ROBOTICS CAMP-2021

Session: 1st, Class: 4th

Hardware Diagram Drawing

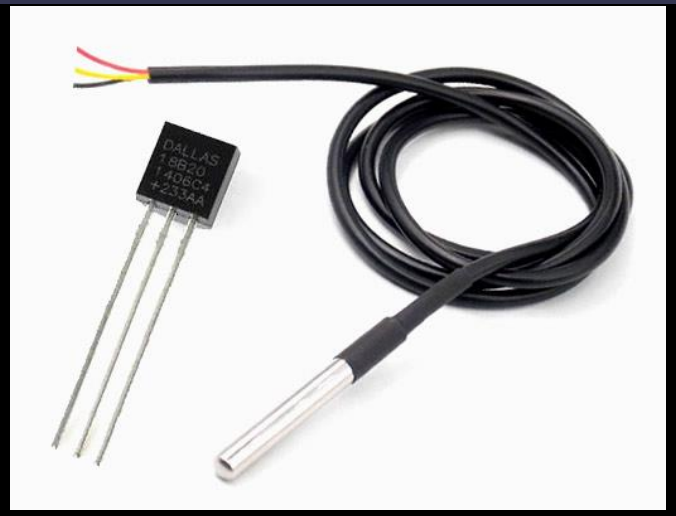
Fundamental theme of Automation

INPUT DEVICES

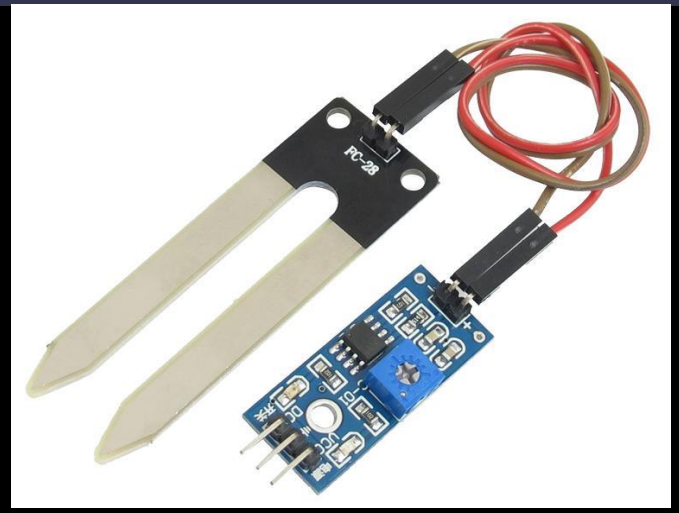
- Temperature Sensor
- Motion Sensor
- Light Sensor
- Fire/ Flame Sensor
- Water Sensor
- Obstacle Sensor

OUTPUT DEVICES

- Motor
- Lamp
- Fan
- Buzzer
- Pump

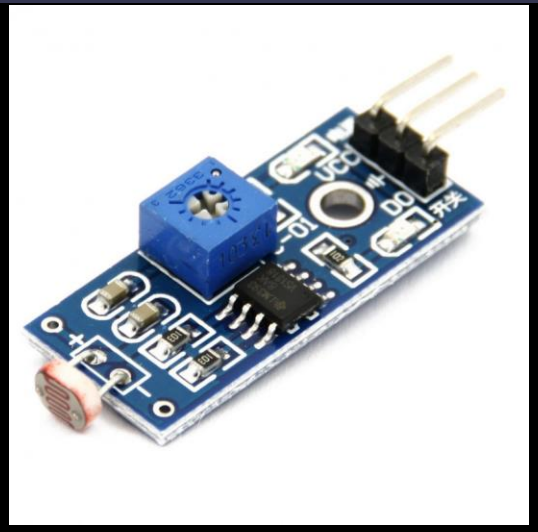


Temperature Sensor

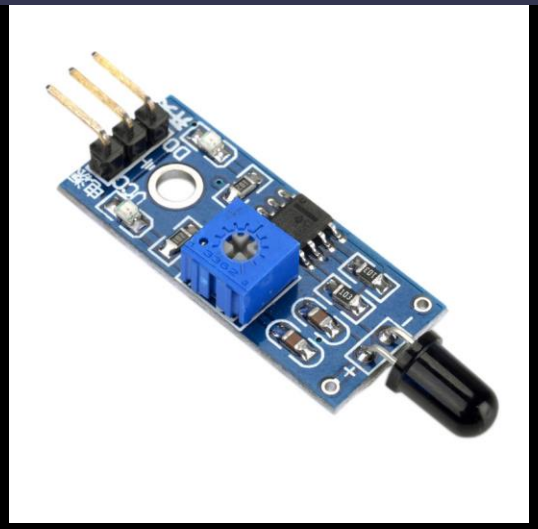


Moisture/Water Sensor

Motion Sensor



Light Sensor



Fire Sensor

Obstacle Sensor

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Robotics & Automation Project Idea Generation

INPUT DEVICES

- Temperature Sensor
- Motion Sensor
- Light Sensor
- Fire/ Flame Sensor
- Water Sensor
- Obstacle Sensor

OUTPUT DEVICES

- Motor
- Fan
- Buzzer
- Pump
- Lamp

Motion Sensor + Lamp

Automatic Indoor Lamp

If, Motion Sensor High - Lamp on
Else - Lamp off.

INPUT DEVICES

- Temperature Sensor
- Motion Sensor
- Light Sensor
- Fire/ Flame Sensor
- Water Sensor
- Obstacle Sensor

OUTPUT DEVICES

- Motor
- Fan
- Buzzer
- Pump
- Lamp

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Motion Sensor + Buzzer

Automatic Thief Detector

If, Motion Sensor High - Buzzer on
Else - Buzzer off.

