INTRODUCTION TO ROCKWELL PLC AND PAC PROGRAMMING

PARKING LOT APPLICATION

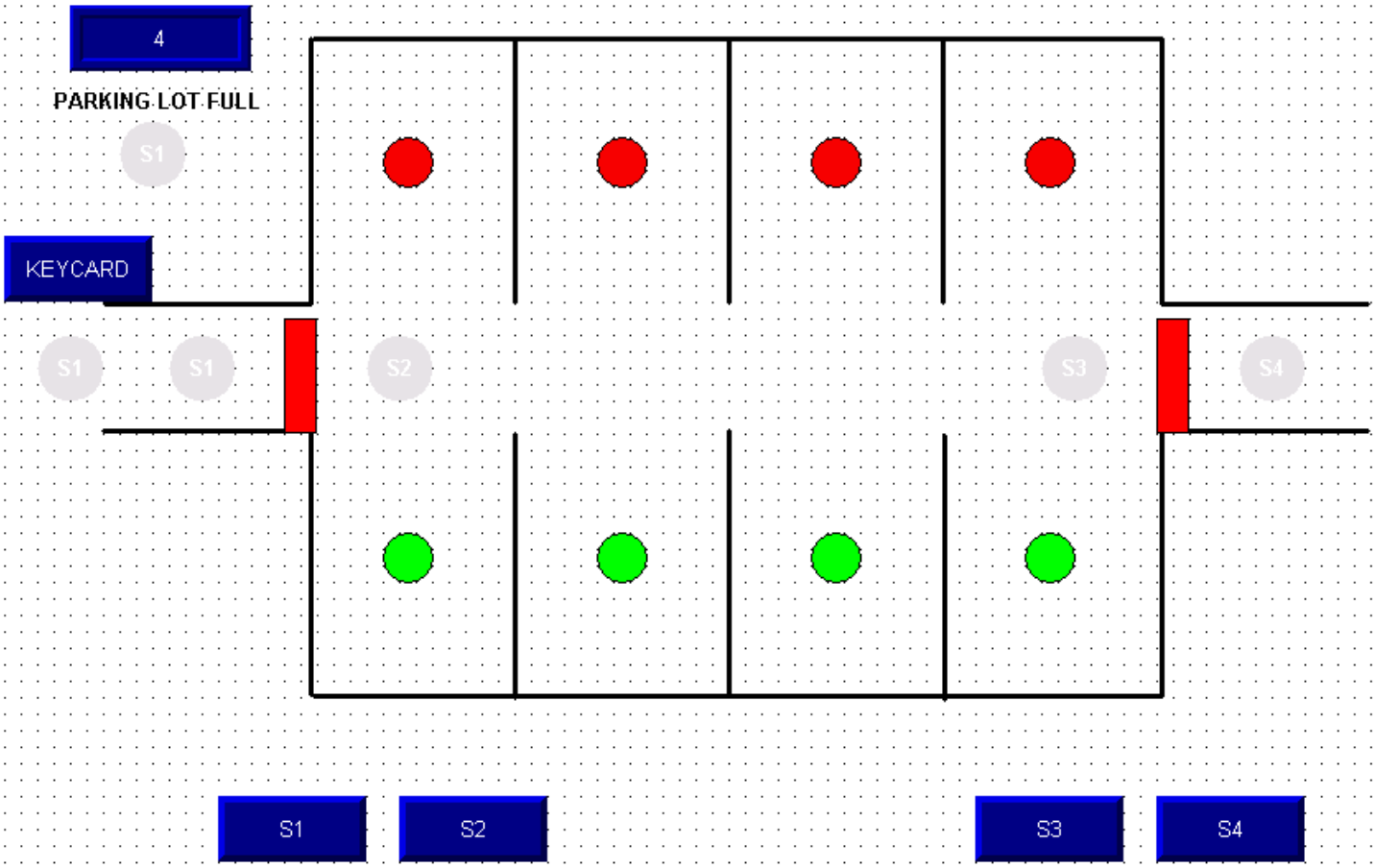
Design a car parking lot to hold 8 cars. The entrance gate is controlled by the insertion of a "**Key Card**" into a control box. When the Key Card is inserted and the car pass the Sensor 1 "**S1**", "Entrance_Gate" will rise provided there is an empty parking space. If the parking lot is full, the entrance gate will be disabled until a parking space becomes available.

After the car enters the parking lot, the In proximity sensor **"S2"** located in the ground will lower the "entrance gate". Otherwise the entrance gate remains open until the "In" proximity is triggered. Or implement a timer to close the gate if the car decided not to enter.

When a car is leaving the parking lot, the Out proximity sensor **"S3"** rises the exit gate. The exit gate remains open until the Exit proximity sensor **"S4"** is triggered. Or implement a timer to close the gate if the car decided not to exit.

A flashing light is required to indicate when the parking lot is full.

	TAGS	**INPUTS**	**DESCRIPTION**
1	KEY_CARD	Key Card	Momentary switch or use a numeric input
2	S1	Entrance Proximity	Proximity sensor located before the Entrance Gate S1
3	S2	In Proximity	Proximity sensor located after the Entrance Gate S2
4	S3	Out Proximity	Proximity sensor located before the Exit Gate S3
5	S4	Exit Proximity	Proximity sensor located after the Exit Gate S4
	TAGS	**OUTPUTS**	**DESCRIPTION**
1	ENTRANCE_GATE	Entrance Gate	Indicate the entrance gate Up / Down
2	EXIT_GATE	Exit Gate	Indicate the exit gate Up / Down
3	LOT_FULL	Car Park Full	Flashing every two seconds to indicate parking lot full


4
PARKING LOT FULL
S1
KEYCARD
S1
S1
S2
S3
S4
S1
S2
S3
S4