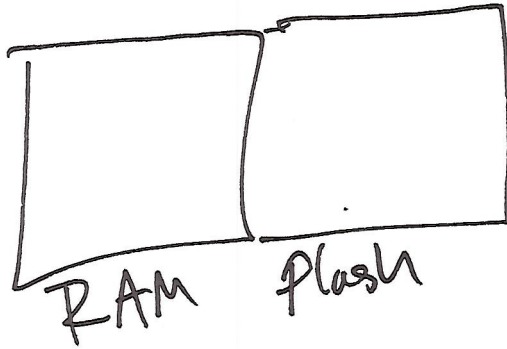


What happens when a processor powers up

New Processor



No code here?

Options

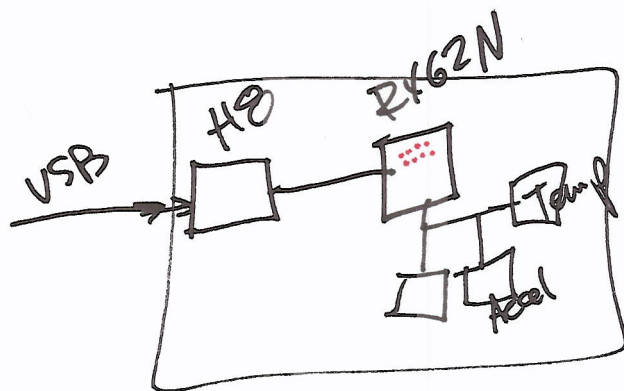
- 1) JTAG → clock data into & out of a processor's memory & registers
- 2) Mfg / place code (Boot loader) to do the simplest task (i.e. load flash w/ programs)

Processor → clock, execute Reset

Space in memory holds the "boot up" program.

Top boot → 1st address (x00000000)  
 bottom boot → last address (xFFFF FFFC)  
 holds the ~~PC~~ address of 1st instruction of boot up program  
 → PC

(2)

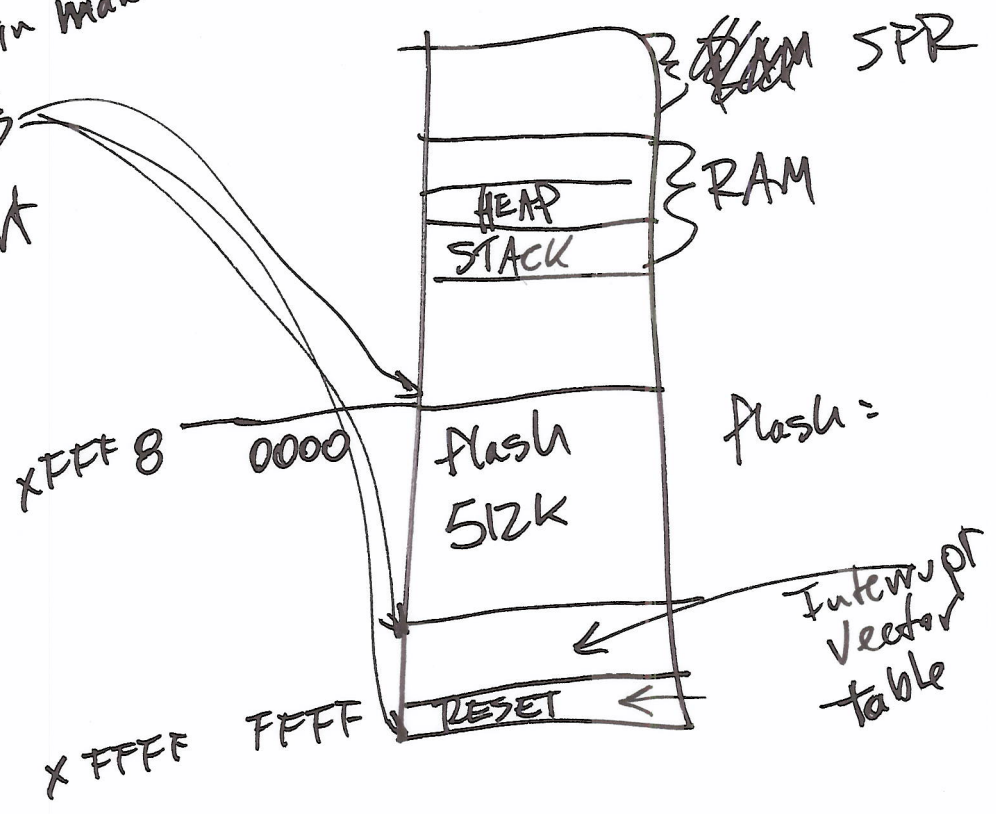
Test  
Question

Somehow, a boot up program are already on the board. So, what needs to be "setup" to make an operational Embedded

System:

- \* SP/FB & the stack space
- \* Heap space
- \* Set up processor (speed, clocks), I/O ports
- \* Interrupts
- \* Supervisor to user mode
- \* Call main
- \* clear out RAM
- \* WDT

Previously  
 Compiler I did (in make file)  
 Flash addresses  
 RAM size & start  
 STACK size & start



Boot up starts at xFFF80000

SP & FB  
 OS → Heap space, keep track of space  
 → protection of stack