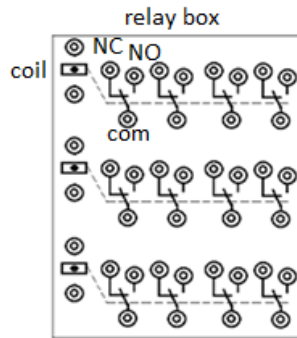
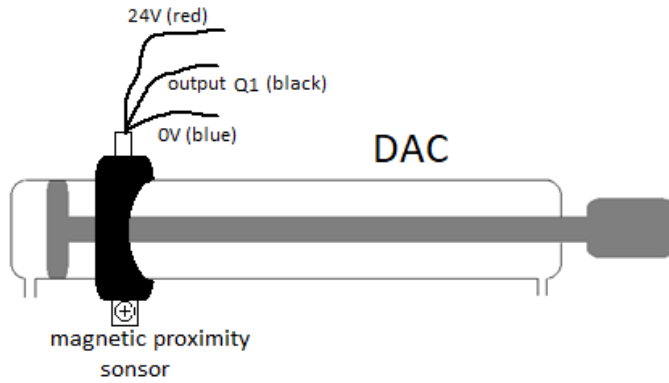
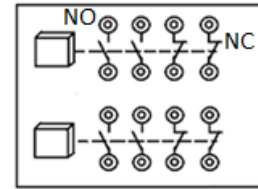


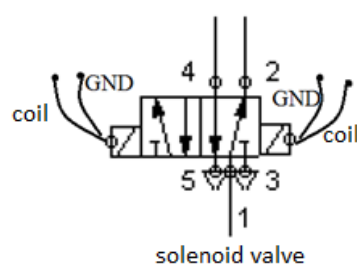
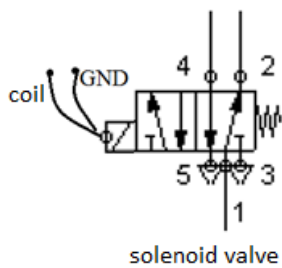
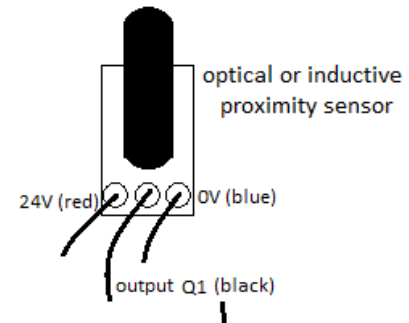
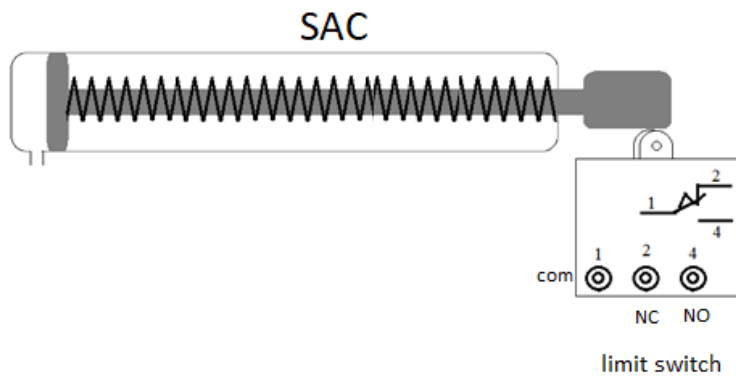
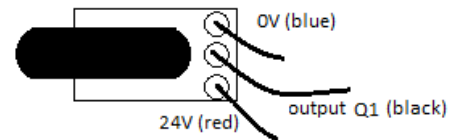
electrical
power supply



