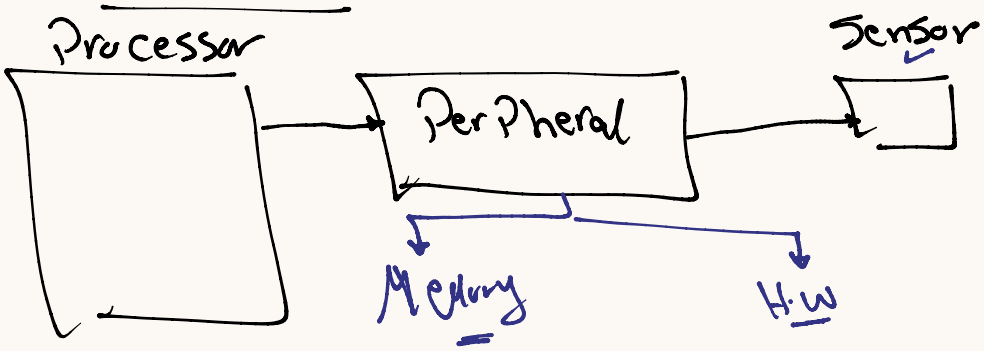
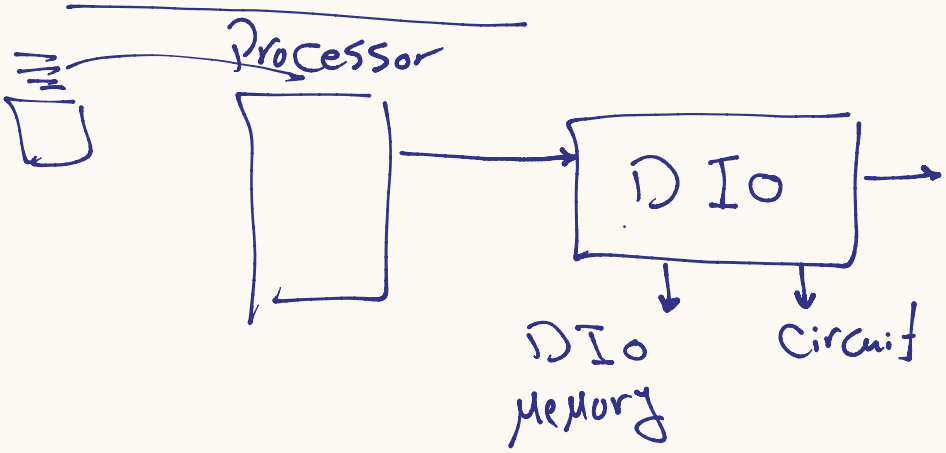
DIO

Revision → Peripheral



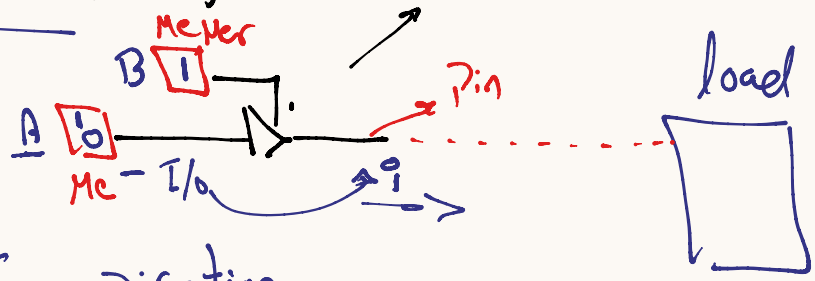
DIO Peripheral



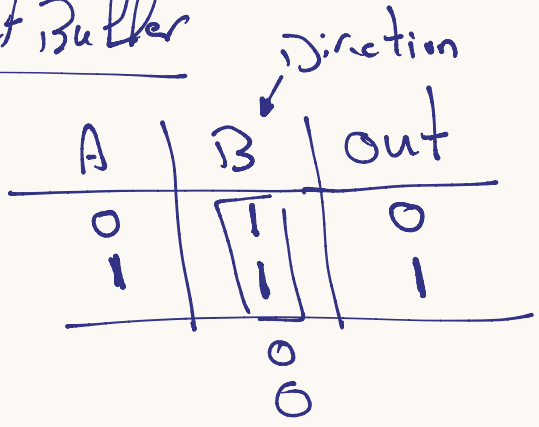
Interface

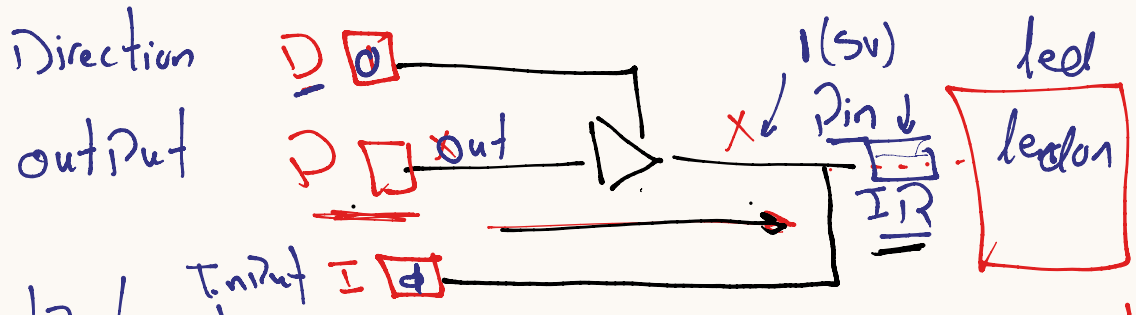
- led
- switch
- segment
- LCD
- KYD

DIO Circuit (AVR)



tristat Buffer





Pin output
↳ High → D → 1 ····→ Allow for P value to out
→ P → 1 ····→ output is High is on

Pin output
↳ low → D → 1
→ P → 0

Pin Input → D → 0 → Direction Input
→ I → Read →

to control on DIo Pin

↳ Direction → output = 1
1 Bit Input = 0

↳ output → High = 1 = 5V
low = 0 = 0V
1 Bit

↳ Input → Read for this Pin
1 Bit → 1
→ 0

Notes
↳ 32 Pin → Classification into 4 group
each group have 8 bit
(GroupA) (GroupB) (GroupC) (GroupD)

How many DIO Pin in Atmega32

↳ 32 DIO Pin

32 Bit For Direction	32 Bit For output	32 Bit For Input

AVR → System bus = 8bit

DIO Memory

Direction 32 Bit

DDRA

7	6	5	4	3	2	1	0

↑ Control Direction For [Group A]

DDRB

7	6	5	4	3	2	1	0

Direction Group B

DDRC

DDRD

output 32 Bit

PORTA

7	6	5	4	3	2	1	0

Control output type For group A (High / low)

PORTB

PORTC

PORTD

Input 32 Bit

PINA

7	6	5	4	3	2	1	0

store the input value

PINB

PINC

PIND

IO_Register For Atmega32

- DDRA
- DDRB
- DDRC
- DDRD

Direction

- PORTA
- PORTB
- PORTC
- PORTD

Output I/P
(low / High)

- PINA
- PINB
- PINC
- PIND

Input value

Revision

H.W