

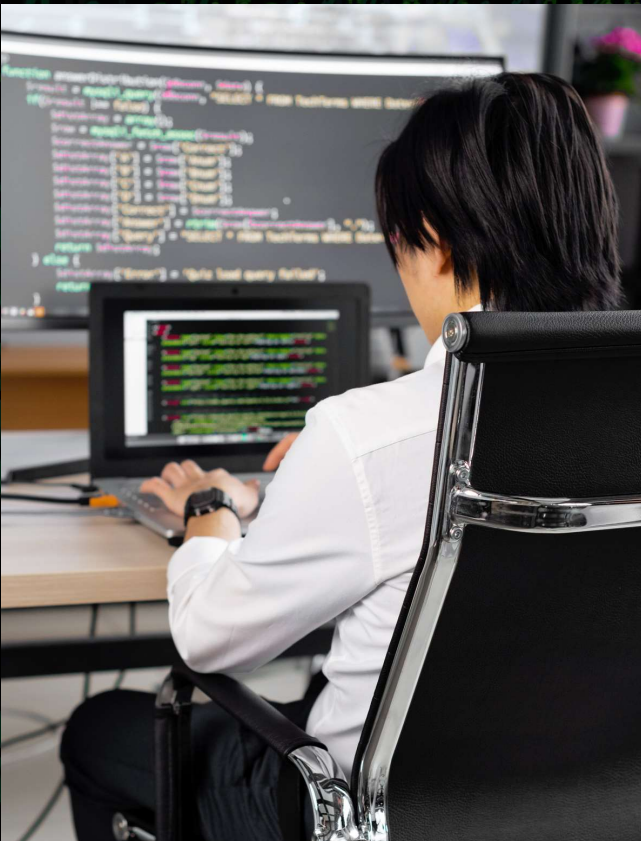
The background is a dark green field filled with a dense, slightly blurred pattern of white and light green binary digits (0s and 1s). Overlaid on this are several thin, light green circuit-like lines that branch out from the left and right sides towards the center. The main title is centered in large, white, sans-serif capital letters, with the word 'INTRODUCTION' in a smaller, light green font below it.

PLATFORM TECHNOLOGIES

INTRODUCTION



Studio Shodwe



ABOUT

PLATFORM

- HARDWARE
- SOFTWARE
- NETWORKS

Pre-existing
Base technology

ABOUT PLATFORM

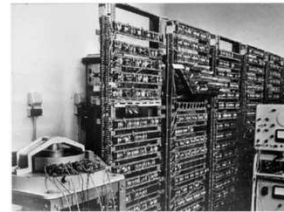
Platform - is a group of technology that are used as a base upon other applications, processes or technologies are developed

conforms to a set of standards that enable software developers to develop software application for the platform