push button box



optical or inductive
proximity sensor



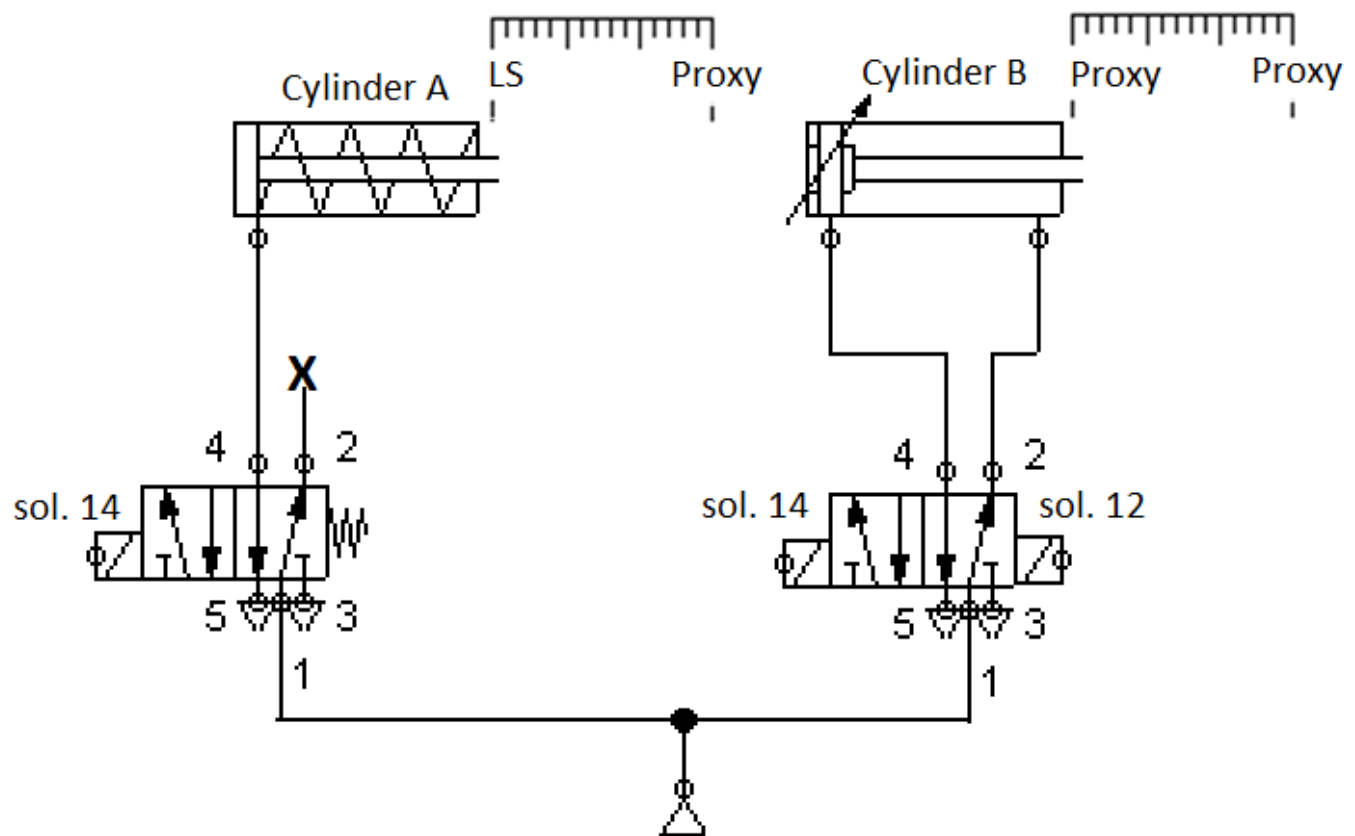


Example 2: (easy, multiple conditions)

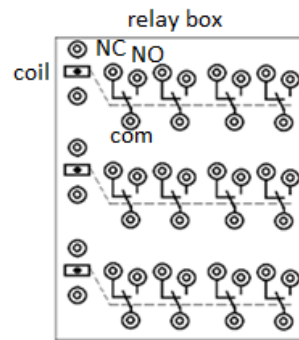
Names:

For the electro-pneumatic system below

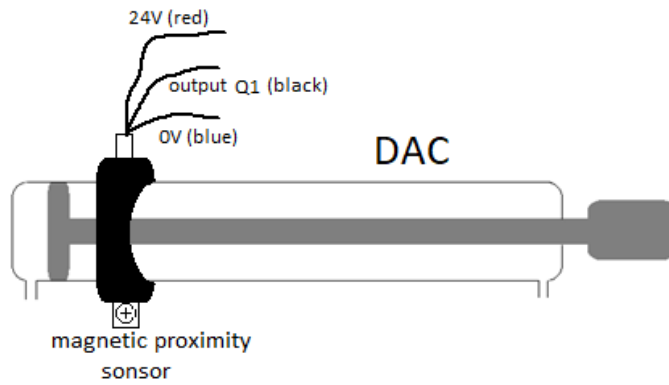
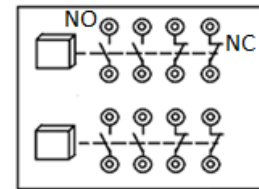
1. Design a ladder diagram to satisfy the following ;
 - If cylinder B is fully retracted **and** a push button is pressed, it will advance then it will fully retract.
2. On the hardware provided in the lab, do the needed Connections.



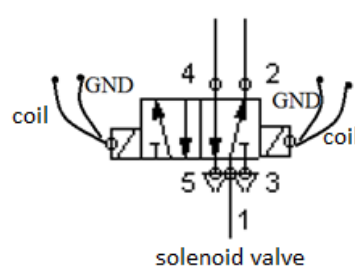
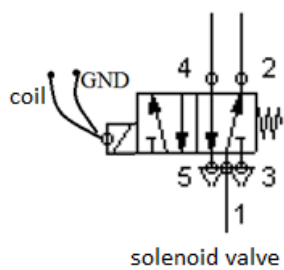
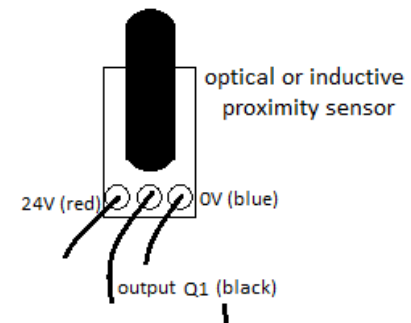
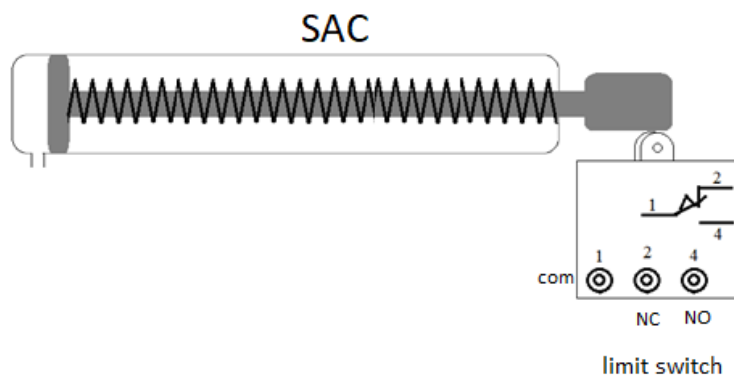
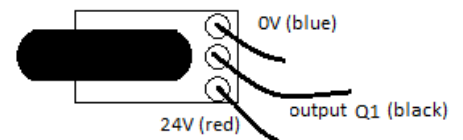
electrical
power supply