INPUT DEVICES

- Temperature Sensor
- Motion Sensor
- Light Sensor
- Fire/ Flame Sensor
- Water Sensor
- Obstacle Sensor

OUTPUT DEVICES

- Motor
- Fan
- Buzzer
- Pump
- Lamp

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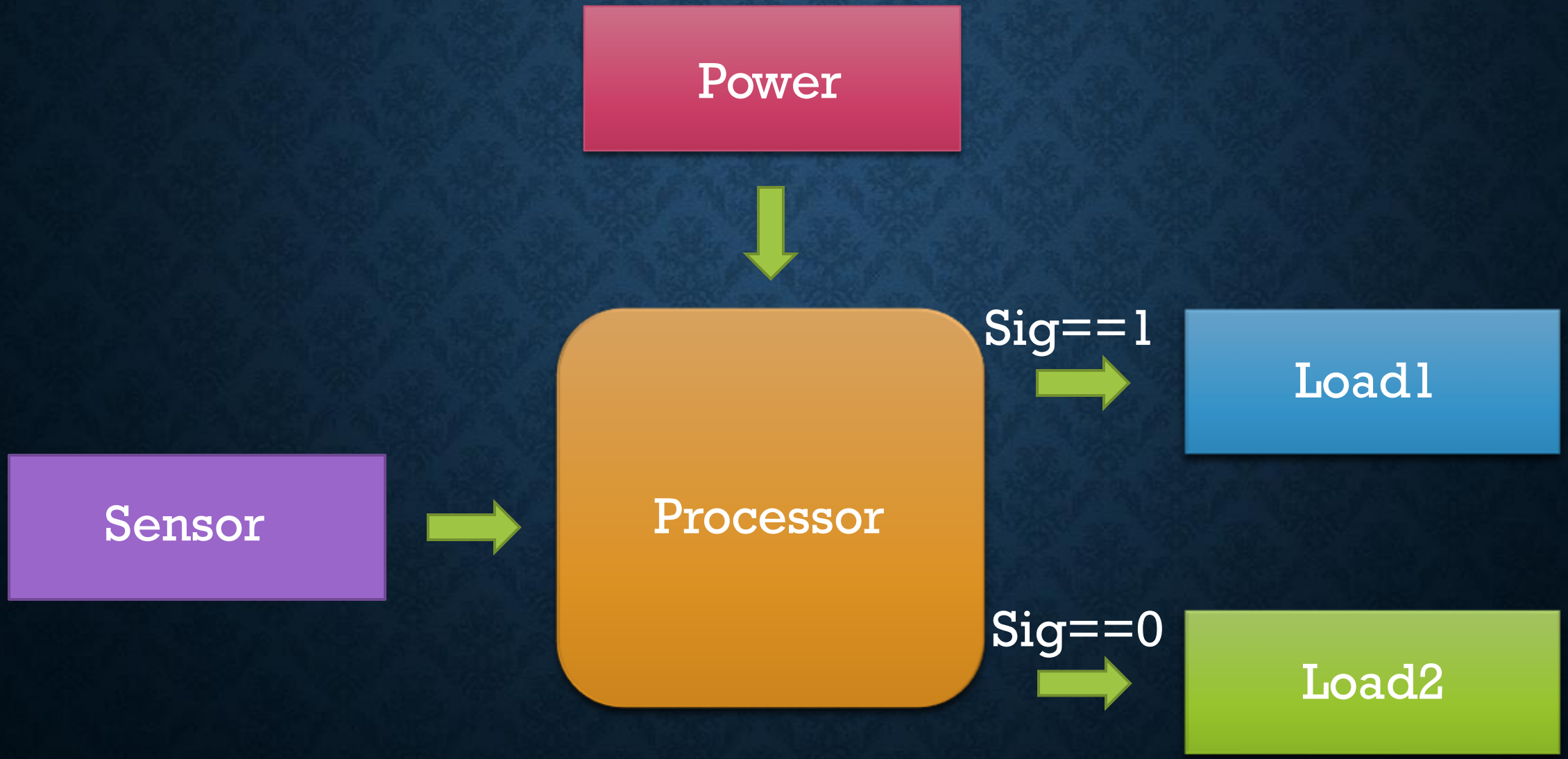
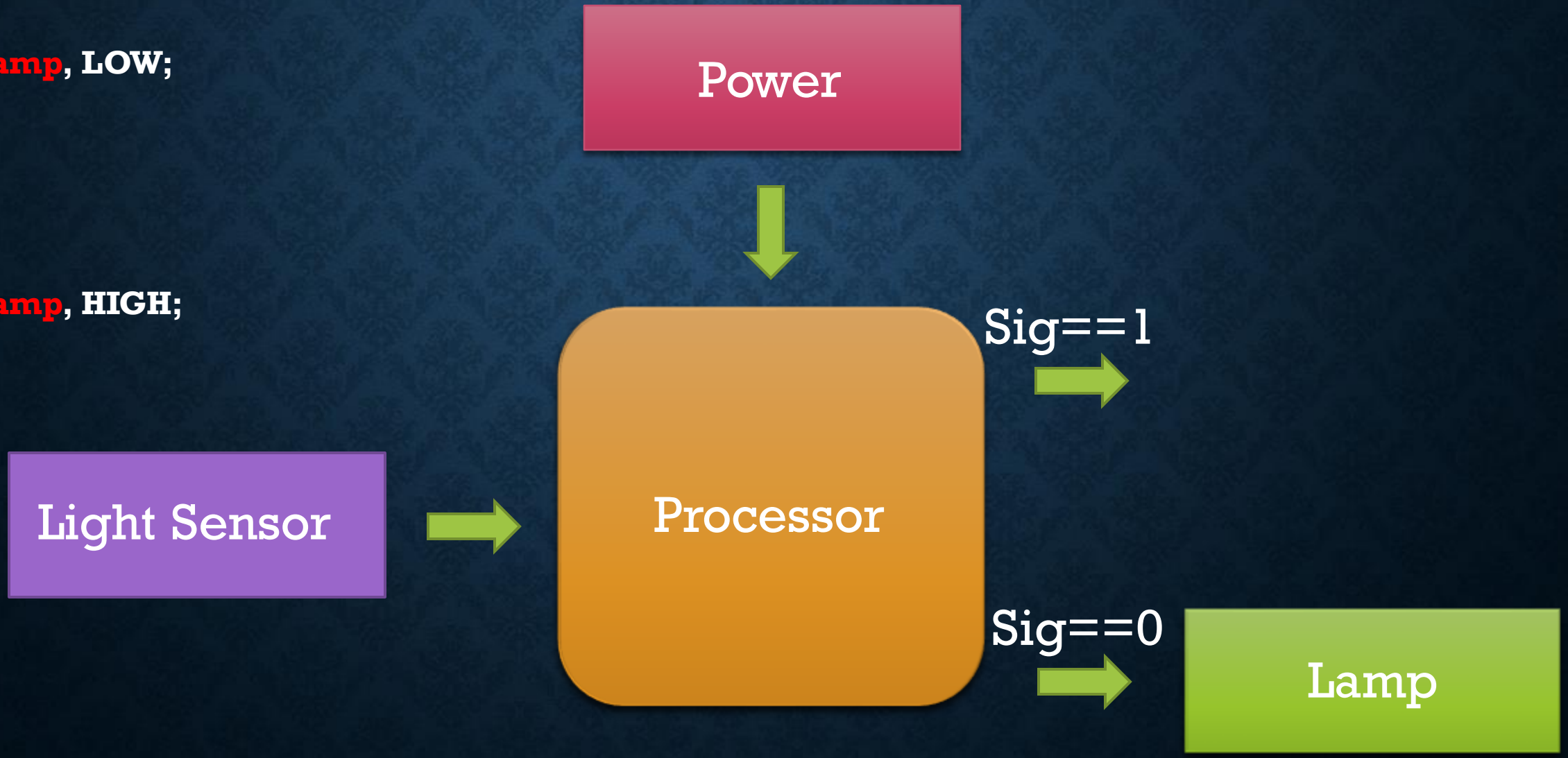
Hardware Diagram Drawing

