;1DT301, Computer Technology I :Date: 2019-09-17 :Author: Student name 1: Einar van de Velde Student name 2: Abdulla Mehdi ;Lab number: 2. Task 2. :Title: STK600, CPU ATmega2560. ;Hardware: :Function: Electronic dice where it displays a die pattern when SW0 has been pressed. ;Input ports: PORTA. On-board LEDs connected to PORTB. ;Output ports: :Subroutines: Check button press. Translate number to display LEDs. :Included files: m2560def.inc ;Other information: ;Changes in program: File Created (2019-09-17) Program is runnable (2019-09-18) .include "m2560def.inc" ldi r16, 0xFF out DDRB, r16 ldi r17, 0b0111 1111 ;Switch 7 is activator. **VARIABLES** .def dice1 = r18;Dice rolls 1. ldi r18, 0b1111_0111 .def dice2 = r19;Dice rolls 2. ldi r19, 0b1110_1101 .def dice3 = r20

ldi r20, 0b1101 0101

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.def dice4 = r21
ldi r21, 0b1100_1100
.def dice5 = r22
ldi r22, 0b1001_0100
.def dice6 = r23
ldi r23, 0b1100_0000
.def COUNTER = r25
;-----;
 RUN ;
RUN:
  ;-----;
  SWITCH:
   in r17, PINA
   cpi r17, 0xFF
   breq STOP
   inc COUNTER
    cpi COUNTER, 6
   brne SWITCH
   Idi COUNTER, 1
  ;-----;
  STOP:
    cpi COUNTER, 1
    breq ONE
    cpi COUNTER, 2
    breq TWO
    cpi COUNTER, 3
    breq THREE
    cpi COUNTER, 4
    breq FOUR
    cpi COUNTER, 5
    breq FIVE
    cpi COUNTER, 6
   breq SIX
  ONE:
   out PORTB, r18
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TWO: out PORTB, r19 rjmp RUN ;	
, THREE: out PORTB, r20 rjmp RUN ;	·
FOUR: out PORTB, r21 rjmp RUN	·
; FIVE: out PORTB, r22 rjmp RUN	·
;SIX: out PORTB, r23 rjmp RUN ;	·