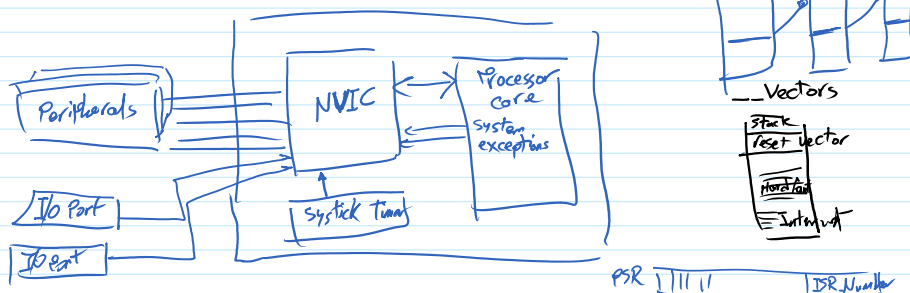
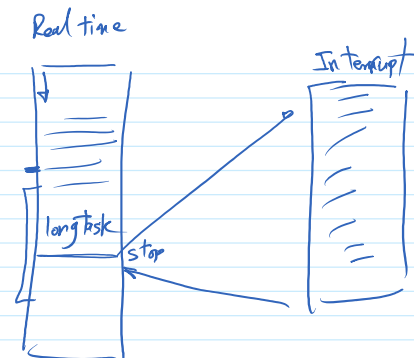


Sunday, June 13, 2021 10:30 AM

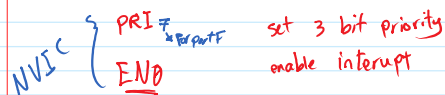
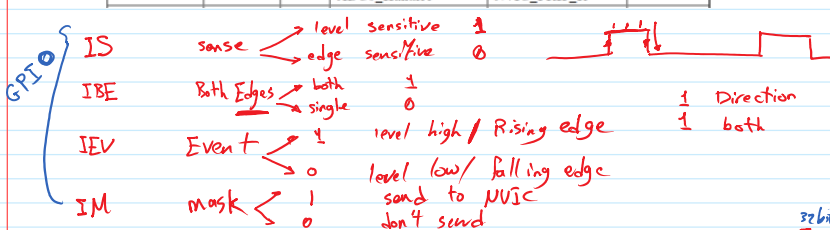


Vector address	Number	IRQ	ISR name in Startup.s	NVIC	Priority bits
0x00000038	14	-2	PendSV_Handler	NVIC_SYS_PRI3_R	23 – 21
0x0000003C	15	-1	SysTick_Handler	NVIC_SYS_PRI3_R	31 – 29
0x00000040	16	0	GPIOPortA_Handler	NVIC_PRI0_R	7 – 5
0x00000044	17	1	GPIOPortB_Handler	NVIC_PRI0_R	15 – 13
0x00000048	18	2	GPIOPortC_Handler	NVIC_PRI0_R	23 – 21
0x0000004C	19	3	GPIOPortD_Handler	NVIC_PRI0_R	31 – 29
0x00000050	20	4	GPIOPortE_Handler	NVIC_PRI1_R	7 – 5
0x00000054	21	5	UART0_Handler	NVIC_PRI1_R	15 – 13
0x00000058	22	6	UART1_Handler	NVIC_PRI1_R	23 – 21
0x0000005C	23	7	SSI0_Handler	NVIC_PRI1_R	31 – 29
0x00000060	24	8	I2C0_Handler	NVIC_PRI2_R	7 – 5
0x00000064	25	9	PWM0Fault_Handler	NVIC_PRI2_R	15 – 13
0x00000068	26	10	PWM0_Handler	NVIC_PRI2_R	23 – 21
0x0000006C	27	11	PWM1_Handler	NVIC_PRI2_R	31 – 29
0x00000070	28	12	PWM2_Handler	NVIC_PRI3_R	7 – 5
0x00000074	29	13	Quadrature0_Handler	NVIC_PRI3_R	15 – 13
0x00000078	30	14	ADC0_Handler	NVIC_PRI3_R	23 – 21

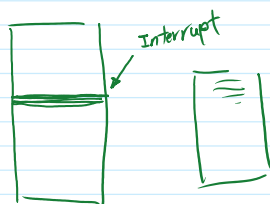
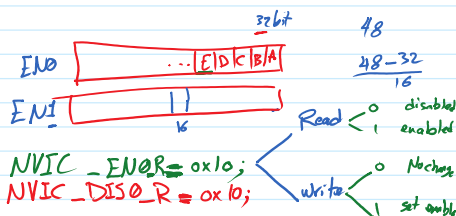
prio

D	C	B	A	1
---	---	---	---	---

76.5
0
7
4n
4n+1
4n+2
4n+3
0,1,2,3



```
Enable Interrupts();  
Disable Interrupts();
```



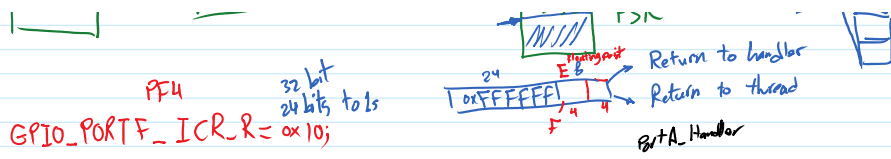
	RA	TOP
push for the current instruction to finish		
set $IPSR = 18$		RA - R3
set $LR = 0xFFFFFFFF$	LR	R12
get MSR as stack pointer	PC	LR
	PSE	PC



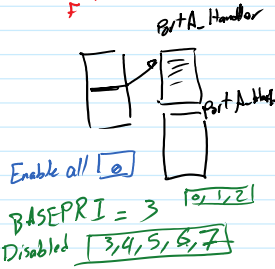
PF4

32 bit
010 bits to 1s

24
E6
Return to handler
Return to thread

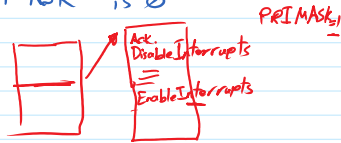


GPIO {
ICR Interrupt clear = 0x01
RIS Raw Interrupt status



5 req:

- trigger flag bit is set (RIS)
- bit is set (IME)
- level of interrupt must be less than BASEPRI
- interrupt must be enabled in NVIC_ENO_R
- Bit 0 of the special register PRIMASK is 0



volatile uint32_t FallingEdges = 0;

Void EdgeCounter_Init () {

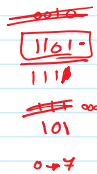
SYSCCTL_RCGCGPIOR = 0x20;

FallingEdges = 0;

GPIO_PORTF_DIR_R &= ~0x10; PF4

- ~ - AFSEL_R &= ~0x10;
- ~ - DEN_R = 0x10;
- ~ - PCTL_R &= ~0x000F6000;
- ~ - AMSEL_R &= ~0x10;
- ~ - PUR_R = 0x10;

- ~ - IS_R &= ~0x10;
- ~ - IBE_R &= ~0x10;
- ~ - IEV_R &= ~0x10;
- ~ - ICR_R &= ~0x10;
- ~ - IM_R = 0x10;



NVIC_PRI7_R = (NVIC_PRI7_R & 0xFF0FFFFF) | 0x00A00000;

NVIC_ENO_R = 0x40000000;

EnableInterrupts();

}

void GPIOPortF_Handler(void) {

GPIO_PORTF_ICR_R = 0x10;

FallingEdges += 1;

}