BASIC BLOCK DIAGRAM



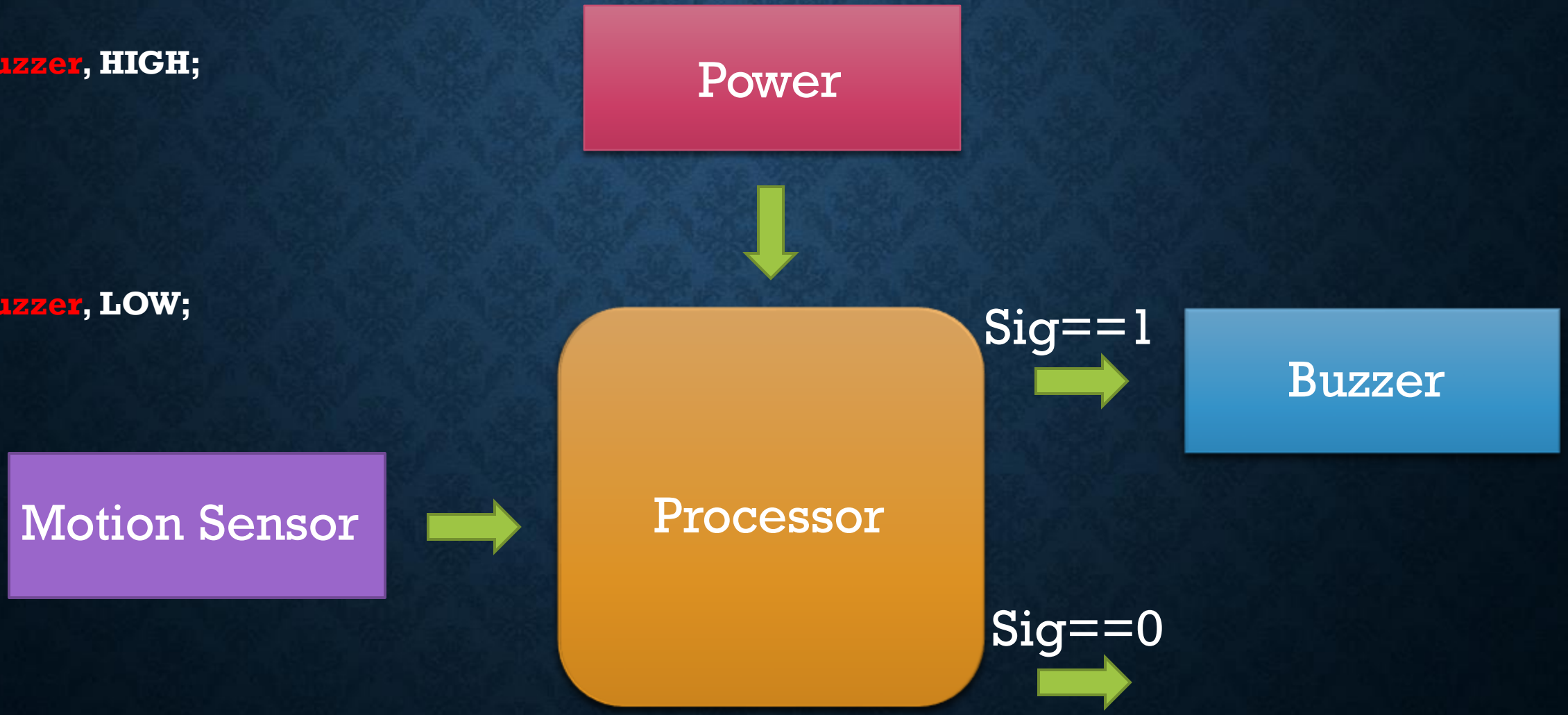
01. Project Title: Automatic Street Lamp

```
If (Light Sensor==1)
    {
      Lamp, LOW;
    }
else
    {
      Lamp, HIGH;
    }
```



