UNIT 11
Glossary

Argument
Functions and routines are passed arguments to process.

ARP
Address Resolution Protocol. Used to translate IP addresses into physical hardware addresses.

Ascii
American Standard Code for Information Interchange. Each letter of the alphabet is represented by an 8 bit code. Ascii is most often used to store written characters.

Bit
A single bit of data that represents either 1 or 0 (on or off).

Bottom Half Handler
Handlers for work queued within the kernel.

Byte
8 bits of data,

C
A high level programming language. Most of the Linux kernel is written in C.

CISC
Complex Instruction Set Computer. The opposite of *RISC*, a processor which supports a large number of often complex assembly instructions. The X86 architecture is a CISC architecture.

CPU
Central Processing Unit. The main engine of the computer, see also *microprocessor* and *processor*.

Data Structure
This is a set of data in memory comprised of fields,

Device Driver
The software controlling a particular device, for example the NCR 810 device driver controls the NCR 810 SCSI device.

DNS
Distributed Name Server.

DMA
Direct Memory Access.

ELF
Executable and Linkable Format. This object file format designed by the Unix System Laboratories is now firmly established as the most commonly used format in Linux.

EIDE
Extended IDE.

Executable image
A structured file containing machine instructions and data. This file can be loaded into a process's virtual memory and executed. See also *program*.

Function
A piece of software that performs an action. For example, returning the bigger of two numbers.

IDE
: Integrated Disk Electronics.

Image
: See *executable image*.

IP
: Internet Protocol.

IPC
: Interprocess Communiction.

Interface
: A standard way of calling routines and passing data structures. For example, the interface between two layers of code might be expressed in terms of routines that pass and return a particular data structure. Linux's VFS is a good example of an interface.

IRQ
: Interrupt Request Queue.

ISA
: Industry Standard Architecture. This is a standard, although now rather dated, data bus interface for system components such as floppy disk drivers.

Kernel Module
: A dynamically loaded kernel function such as a filesystem or a device driver.

Kilobyte
: A thousand bytes of data, often written as Kbyte,

Megabyte
: A million bytes of data, often written as Mbyte,

Microprocessor
: A very integrated *CPU*. Most modern CPUs are *Microprocessors*.

Module
: A file containing CPU instructions in the form of either assembly language instructions or a high level language like C.

Object file
: A file containing machine code and data that has not yet been linked with other object files or libraries to become an *executable image*.

Page
: Physical memory is divided up into equal sized pages.

Pointer
: A location in memory that contains the address of another location in memory,

Process
: This is an entity which can execute *programs*. A process could be thought of as a *program* in action.

Processor
: Short for Microprocessor, equivalent to *CPU*.

PCI
: Peripheral Component Interconnect. A standard describing how the peripheral components of a computer system may be connected together.

Peripheral
: An intelligent processor that does work on behalf of the system's CPU. For example, an IDE controller chip,

Program
: A coherent set of CPU instructions that performs a task, such as printing ``hello world''. See also *executable image*.

Protocol

A protocol is a networking *language* used to transfer application data between two cooperating processes or network layers.

Register

A location within a chip, used to store information or instructions.

Register File

The set of registers in a processor.

RISC

Reduced Instruction Set Computer. The opposite of *CISC*, that is a processor with a small number of assembly instructions, each of which performs simple operations. The ARM and Alpha processors are both RISC architectures.

Routine

Similar to a function except that, strictly speaking, routines do not return values.

SCSI

Small Computer Systems Interface.

Shell

This is a program which acts as an interface between the operating system and a human user. Also called a *command shell*, the most commonly used shell in Linux is the bash shell.

SMP

Symmetrical multiprocessing. Systems with more than one processor which fairly share the work amongst those processors.

Socket

A socket represents one end of a network connection, Linux supports the BSD Socket interface.

Software

CPU instructions (both assembler and high level languages like C) and data. Mostly interchangable with *Program*.

System V

A variant of Unix ™ produced in 1983, which included, amongst other things, *System V IPC mechanisms*.

TCP

Transmission Control Protocol.

Task Queue

A mechanism for deferring work in the Linux kernel.

UDP

User Datagram Protocol.

Virtual memory

A hardware and software mechanism for making the physical memory in a system appear larger than it actually is.

Reference e-mails: raomvp@yahoo.com roopasindhe@lycos.com
URL / Web Site: http://www.raomvp.bravepages.com

Good-Luck