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; AssemblerApplication2.asm
;
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; Author : CAD
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;PA7 reads SW0 and PD7 drives LED0
start:
    sbi VPORTD_DIR, 7    ;set direction of PD3 as output
    sbi VPORTD_OUT, 7    ;set output value to 1
    cbi VPORTA_DIR, 7    ;set direction of PA7 to input (default)
    ldi r16, 0x08        ;enable internal pull-up resistor at PA7
    sts PORTA_PIN7CTRL, r16

;Read switch position to control LED
loop:
    sbis VPORTA_IN, 7    ;skip next instruction if PA7 is 1
    cbi VPORTD_OUT, 7    ;clear output PD7 to 0, turn LED ON
    sbic VPORTA_IN, 7    ;skip next instruction if PA7 is 0
    sbi VPORTD_OUT, 7    ;set output PD7 to 1, turn LED OFF
    rjmp loop            ;jump back to loop
```