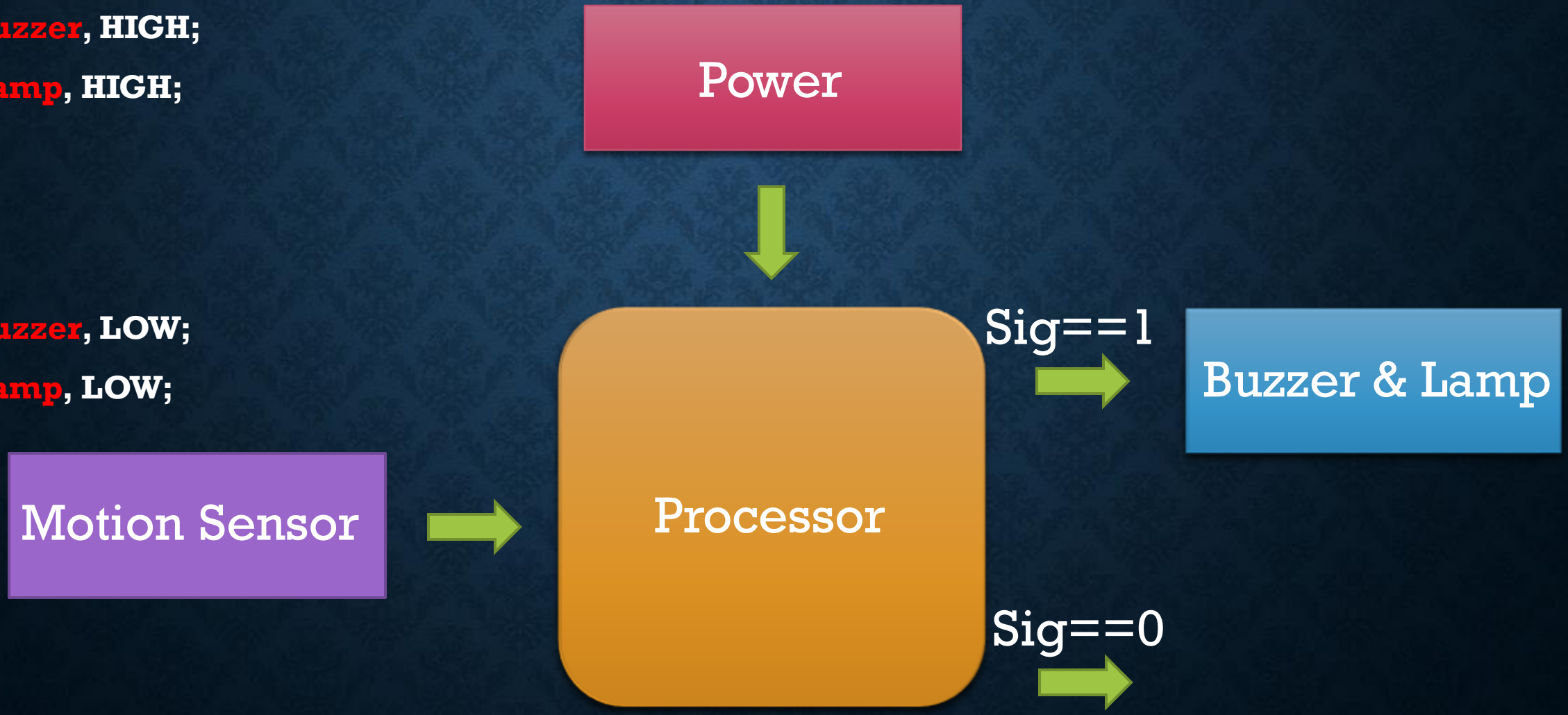
02. Project Title: Automatic Thief Detector

```
If (Motion Sensor==1)
    {
      Buzzer, HIGH;
    }
else
    {
      Buzzer, LOW;
    }
```