GENERATION OF COMPUTER

Generation Of Computers 1st To 5th



First Generation 1946-1959



**Second Generation
1959-1965**



**Third Generation
1965-1971**



**Fourth Generation
1971-1980**



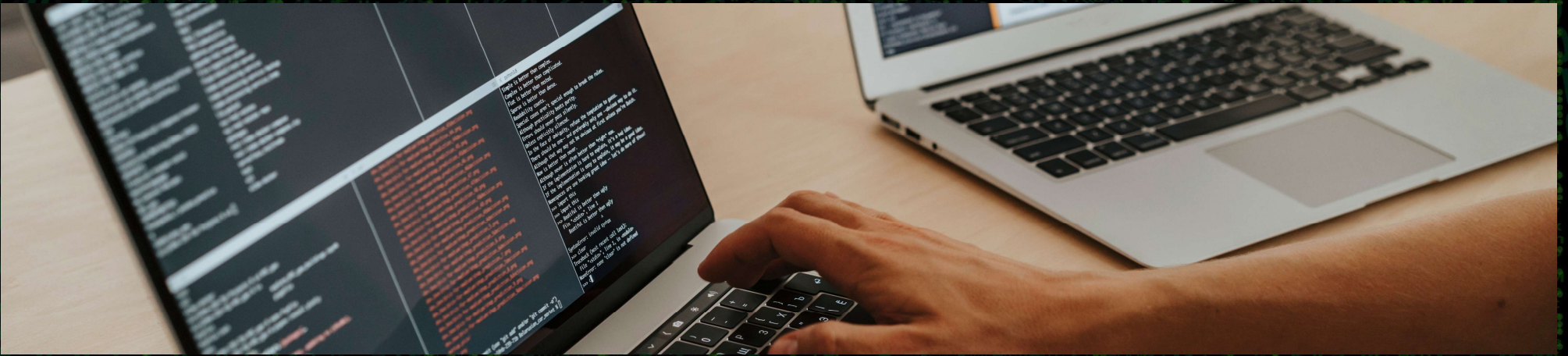
Fifth Generation 1980- Present

MODERN COMPUTER

CONSISTS OF:

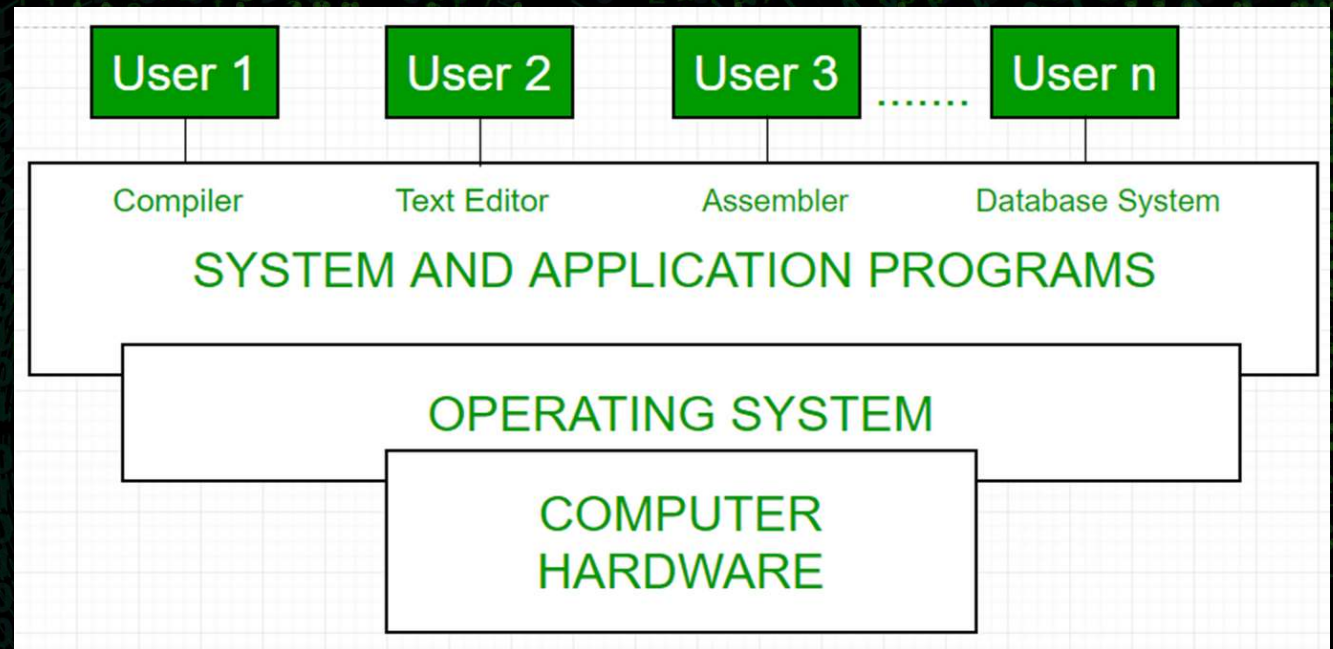
- 1 One or more processors
- 2 Main Memory
- 3 Disk
- 4 Printer
- 5 Various Input/output device





WHAT IS OPERATING SYSTEM?

