How are instruction and data memory initialized in the simulation? How does MARS interface with ModelSim?

The software has a generate hex function which writes temp/imem.hex and temp/dmem.hex. It looks like a series of python files interact with compiling ModelSim source code and test benches and then compare the results with MARS mips results.

In the MIPS skeleton VHDL, how is a halting / termination condition detected? What MIPS assembly instruction does this correspond to?

When the upper 6 bits of the instruction are 0 and the lower 6 bits are 0x0C this should correspond to SYSCALL.