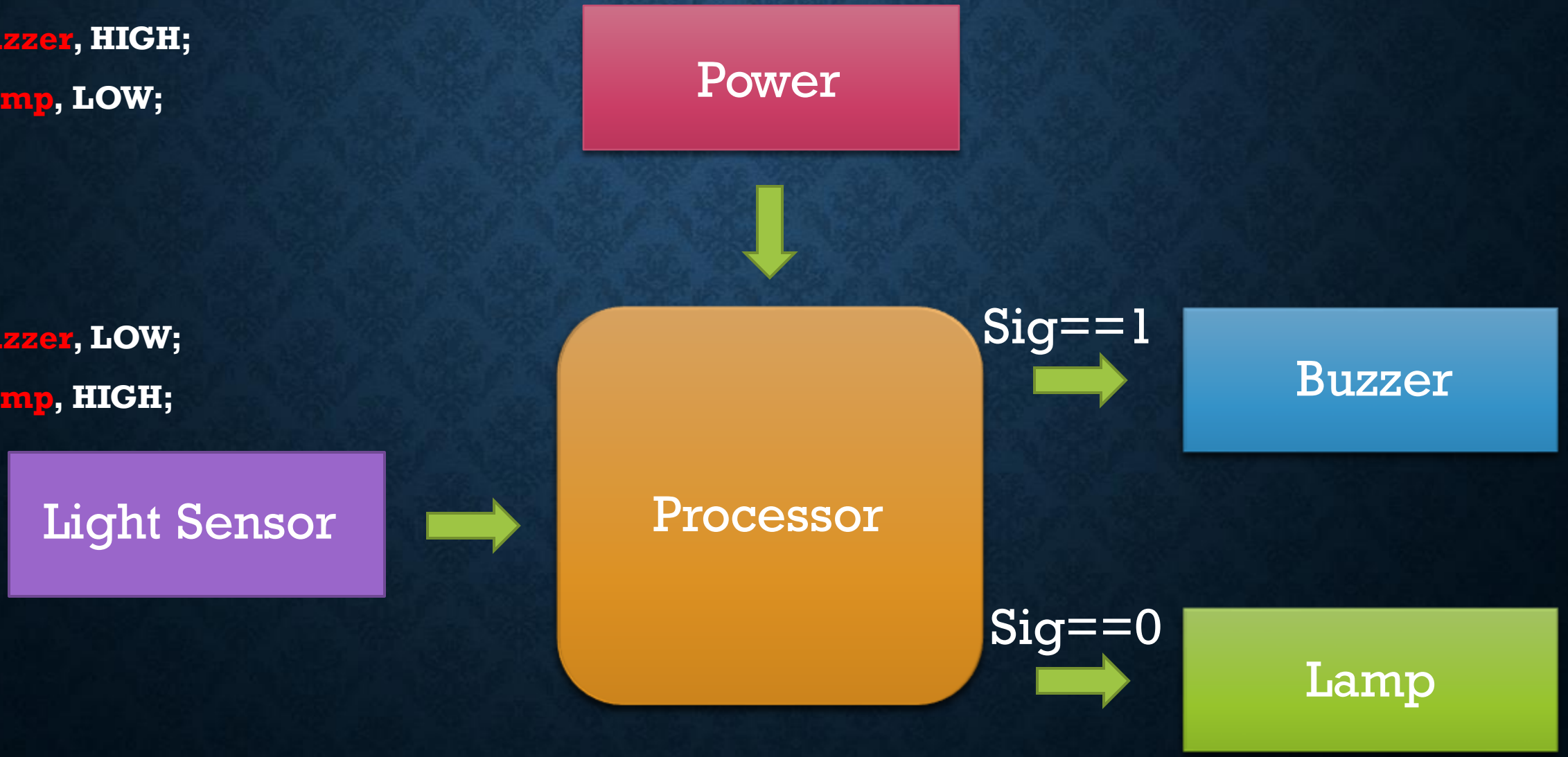
03. Project Title: Automatic Thief Detector & Lighter

```
If (Motion Sensor==1)
    {
      Buzzer, HIGH;
      Lamp, HIGH;
     }
else
    {
      Buzzer, LOW;
      Lamp, LOW;
     }
```



04. Project Title: Automatic Morning Alarm & Night Light

```
If (Light Sensor==1)
   {
     Buzzer, HIGH;
     Lamp, LOW;
   }
else
   {
     Buzzer, LOW;
     Lamp, HIGH;
    }
```



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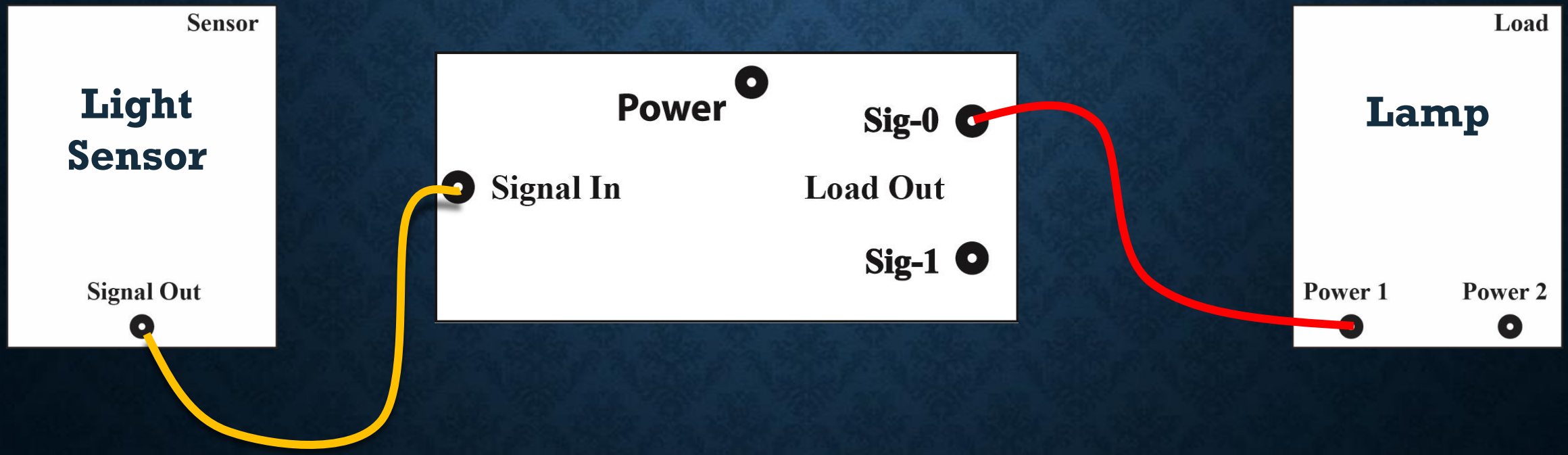
Automatic Street Lamp