push button box



optical or inductive
proximity sensor



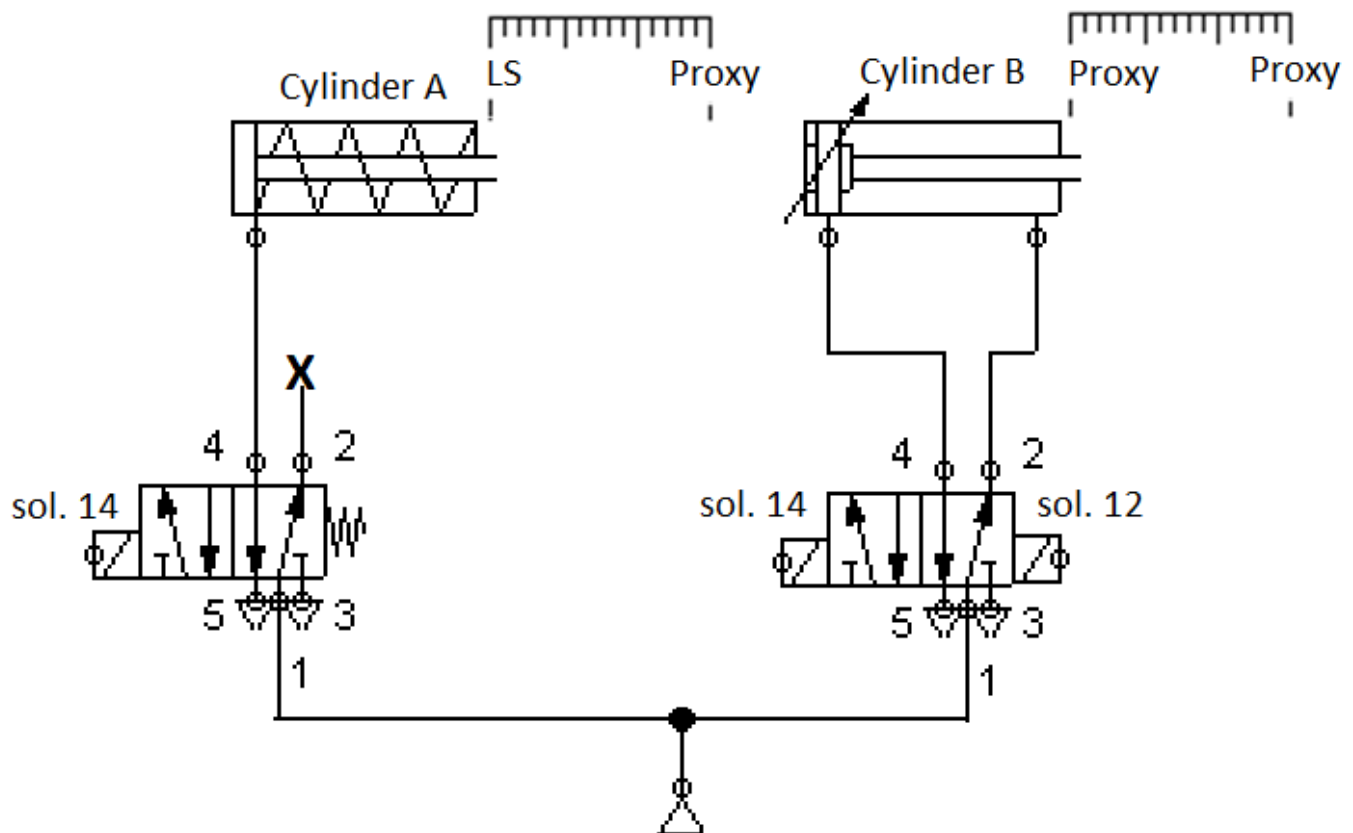


Example 3: (medium, self-latch using relay)

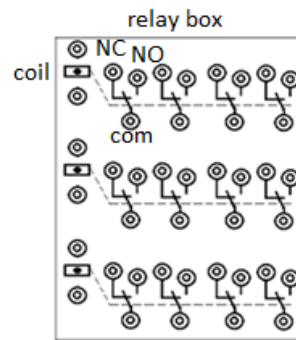
Names:

For the electro-pneumatic system below

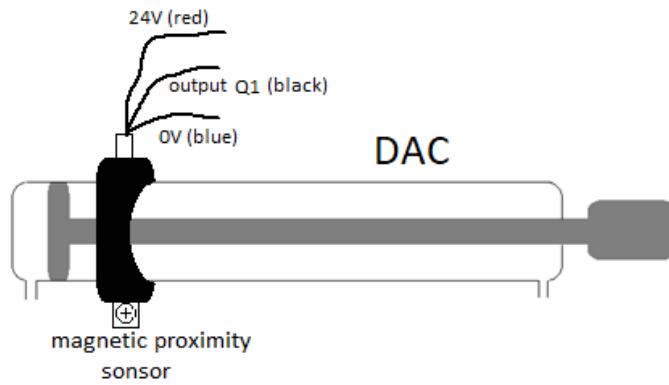
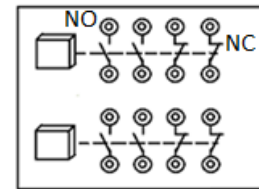
1. Design a ladder diagram to satisfy the following ;
 - If cylinder A is fully retracted, it will fully advance then it will fully retract.
2. On the hardware provided in the lab, do the needed Connections.



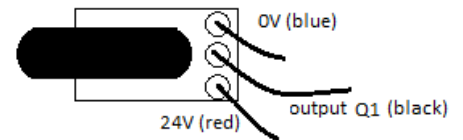
electrical
power supply



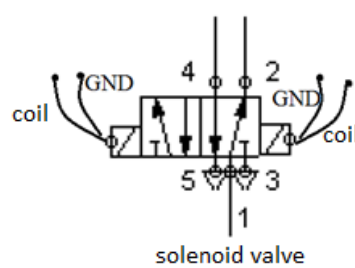
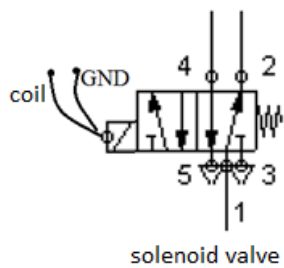
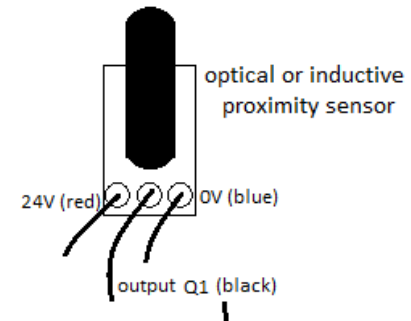
push button box



