SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)
COIMBATORE-35
Accredited by NBA-AICTE and Accredited by NAAC – UGC with A++ Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

19EEE305 / EMBEDDED SYSTEMS
III YEAR / VI SEMESTER

UNIT-IV: RTOS BASED EMBEDDED SYSTEM DESIGN

INTRODUCTION - OS

OS Introduction

I. An Operating System (OS) is a piece of software that controls the overall operation of the Computer.

II. It acts as an interface between hardware and application programs .

III. It facilitates the user to format disks, create ,print ,copy , delete and display files , read data from files ,write data to files ,control the I/O operations , allocate memory locations and process the interrupts etc.

IV. It provides the users an interface to the hardware resources.

V. In a multiuser system it allows several users to share the CPU time, share the other system resources and provide inter task communication ,Timers , clocks , memory management and also avoids the interference of different users in sharing the resources etc.

VI. Hence the OS is also known as a resource manager.

OS - Definition

Operating system can also be defined as a collection of system calls or functions which provide an interface between hardware and application program.

OS typically provides multitasking, synchronization, Interrupt and Event Handling, Input/Output, Inter-task Communication, Timers and Clocks and Memory Management.

KERNAL

The **core of the OS is Kernel** which is typically a small, highly optimised set of libraries

I.   The Kernel is a program that constitutes the central core of an operating system. It has complete control over everything that occurs in the system.

II. The Kernel is the first part of the operating system to load into memory during booting (i.e., system startup), and it remains there for the entire duration of the session because its services are required continuously.

III. The kernel provides basic services for all other parts of the operating system, typically including memory management, process management, file management and I/O (input/output) management (i.e., accessing the peripheral devices)
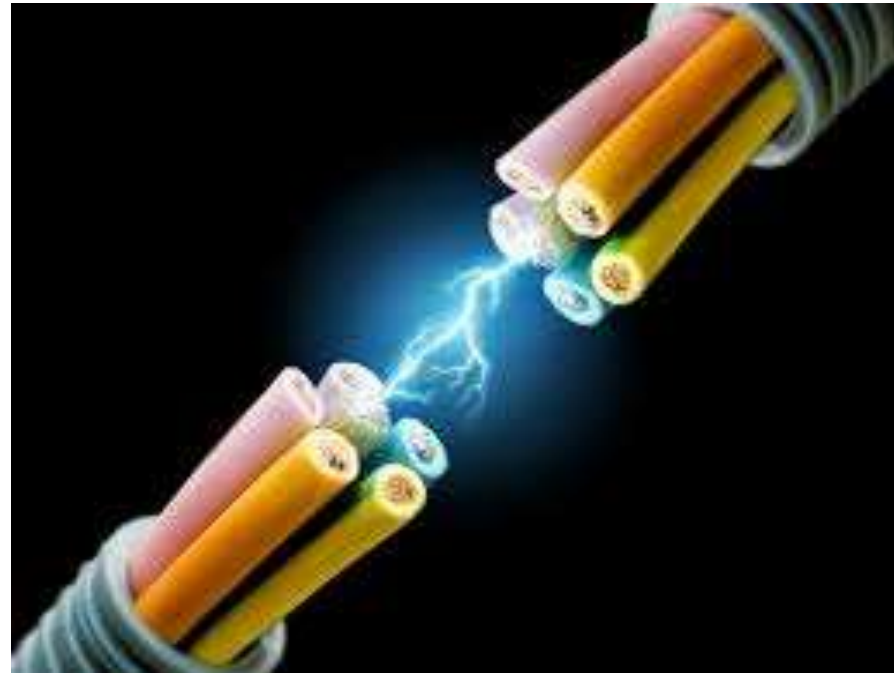
POPULAR -OS

- Windows (from Microsoft),

- MacOS, MS-Dos,

- Linux(Open source),

- Unix (Multi user-Bell Labs) ,

- Xenix (Microsoft),

- Android (Mobile)

RECAP….

…THANK YOU