Light Sensor + Lamp

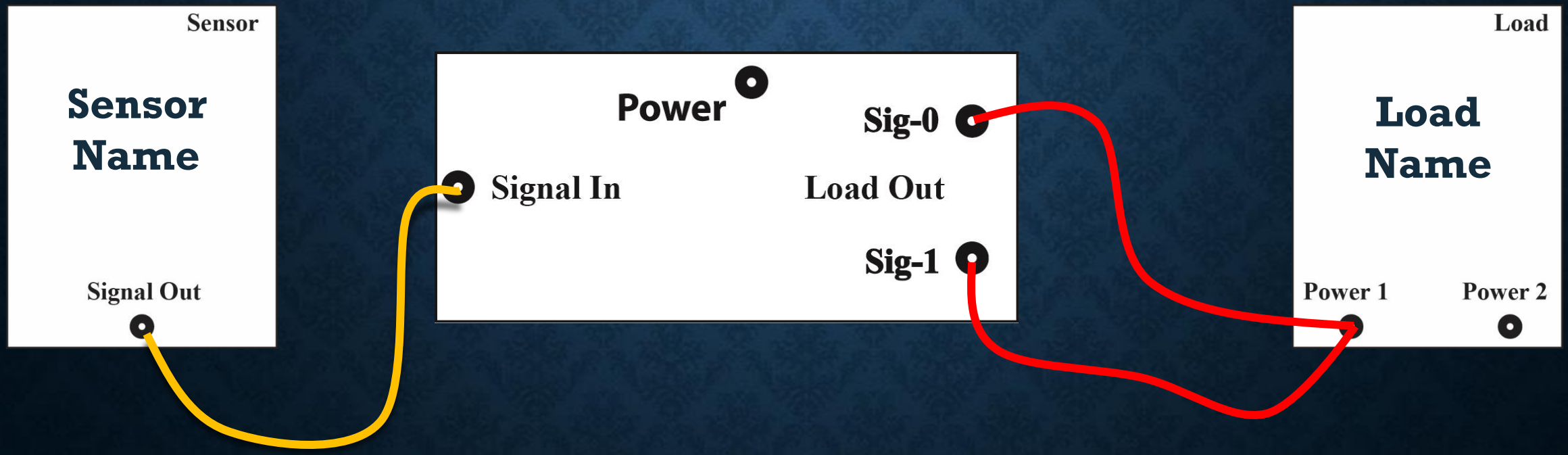


If, Light Sensor High – Lamp off

Else – Lamp on.

Wrong way

Components



Concepts

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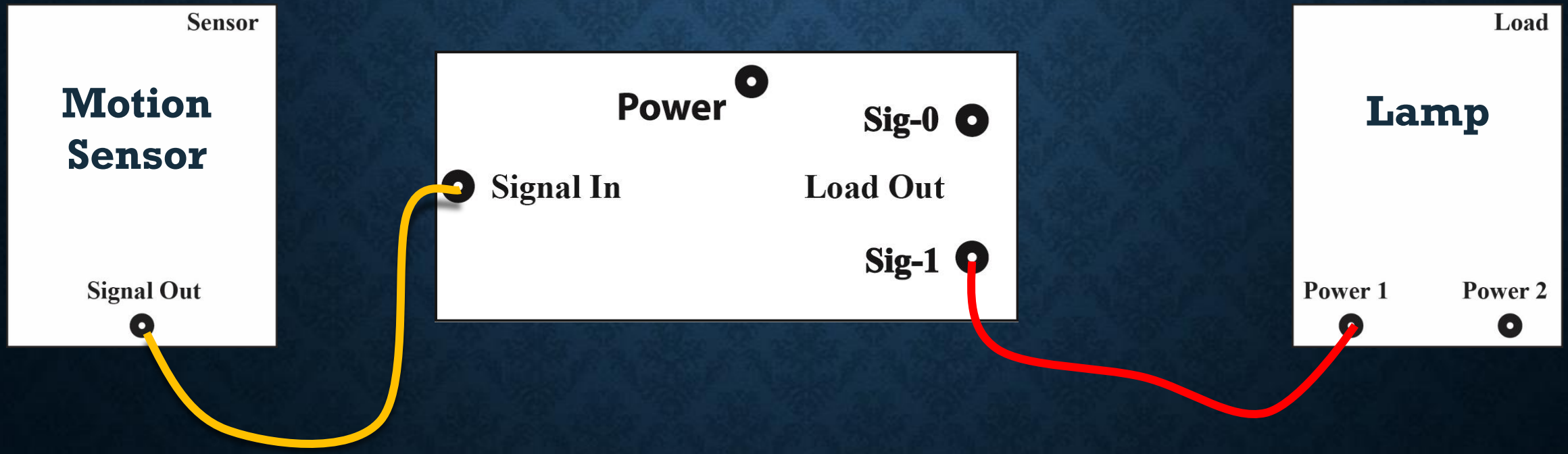
Automatic Indoor Lamp

Motion Sensor + Lamp



If, Motion Sensor High - Lamp on
Else - Lamp off.

