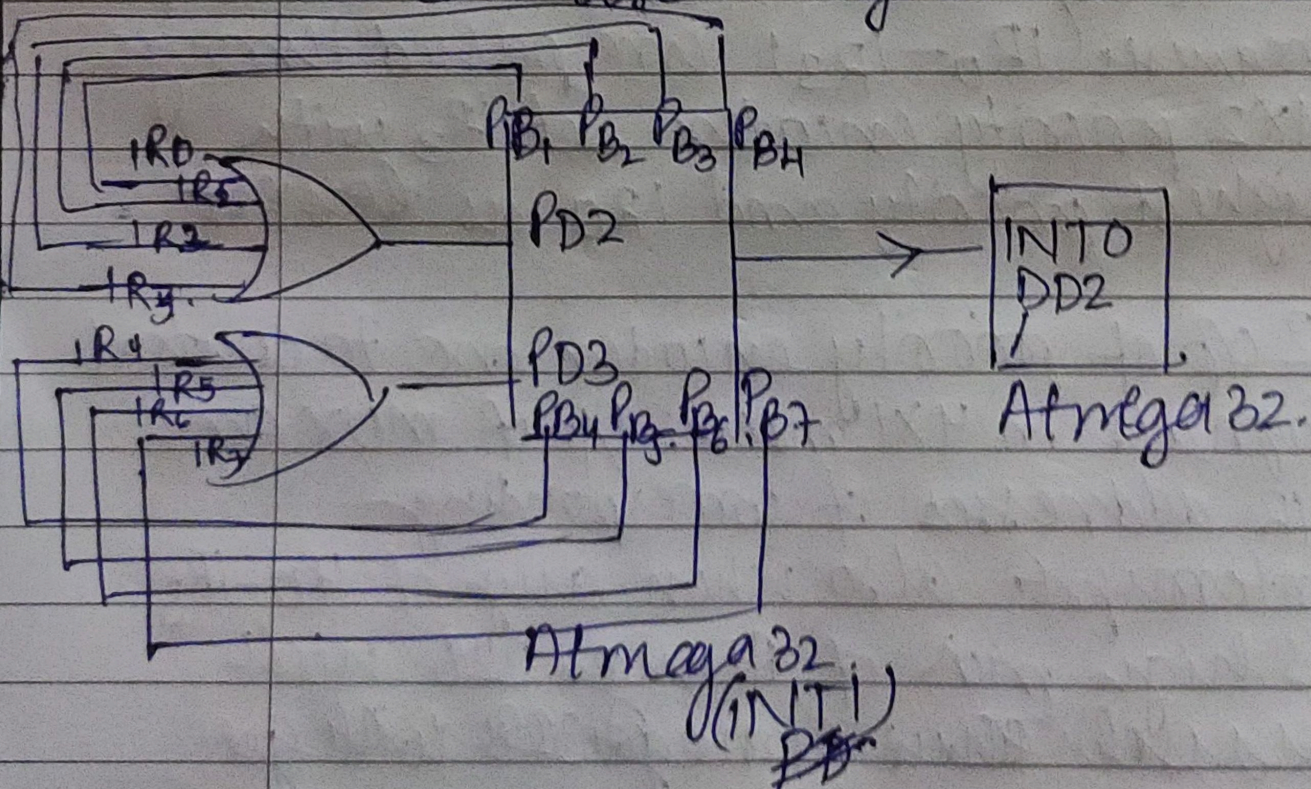embedded.   Mansi Uniyal
                19EEI0D39.   / /

1. Operate Atmega32 as 8259. and connect with other Atmega32.

When we use Atmega32 as pheripheral interfacing controller (PIC) we can use only 2 external pins for interrupts that are INT0, INT1 Connecting 8 interrupt signals in group of 4 to each external interrupts pins of Atmega32 and maintain 8 flags to indicate which interrupt signal is enabled. Thus, using pooling method, we can use Atmega32 as 8259.

PB1 PB2 PB3 PB4

PD2

INT0
PD2

Atmega32.

IR0
IR1
IR2
IR3

IR4
IR5
IR6
IR7

PD3
PB4 PB5 PB6 PB7

Atmega32
(INT1)

When any $(IR_0 - IR_3)$ is enabled, it will make INT0 of first Atmega32 to set, all other interrupts are connected to Port B pins, which as flag for particular interrupt. Similarly, INT1 is open.

Fist Atmega32 can be programmed for priority scheduling and sending interrups to second atmega 32. Second Atmega32 on recieving this interrupt jumps to defined IR. using vector interrypt table.

2. To recieve vector interrupt - 4 interrupt requests $(IR_0 - IR_3)$ are passed through 4x2 priority encoder. Set IR_3 with highest priority and IR_0 as lowest.

2 o/p of priority encoder are to control signals in 4x1 maux.

I/p of mux are IR addresses of
corresponding interrupts, with $IR0-IR_3$.

Amega 32 will get interrupt request
and address of IRC form mux.