INPUT OUTPUT OPERATIONS

The I/O operations that you used earlier in writing assembly language programs are not real – they work with the SPIM simulator only. This lecture outlines the major things that you need to know to perform I/O operations with real machines.

Memory mapped I/O

Determines how the devices are addressed. Each device register is assigned an address similar to the memory addresses.

Communicating with I/O devices

1. Programmed I/O or Polled I/O

We will discuss about interfacing a keyboard as an input device. Poled I/O is very basic, but inefficient.

2. Interrupt driven I/O

Efficient method of communication with I/O devices

3. Direct Memory Access (DMA)

Used for communication with high-speed devices like Disk.

These will be explained in the class