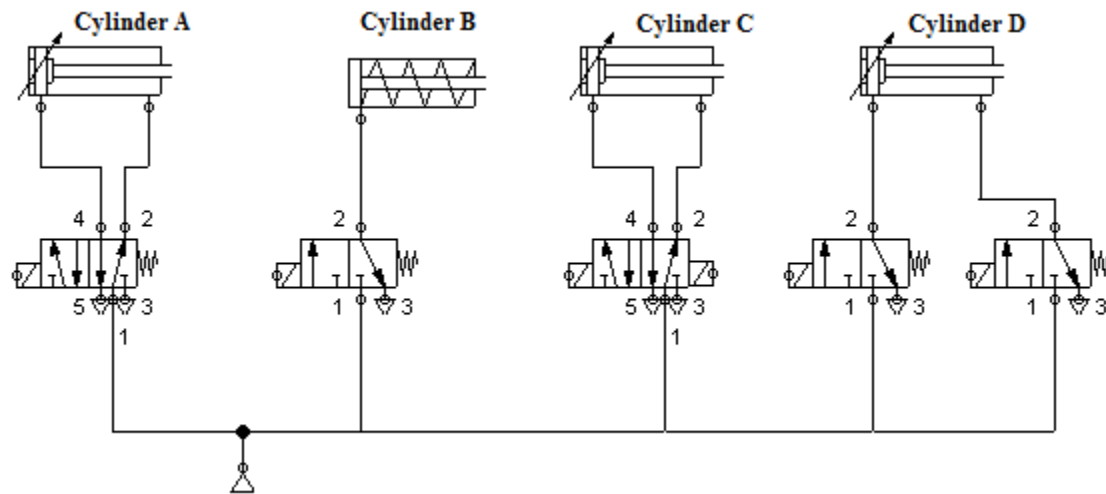


**Process 1**

For the system in the figure below, given the address in the next table, answer the following questions:



Hardware	Address	Hardware	Address
A is fully retracted	I0.0	Start	I1.0
A is fully extended	I0.1	Stop (NC)	I1.1
B is fully retracted	I0.2	Reset	I1.3
B is fully extended	I0.3	Cylinder A advances	Q0.0
C is fully retracted	I0.4	Cylinder B advances	Q0.1
C is fully extended	I0.5	Cylinder C advances	Q0.2
D is fully retracted	I0.6	Cylinder C retracts	Q0.3
D is fully extended	I0.7	Cylinder D advances	Q0.4
		Cylinder D retracts	Q0.5



Number	Level	Required Tasks
1.	Easy	If "Start" is pressed cylinder A is will extend twice.
2.	Easy	If "Start" is pressed cylinder D is will extend trice.
3.	Esay	If "Start" is pressed cylinder D is will extend twice. And if "Reset" is pressed cylinder A is will extend 4 times.
4.	Medium	If "Start" is pressed once the following sequence will be rpeated until stop is pressed: 1. B will fully advance and retract. 2. D will fully advance and retract.
5.	Medium	If "Start" is pressed once the following sequence will be rpeated 3 times. stop will stop everything: 1. B will fully advance. 2. D will fully advance. 3. B will fully retract. 4. D will fully retract.
6.	Hard	If "Start" is pressed once the following sequence will be rpeated until stop is pressed: 1. D will fully advance. 2. A will fully advance and retract twice. 3. D will fully retract.
7.	Hard	If "Start" is pressed once the following sequence will be rpeated 3 times. stop will stop everything: 1. B will fully advance. 2. D will fully advance and retract twice. 3. B will fully retract.
8.	Extra Hard	If "Start" is pressed cylinder A will extend. And if "Reset" is pressed cylinder B is will extend. Cylinder D will extend once only if cylinder B extended 3 times more than cylinder A. (Solve using up/down counter).
9.	Extra Hard	If "Start" is pressed cylinder A will extend. And if "Reset" is pressed cylinder B is will extend. Cylinder D will extend once only if cylinder B extended 3 times more than cylinder A. (Solve using down counter).