

BITS Pilani
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Tutorial 3- Sequencing of cylinders

Tutorial Problems

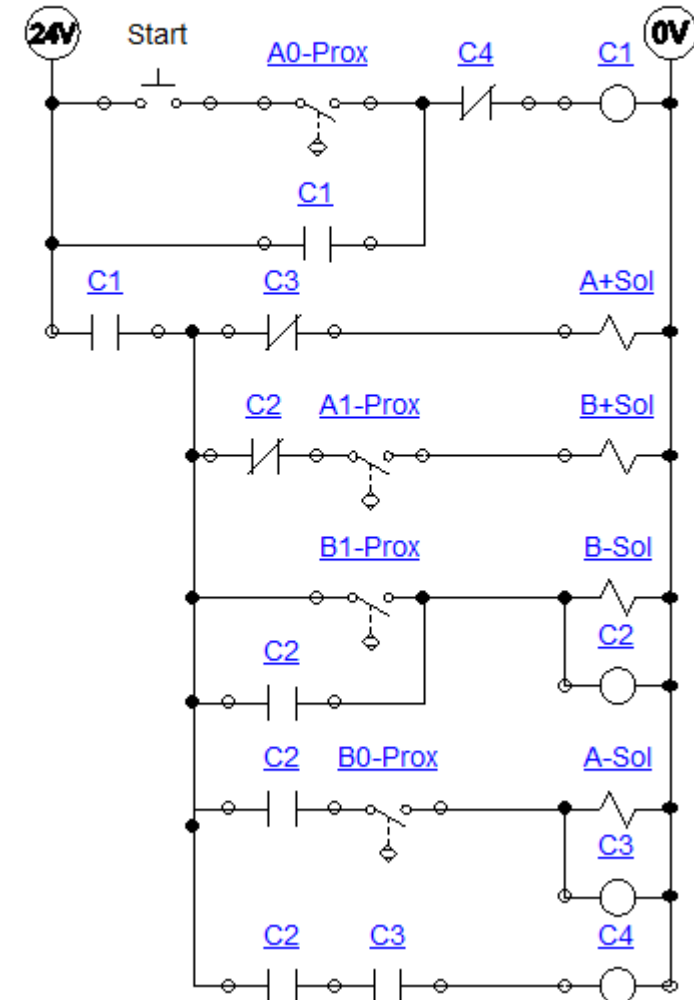
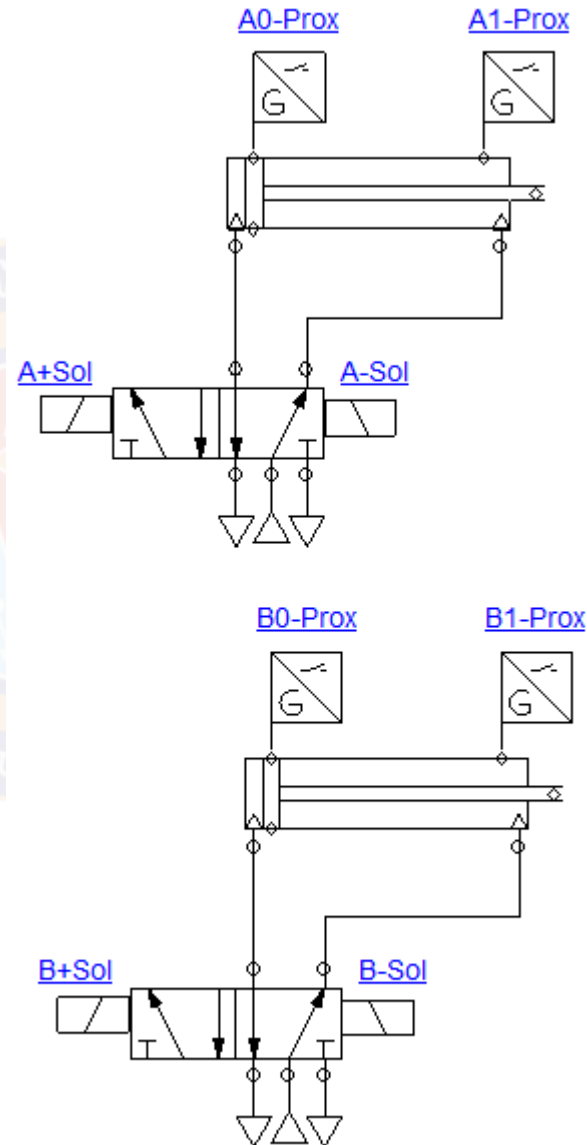
Practice problems for 2 hours of practice in Virtual Lab

- Tutorial 3 Sequencing
 - 3A - Cylinder sequencing with electrical sensors (two cylinders A+B+B-A-)



Tutorial 3A A+B+B-A-

- Open new project with default
- Drag and drop the following components in canvas
 1. Double acting cylinder
 2. 5/2 way valve pilot operated
 3. Pneumatic power supply
 4. Reservoir (2 nos.)
 5. Proximity sensor (2 nos.)
Pneumatic → Sensors → Proximity Sensors
(Alias A0-Prox and A1-Prox)
 6. 24V, 0V, NO Push button (Alias Start)
 7. Normally closed proximity switch (4 nos. -
Electrical Control (JIC) → Sensor switches))
 1. Link each switch with A0-Prox, A1-Prox, B0-Prox and B1-Prox respectively
 8. Coil (4 Nos.)
 1. Name (Alias) the coils as follows: C1, C2, C3 and C4.
 9. NO contact (3 Nos.)
 1. Link each contact with C1, C2 and C3 respectively. (contd.)