optical or inductive
proximity sensor



SAC



**Example 4: (medium, sequence and self-latch using relay)**

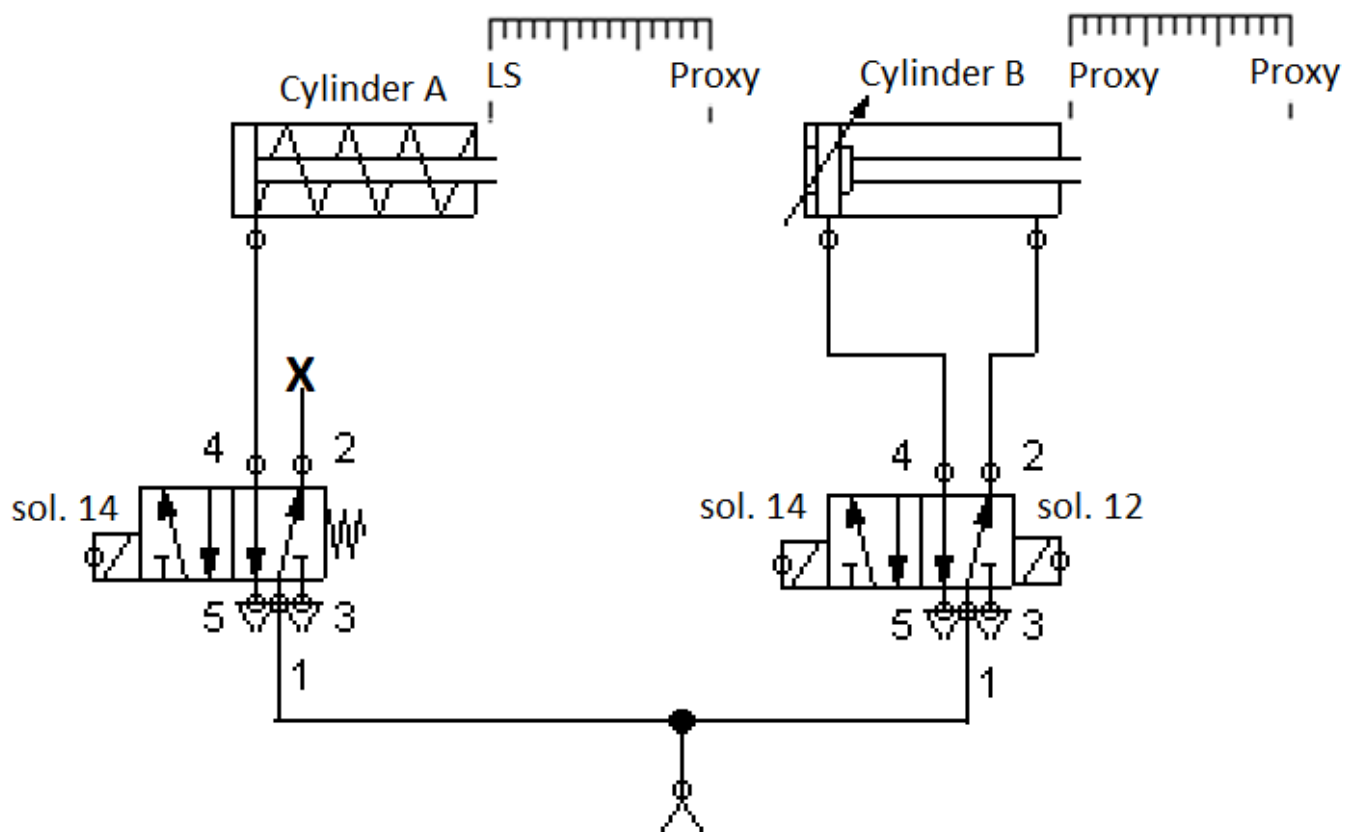
Names:

For the electro-pneumatic system below

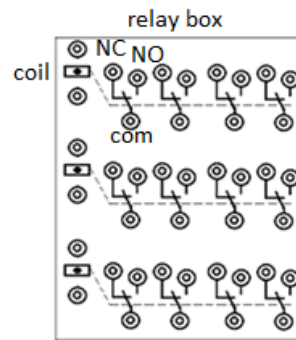
1. Design a ladder diagram to satisfy the following ;

If a push button is pressed the following sequence will start

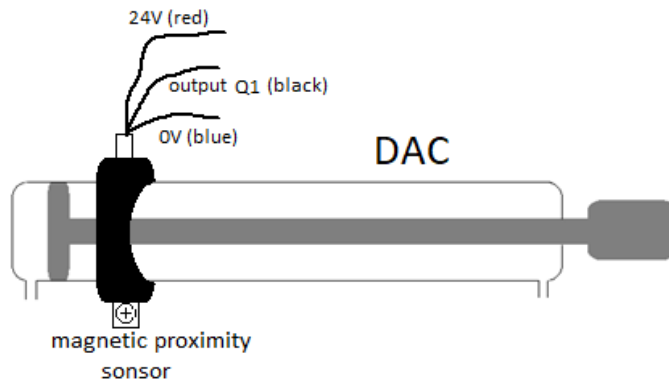
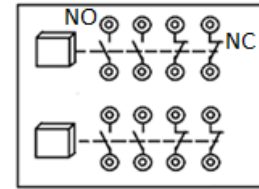
- Cylinder B will fully advance
 - Cylinder A will fully advance
 - Cylinder B full will fully retract
 - Cylinder A will fully retract
2. On the hardware provided in the lab, do the needed Connections.



electrical
power supply



push button box



optical or inductive
proximity sensor