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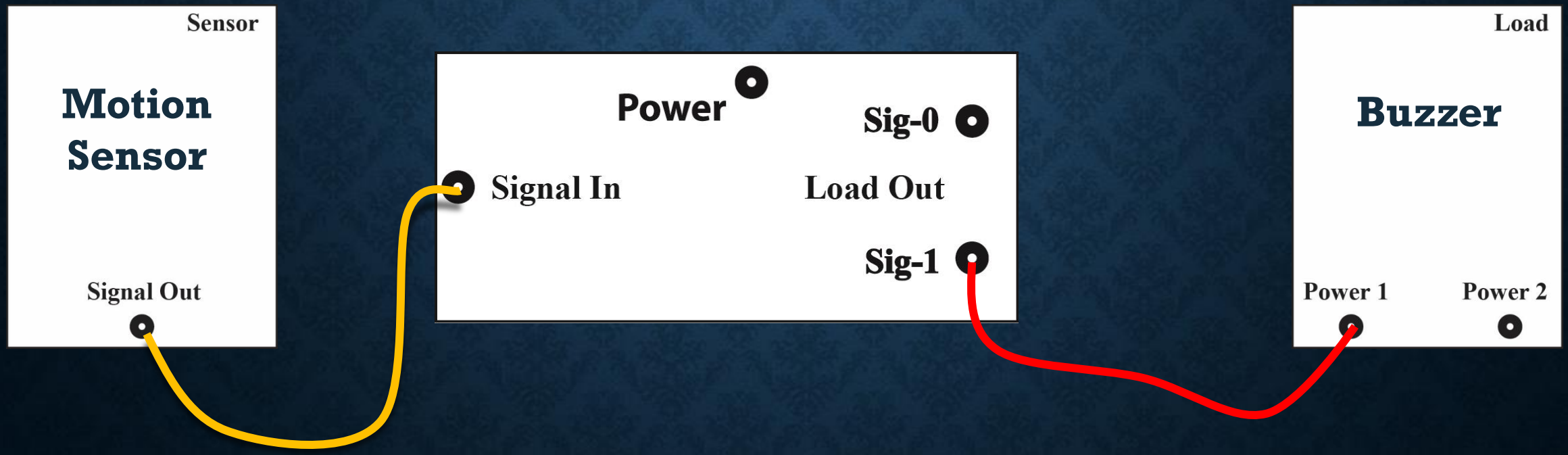
Motion Sensor + Buzzer

Automatic Thief Detector



If, Motion Sensor High - Buzzer on
Else - Buzzer off.

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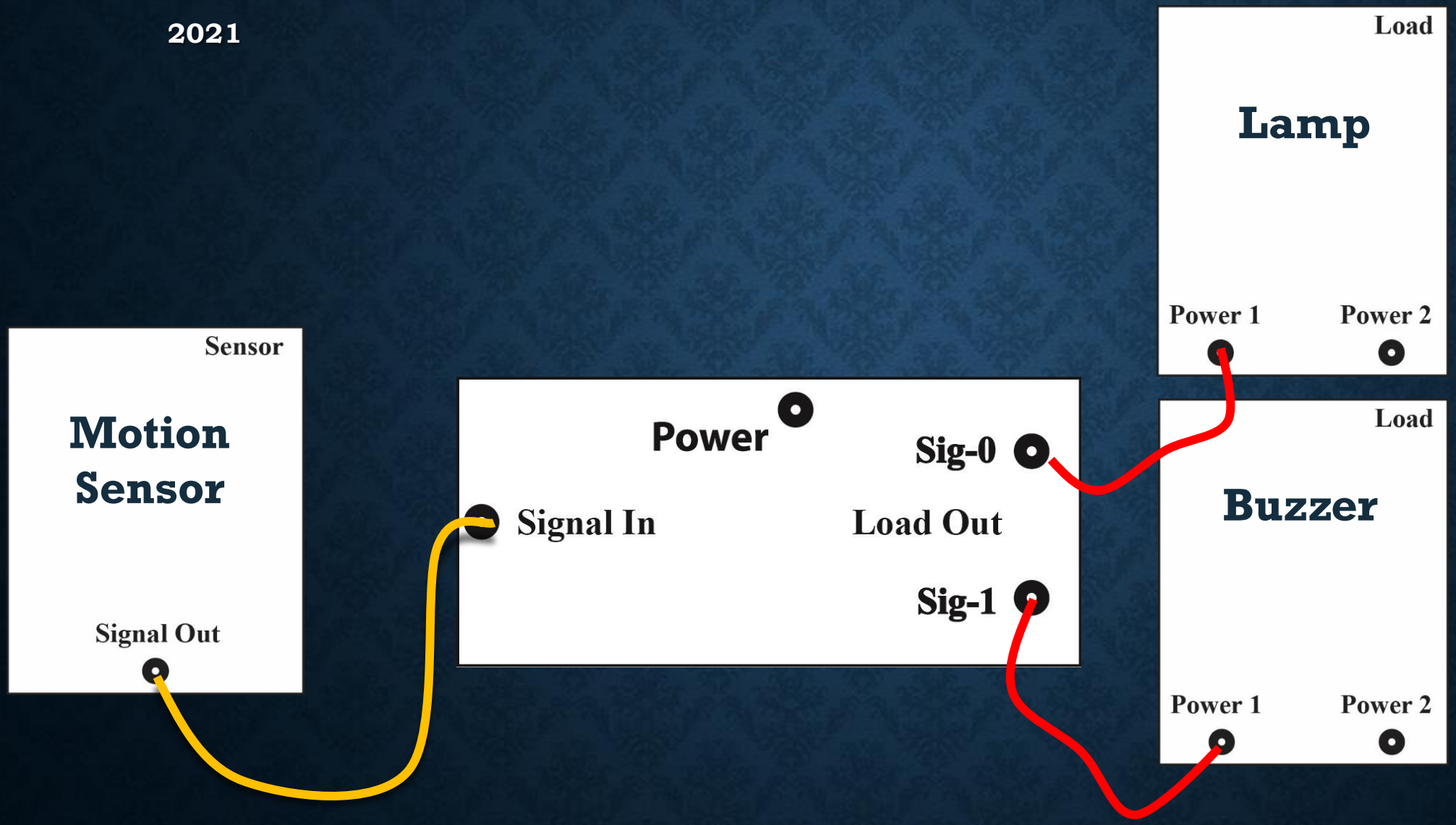