Tutorial 3A A+B+B-A-

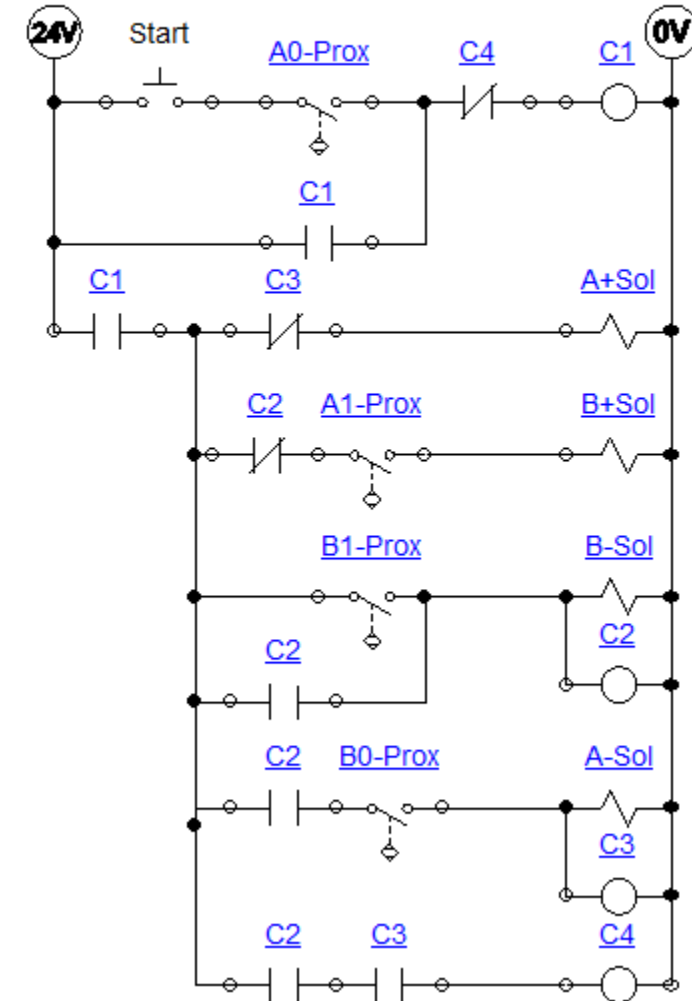
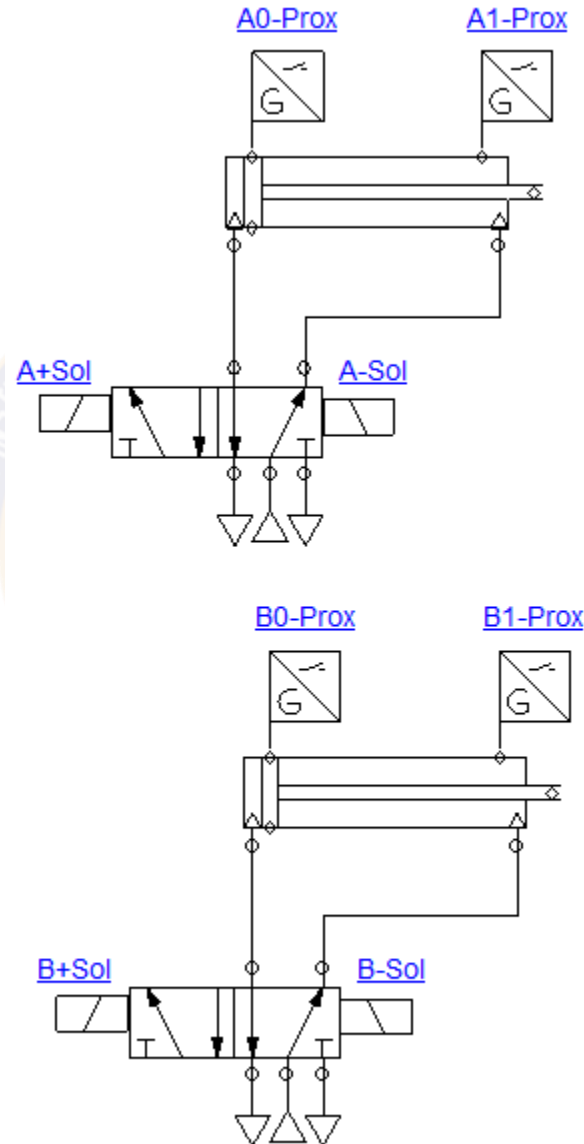
10. Normally closed contact (3 nos.)

1. Connect the contacts with C2, C3 and C4 respectively

11. Solenoid (4 nos.)

1. Name each solenoid as follows: A+Sol, A-Sol, B+Sol and B-Sol

- Double click on DCV and change pilot to solenoid DC
- Join the elements as shown in the figure
- Run the simulation and check the sequence





Thank you