

[illegible]

```
ldi r16, 0x00
out DDRD, r16
out DDRA, r16
```

```
ldi r16, 0xff
out DDRE, r16
out DDRB, r16
```

```
ldi r16, 0b00000011
out EIMSK, r16
```

```
ldi r16, 0b00001010
sts EICRA, r16
```

```
sei
```

```
;-----
```

```
MAIN:
```

```
ldi r16, 0xff
out DDRB, r16
com r16
out DDRD, r16
ldi r24, 1
```

```
LOOP:
```

```
cpi r24, 1
breq NORMAL
cpi r24, 2
breq LEFT
cpi r24, 3
breq RIGHT
```

```
rjmp LOOP
```

```
;NORMAL -----
```

```
NORMAL:
```

```
ldi r17, 0b00111100
out PORTB, r17
rjmp LOOP
```

```
;LEFT -----
```

```
LEFT:
```

```
ldi r17, 0b11101100
rcall DELAY_1
```

```
out PORTB, r17
ldi r17, 0b11011100
rcall DELAY_1
```

```
out PORTB, r17
ldi r17, 0b10111100
rcall DELAY_1
```

```
out PORTB, r17
ldi r17, 0b01111100
rcall DELAY_1
```

```
out PORTB, r17
rjmp LOOP
```

```
;RIGHT -----
```

```
RIGHT:
ldi r17, 0b00110111
rcall DELAY_1
```

```
out PORTB, r17
ldi r17, 0b00111011
rcall DELAY_1
```

```
out PORTB, r17
ldi r17, 0b00111101
rcall DELAY_1
```

```
out PORTB, r17
ldi r17, 0b00111110
rcall DELAY_1
```

```
out PORTB, r17
rjmp LOOP
```

```
;DELAY_1 -----
```

```
DELAY_1:
ldi r20, 255
ldi r21, 0
```

```
DEL_1:
rcall DELAY_2
inc r21
cp r20, r21
brne DEL_1
ret
```

```
DELAY_2:
ldi r22, 255
ldi r23, 0
```

```
DEL_2:
inc r23
```

```

        cp r22, r23
        brne DEL_2
    ret
;-----

;INTERRUPT_0 -----
INTERRUPT_0:
    push r16
    in r16, sreg
    push r16

    cpi r16, 0x00
    breq PRESS_0

PRESS_0:
    cpi r24, 2
    brne TURN_RIGHT
    ldi r24, 1
    rjmp DONE_1

TURN_RIGHT:
    ldi r24, 2

DONE_1:
    pop r16
    out sreg, r16
    pop r16
    reti

;INTERRUPT_1 -----
INTERRUPT_1:
    push r16
    in r16, sreg
    push r16

    cpi r16, 0x00
    breq PRESS_1

PRESS_1:
    cpi r24, 3
    brne TURN_LEFT
    ldi r24, 1
    rjmp DONE_2

TURN_LEFT:
    ldi r24, 3

DONE_2:
    pop r16

```

```
    out sreg, r16  
    pop r16  
    reti
```