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import RPi.GPIO as GPIO
import time
import smtplib

# change these as desired - they're the pins connected from the
# SPI port on the ADC to the Cobbler
SPICLK = 11
SPIMISO = 9
SPIMOSI = 10
SPICS = 8

# photoresistor connected to adc #0
photo_ch = 0

#port init
def init():
         GPIO.setwarnings(False)
         GPIO.cleanup()             #clean up at the end of your script
         GPIO.setmode(GPIO.BCM)           #to specify whilch pin numbering
system
         # set up the SPI interface pins
         GPIO.setup(SPIMOSI, GPIO.OUT)
         GPIO.setup(SPIMISO, GPIO.IN)
         GPIO.setup(SPICLK, GPIO.OUT)
         GPIO.setup(SPICS, GPIO.OUT)

#read SPI data from MCP3008(or MCP3204) chip,8 possible adc's (0 thru 7)
def readadc(adcnum, clockpin, mosipin, misopin, cspin):
        if ((adcnum > 7) or (adcnum < 0)):
                return -1
        GPIO.output(cspin, True)

        GPIO.output(clockpin, False)  # start clock low
        GPIO.output(cspin, False)     # bring CS low

        commandout = adcnum
        commandout |= 0x18  # start bit + single-ended bit
        commandout <<= 3    # we only need to send 5 bits here
        for i in range(5):
                if (commandout & 0x80):
                        GPIO.output(mosipin, True)
                else:
                        GPIO.output(mosipin, False)
                commandout <<= 1
                GPIO.output(clockpin, True)
                GPIO.output(clockpin, False)

        adcout = 0
        # read in one empty bit, one null bit and 10 ADC bits
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        for i in range(12):
                GPIO.output(clockpin, True)
                GPIO.output(clockpin, False)
                adcout <<= 1
                if (GPIO.input(misopin)):
                        adcout |= 0x1

        GPIO.output(cspin, True)

        adcout >>= 1       # first bit is 'null' so drop it
        return adcout

def main():
         init()
         time.sleep(2)
         print ("will start detec water level\n")
         loop_counter = 0
         while True:
             adc_value=readadc(photo_ch, SPICLK, SPIMOSI, SPIMISO, SPICS)
             if adc_value < 10:
                 print ("no water\n")
                 time.sleep(1)
             elif adc_value>10 and adc_value<200:
                 print("water level:"+str("%.1f"%(adc_value/200.*100))+"%\n")
                 loop_counter += 1
                 print(loop_counter)
                  #print "adc_value= " +str(adc_value)+"\n"
                 time.sleep(1)
                 if loop_counter == 1:
                     server = smtplib.SMTP('smtp.gmail.com', 587)
                     server.starttls()
                     server.login(“ ~sender email~ ", “ ~email password~ ")
                     msg = "it sure is wet down here!"
                     server.sendmail("~sender email~”,"~receiver email~”, msg)
                     server.quit()


if __name__ == '__main__':
         try:
                  main()

         except KeyboardInterrupt:
                  pass
GPIO.cleanup()
```