Calculating distance and durarion of the wave sent

Using it to map into a value between 0 and 255

Duration the echo pin is high determines the time period to travel and return

Inside the while(1) loop itself

Do not use interrupts

Use embedded c and usart

1)timer to be started when pin is set high

2)timer to be stopped when pin is set low

3)calculate the time difference

4)change count to real time

5)print distance

Parity and sum checker

See the 9th bit somewhere in datasheet