 2
2 B 3
0 Subsystem A Design 2 1 3
3 E 5
0 Program A 3 2 5
5 H 6
0 Subsystem A Test 5 1 6
2 C 3
0 Subsystem B Design 2 1 3
3 F 5
0 Program B 3 2 5
5 I 6
0 Subsystem B Test 5 1 6
2 D 3
0 Subsystem C Design 2 1 3
3 G 5
0 Program C 3 2 5
5 J 1
0 Subsystem C Test 5 1 6
6 K 8
0 Integration 6 2 8
8 L 9
0 Integration Test 8 1 9
Legend
ES ID EF
SL Description
LS DUR LF

10.


Exercise 10
CP = A, B, E, H, J, K, L
LEGEND
ES ID EF
SL Descript
LS DUR LF
Color Printer Drivers Software Project J. Wold, PM
0 A 8
0 External Spec's 0 8 8
8
65
18
8 B 10
0 Review Design 8 2 10
10 E 70
0 Program & Test 10 60 70
8 C 11
57 Doc. New Features 65 3 68
11 F 13
57 Edit & Pub. Notes 68 2 70
8 D 68
10 Write Software 18 60 78
68 G 70
10 Review Manual 78 2 80
70 H 90
0 Alpha Site 70 20 90
70
13
70 I 80
10 Print Manual 80 10 90
80
90 J 100
0 Beta Site 90 10 100
90
100 K 112
0 Manu-facture 100 12 112
112 L 115
0 Release & ship 112 3 115