2)

; Lab8\_2.asm

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; R17 used for switch input

.org 0x0030

;=========

Init:

; initialize Stack Pointer (SP)

ldi r16, LOW(RAMEND)

out SPL, r16

ldi r16, HIGH(RAMEND)

out SPH, r16

; initialize Port B

ser r16 ; set all PortB pins to output

out DDRB, r16 ;

; initialize PortA

ldi r16, 0x00 ;PA0-PA7 as inputs

out DDRA, r16

ldi r16, 0xFF

out PORTA, r16 ; enable pull-up resisters

SBI DDRB, 3; set PB3 as output

InLoop:

in r17, pina

sbrc r17, 0

jmp pw0

sbrc r17, 1

jmp pw1

sbrc r17, 2

jmp pw2

sbrc r17, 3

jmp pw3

sbrc r17, 4

jmp pw4

sbrc r17, 5

jmp pw5

sbrc r17, 6

jmp pw6

rjmp InLoop

end: rjmp end

pw0:

ldi r16, 15

out ocr0, r16

ldi r16, 0b01101011

out tccr0, r16

jmp InLoop

pw1:

ldi r16, 17

out ocr0, r16

ldi r16, 0b01101011

out tccr0, r16

jmp InLoop

pw2:

ldi r16, 20

out ocr0, r16

ldi r16, 0b01101011

out tccr0, r16

jmp InLoop

pw3:

ldi r16, 22

out ocr0, r16

ldi r16, 0b01101011

out tccr0, r16

jmp InLoop

pw4:

ldi r16, 25

out ocr0, r16

ldi r16, 0b01101011

out tccr0, r16

jmp InLoop

pw5:

ldi r16, 28

out ocr0, r16

ldi r16, 0b01101011

out tccr0, r16

jmp InLoop

pw6:

ldi r16, 30

out ocr0, r16

ldi r16, 0b01101011

out tccr0, r16

jmp InLoop