ESS: Exercise Set 4

Timers

Question 1:

Calculate the parameters to setup a periodic timer with the following properties:

- System Clock of 64 MHz
- Prescaler of 1,2,8,16,32 (PRESCALE)
- 16 bit period compare register (PERIOD)

For each one, calculate the actual frequency you obtain and the percentage error. Also compute whether the desired period could be attained with an 8 bit period compare register and what the percentage error would be.

(a) A period of 1 μS

(b) A frequency of 50 kHz

(c) A frequency of 128 Hz

(d) A frequency of 57.6 kHz (common baudrate)

(e) A frequency of 1 Hz

Interrupts

Question 2:

What must be done as a minimum to enable interrupts?