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

12. You are creating a customer database for Winston-Salem Warthogs 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? How sensitive is the network schedule? Calculate the free slack and total slack for all noncritical activities.

ID	Descripti	Predecessor	Time (days)
A	Systems design	None	2
B	Subsystem A design	A	1
C	Subsystem B design	A	2
D	Subsystem C design	A	1
E	Program A	B	2
F	Program B	C	10
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