

# **Linux Internal Programming:**

## **Module 1:**

### **The Process:**

→ process state, process control block, context switch, CPU scheduler, dispatcher, scheduling queues, scheduling algorithm, API's for process creation, synchronization with the creator process.

## **Module 2:**

### **Signal Handling:**

→ catching a signal, raising a signal.

## **Module 3:**

### **Unix I/O:**

→ device terminology, reading and writing, opening and closing files, select function, poll function, filters and redirection, file control, operations on files and directories, hard links and symbolic links, unix special files.

## **Module 4:**

### **Threads:**

→ thread concepts, thread identification, thread creation, thread termination, thread synchronization(mutexes, deadlock avoidance, reader writer locks, condition variable), thread control, thread limits, thread attributes, reentrancy, thread specific data, cancel options, threads and signals, threads and fork.

## **Module 5:**

### **IPC:**

→ pipes, FIFO's, message queues, shared memory, semaphores and unix domain sockets(control sockets)

## **Module 6:**

### **Memory Management:**

→ memory management, memory hierarchy, address space of a process, segmented virtual memory, paged virtual memory, combining segmentation and paging, MMU.