

## Turning on/off 9 lamps using 6 switches

**Problem Statement:** Draw a ladder logic diagram to control the output as per the given logic. Make use of start and stop push buttons, 6 switches to turn on and off the 9 lamps.

### START PUSH BUTTON

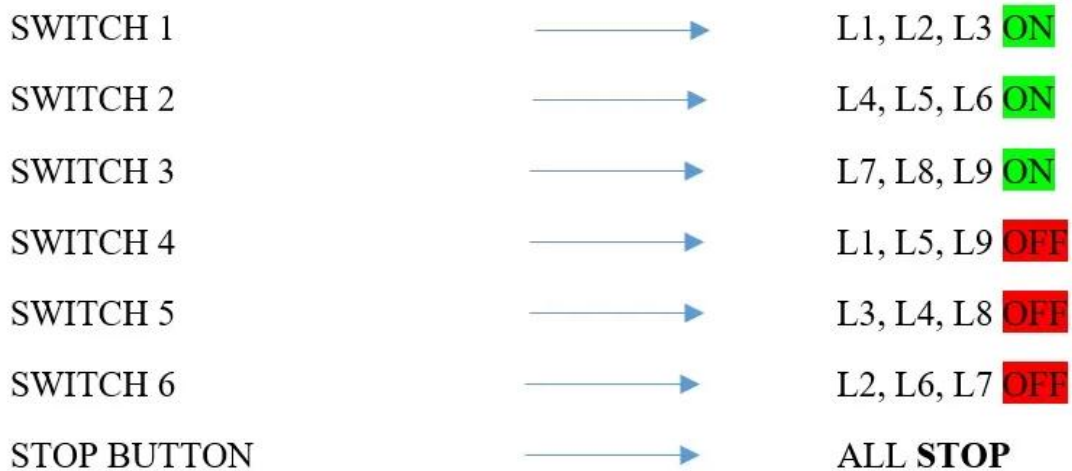


Figure 1. Assignments of buttons and switches

	Class	Label Name	Data Type
1	VAR	start_1	Bit
2	VAR	stop_1	Bit
3	VAR	isON	Bit
4	VAR	switch_1	Bit
5	VAR	switch_2	Bit
6	VAR	switch_3	Bit
7	VAR	switch_4	Bit
8	VAR	switch_5	Bit
9	VAR	switch_6	Bit
10	VAR	lamp_1	Bit
11	VAR	lamp_2	Bit
12	VAR	lamp_3	Bit
13	VAR	lamp_4	Bit
14	VAR	lamp_5	Bit
15	VAR	lamp_6	Bit
16	VAR	lamp_7	Bit
17	VAR	lamp_8	Bit
18	VAR	lamp_9	Bit

Figure 2. Local labels

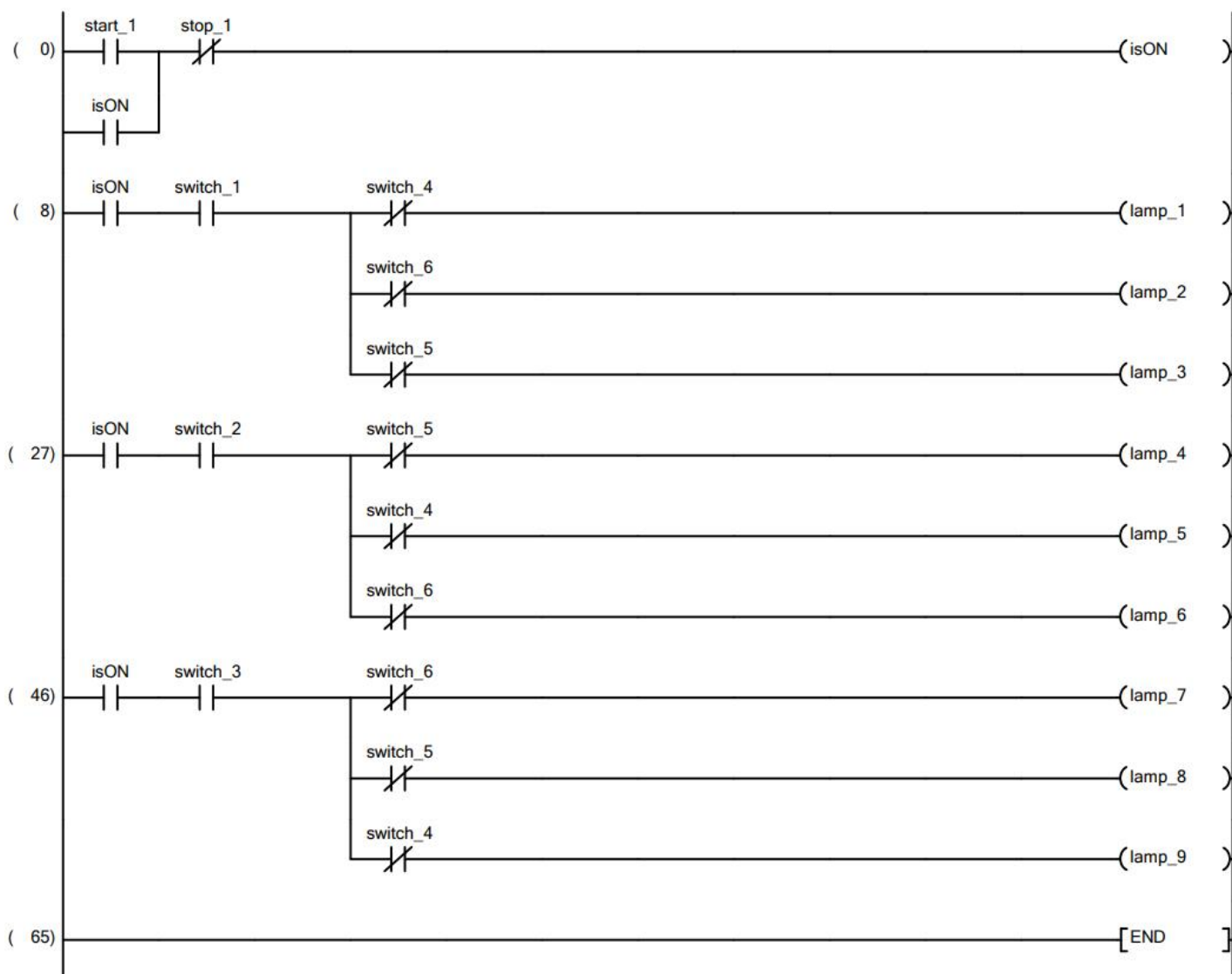


Figure 3. Ladder logic diagram