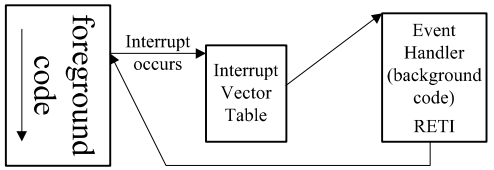
Interrupt/Event Response

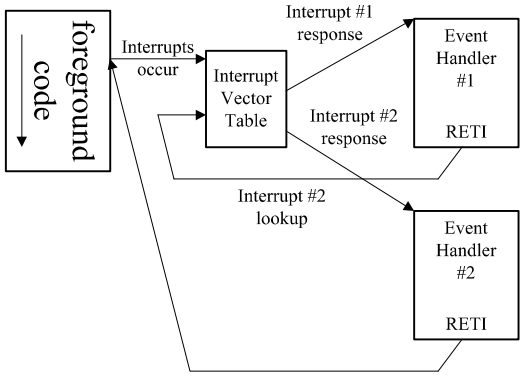
General	AVR
Finish Current Instruction	Finish Current Instruction
Save Processor State	Push PC
Disable Further Interrupts	Clear Interrupt Flag
Acknowledge Interrupt	
Invoke Event Handler	Jump to Event Handler in the Interrupt Vector Table
Save Program Status	PUSH All Used Registers (PUSH Rn)
Process Event	Process Event
Acknowledge Interrupt (if not done in hardware)	
Restore Program Status	POP Pushed Registers (POP Rn)
Restore Processor Status (also re-enables interrupts)	RETI
Continue Program Execution	Continue Program Execution

Simple Interrupt/Event Response



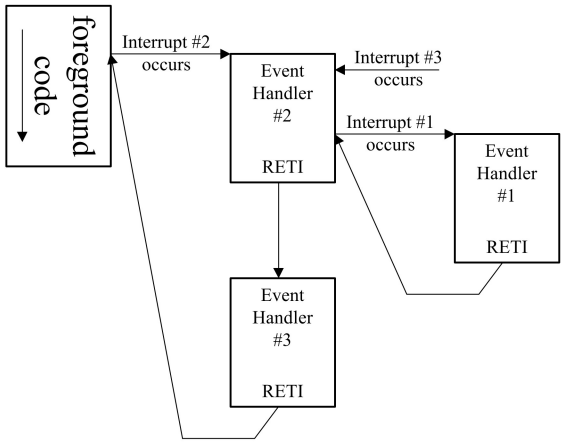
Nested Interrupt/Event Response

Interrupt #1 is higher priority than Interrupt #2
Event Handler #1 keeps interrupts disabled

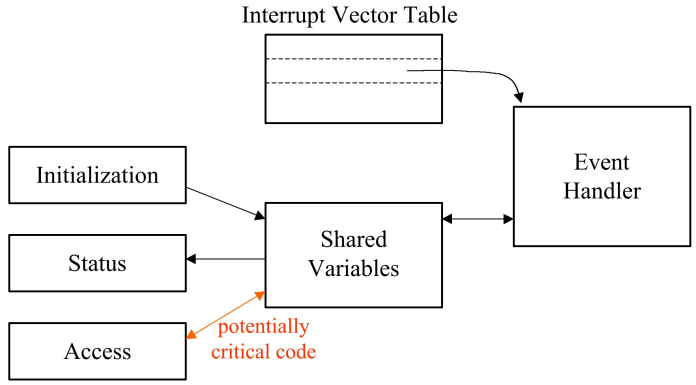


Nested Interrupt/Event Response

Priorities: Interrupt #1 > Interrupt #2 > Interrupt #3
All Event Handlers re-enable interrupts



Event Handler Interface



Alarm Clock Example