`HC SR04 Pat's Avoidance Robot

`Pat McMahon 19/5/2021

setfreq m8

symbol trig = **5** ' Define output pin for Trigger pulse

symbol echo = c.0 ' Define input pin for Echo pulse

symbol range = w1 ' 16 bit variable for range (remember w1 = b2 + b3)

main:

pulsout trig,**2** ' produces about 20uS pulse (must be minimum of 10uS)

pulsin echo,**1**,range ' measures the range in 10uS steps

pause **10** ' SRF04 mandatory 10mS recharge period after ranging completes

' now convert range to cm (divide by 5.8) or inches (divide by 14.9)

' as picaxe cannot use fractions, multiply by 10 then divide by full number

' e.g. range x 10 then / 58 is the same as range / 5.8

let range = range/ **2** \* **10** / **58**

sertxd ("range ",#range," Cm ",cr,lf)

goto main

if w1>**40** then goforwards

if w1<=**10** then gobackwards

if w1<=**30** then goright

if w1<=**40** then goleft

goforwards:

high **3**,**4**

low **1**,**2**

pause **1000**

low **1**,**2**,**3**,**4**

goto main

goleft:

high **1**,**4**

low **2**,**3**

pause **1000**

low **1**,**2**,**3**,**4**

goto main

goright:

high **2**,**3**

low **1**,**4**

pause **1000**

low **1**,**2**,**3**,**4**

goto main

gobackwards:

high **1**,**2**

low **3**,**4**

pause **1000**

low **1**,**2**,**3**,**4**

goto main