Smart Room Controller for the Hearing Impaired

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BME Environment Read

Is homeState = 0? — Yes → Read the Environment → Display to OLED and NeoPixels

No ↓

Control Hue Bulb Colors

Is homeState = 1? → is buttonState = True? — Yes → Turn on Hue Bulbs and Neopixels → is button long pressed? — Yes → Change Hue Bulb and Neopixel color

No (buttonState) ↺

No (long pressed) ↺

No ↓

Control Wemo Outlets

Is homeState = 2? → is buttonState = True? — Yes → Turn on selected Wemo outlet → is encoder rotated? — Yes → Increment selected Wemo outlet

No (buttonState) ↺

No (encoder) ↺

No ↓

Visual Wake Up Alarm

Is homeState = 3? → is buttonState = True? — Yes → Turn on wake up alarm → is alarm timer ready? — Yes → Display alarm flash to Huebulbs and Neopixels

No (buttonState) ↺

No (alarm timer) ↺

No ↓

Control White Hue Bulbs

Is homeState = 4? → is buttonState = True? — Yes → Turn on White Hue Bulbs and Neopixels

No (buttonState) ↺

Door Knock Visual Alert

is microphone reading >1000? — Yes → Display visual door knock alert flash on Hue Bulbs and Neopixels

No ↺