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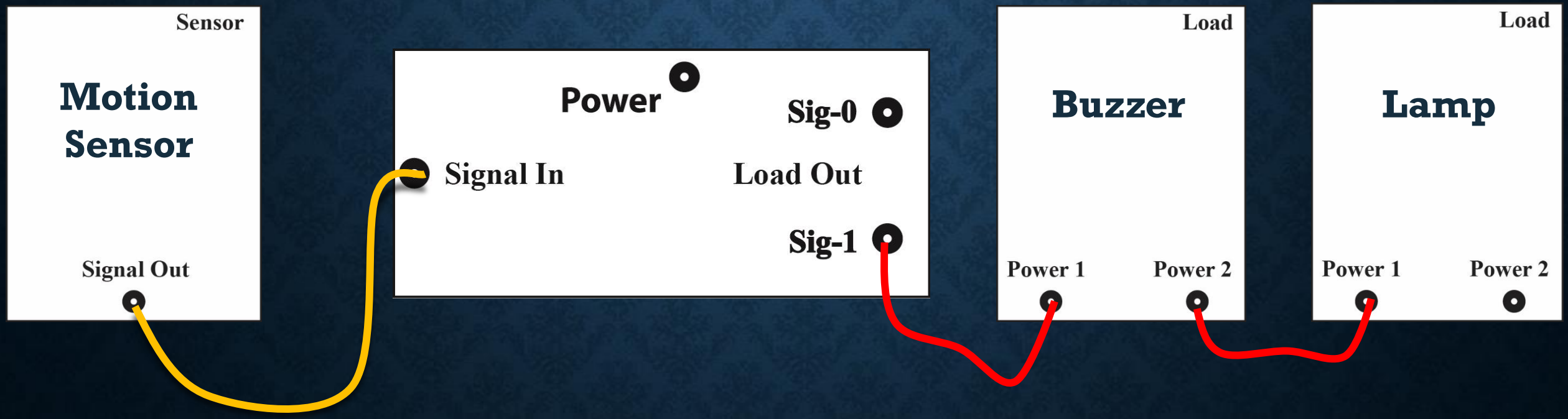

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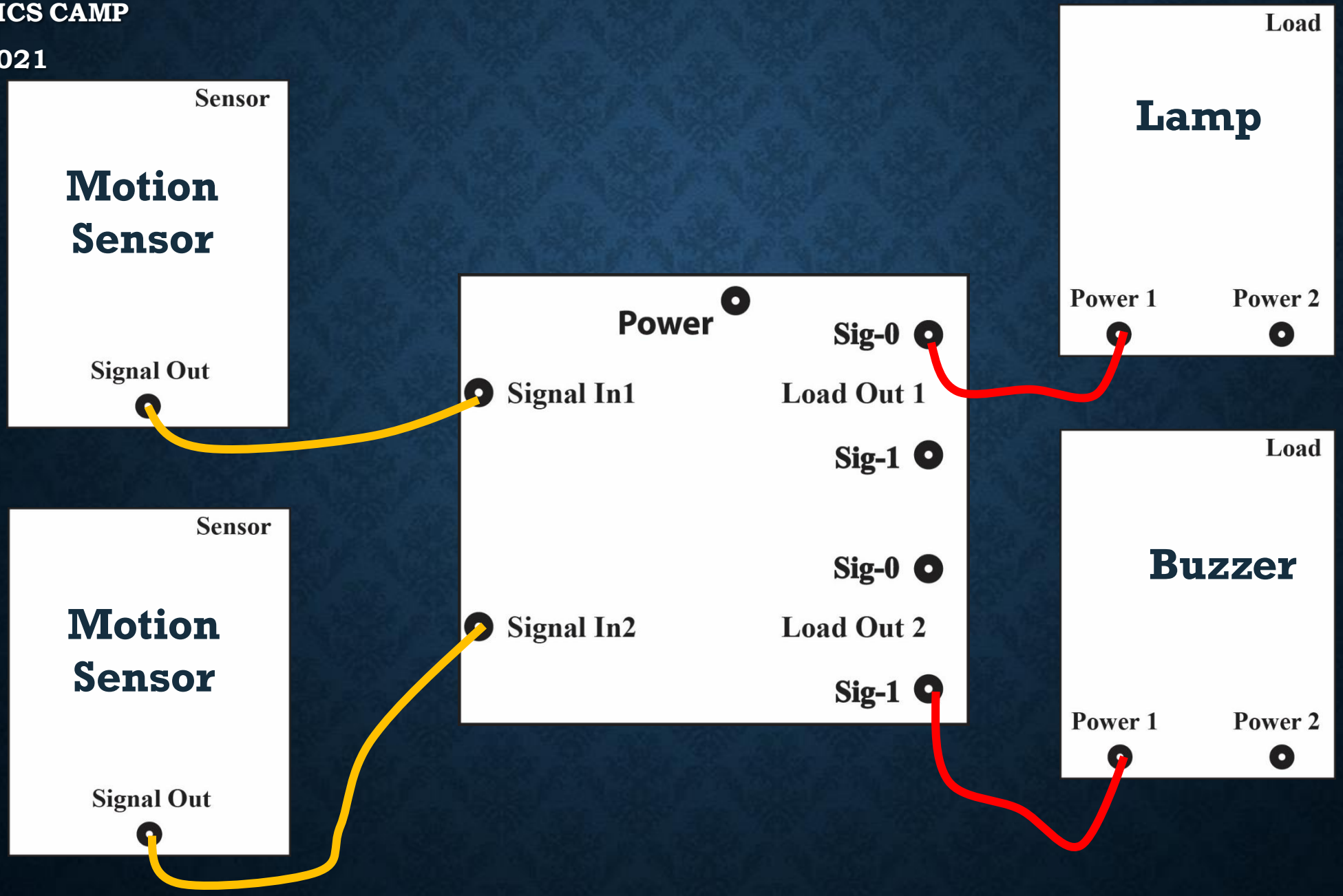

THANK YOU