Assignment 2

Work Progress

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COS10004

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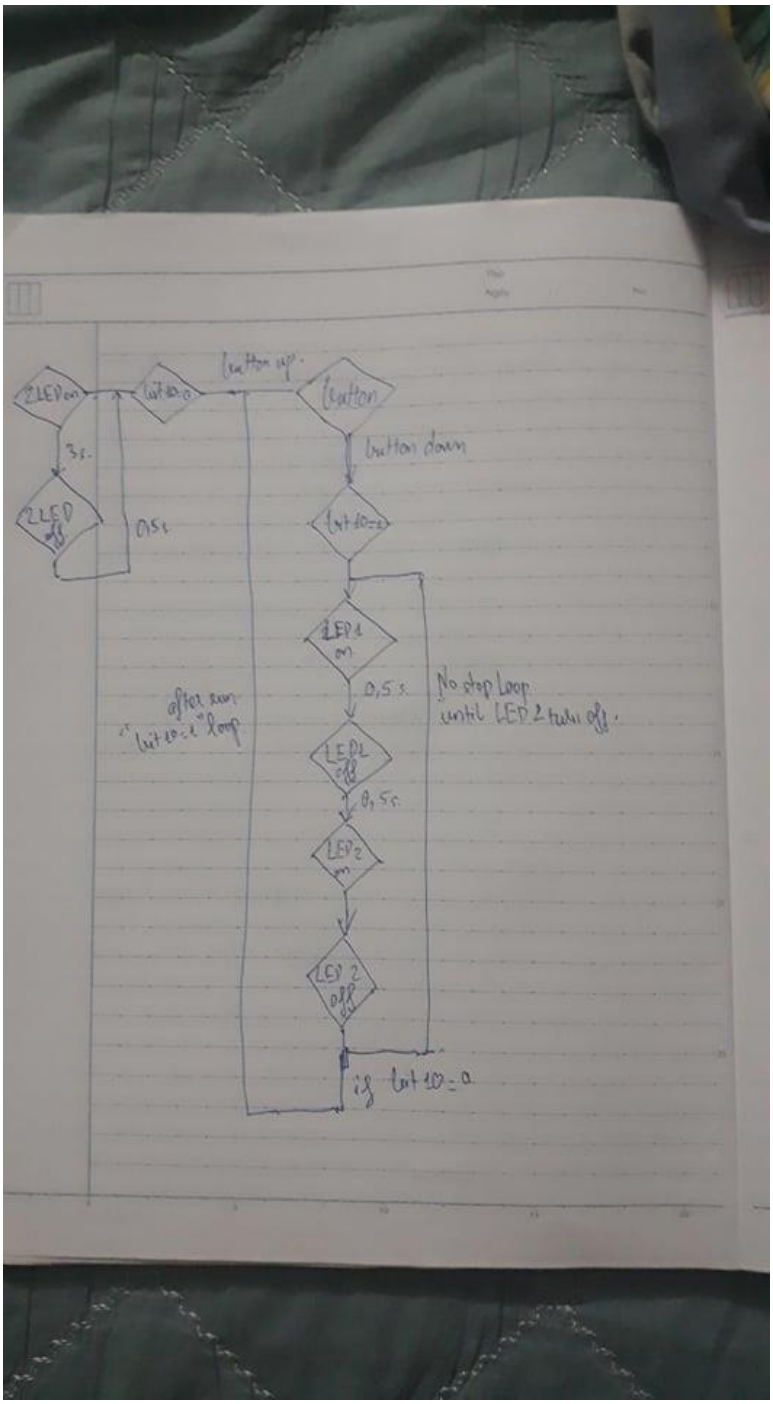
Assignment Program Model:



Main.asm:

```
macro delay {

local .wait
mov r2,#0x3F0000

.wait:
sub r2,#1
cmp r2,#0
bne .wait

}



BASE = $FE000000 ; Use $3F000000 for 2B, 3B, 3B+
GPIO_OFFSET = $200000

mov r0,BASE
orr r0,GPIO_OFFSET ;Base address of GPIO

ldr r1,[r0,#4] ;read function register for GPIO 10 - 19
;clear the 3 bits for GPIO10
bic r1,r1,#7  ;bit clear
str r1,[r0,#4]

;output set up GPIO 17 18
mov r8,#9
```

```
lsl r8,#21
str r8,[r0,#8]

;setvalue
mov r8,#1
lsl,#17

mov r4,#1
lsl r4,#18

;Turn on and off LED base on cont



include "Timer.asm"
```

Timer.asm:

```
TIMER:
  TIMER_OFFSET = $3000
;TIMER_MICROSECONDS = 524288 ; $0080000 ;0.524288 s
  orr r3,TIMER_OFFSET ;store base address of timer (r3)
  mov r4,$70000
  orr r4,$0A100
  orr r4,$00020   ;TIMER_MICROSECONDS = 500,000
  ldrd r6,r7,[r3,#4]
  mov r5,r6 ;store starttime (r5)(=currenttime (r6))
  timerloop:
```

```
  ldrd r6,r7,[r3,#4] ;read currenttime (r6)
  sub r8,r6,r5  ;remainingtime (8)= currenttime (r6) - starttime (r5)
  cmp  r8,r4  ;compare remainingtime (r8), delay (r4)
  bls timerloop
bx lr
```