OPERATING SYSTEM



HISTORY OF OS

Generation	Year	Electronic device used	Types of OS Device
First	1945-55	Vacuum Tubes	Plug Boards
Second	1955-65	Transistors	Batch Systems
Third	1965-80	Integrated Circuits(IC)	Multiprogramming
Fourth	Since 1980	Large Scale Integration	PC



GOAL OF OPERATING SYSTEM

1

Efficient Utilization

- Optimize use of CPU, memory, storage, and I/O devices

2

Multitasking

- Manage the execution of multiple processes simultaneously

3

Resource Sharing

- Allow multiple users/applications to share resources without conflicts

4

System Security

- Enforce security measures like authentication and access control

FUNCTIONS OF AN OPERATING SYSTEM

AN OPERATING SYSTEM PROVIDES THREE ESSENTIAL CAPABILITIES:

- 1 It offers a UI through a CLI or GUI
- 2 it launches and manages the application execution
- 3 it identifies and exposes system hardware resources to those applications -- typically, through a standardized API.

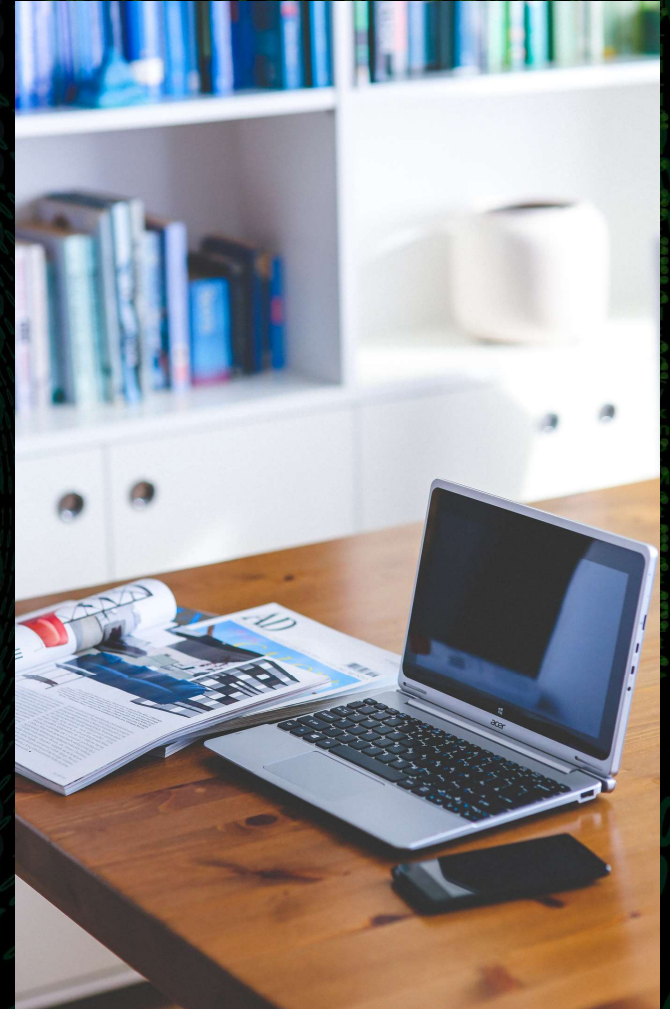
PROCESS CONTROL



- Memory Management
- Memory Processor
- File Management
- Security
- Control over system Performance
- Job accounting
- Error detection aids
- Coordination between software and users

WHAT IS A SYSTEM CALL IN OPERATING SYSTEM?

- way for a user program to interface with the operating system. The program requests several services, and the OS responds by invoking a series of system calls to satisfy the request.
- Application Program Interface (API) connects the operating system's functions to user programs.

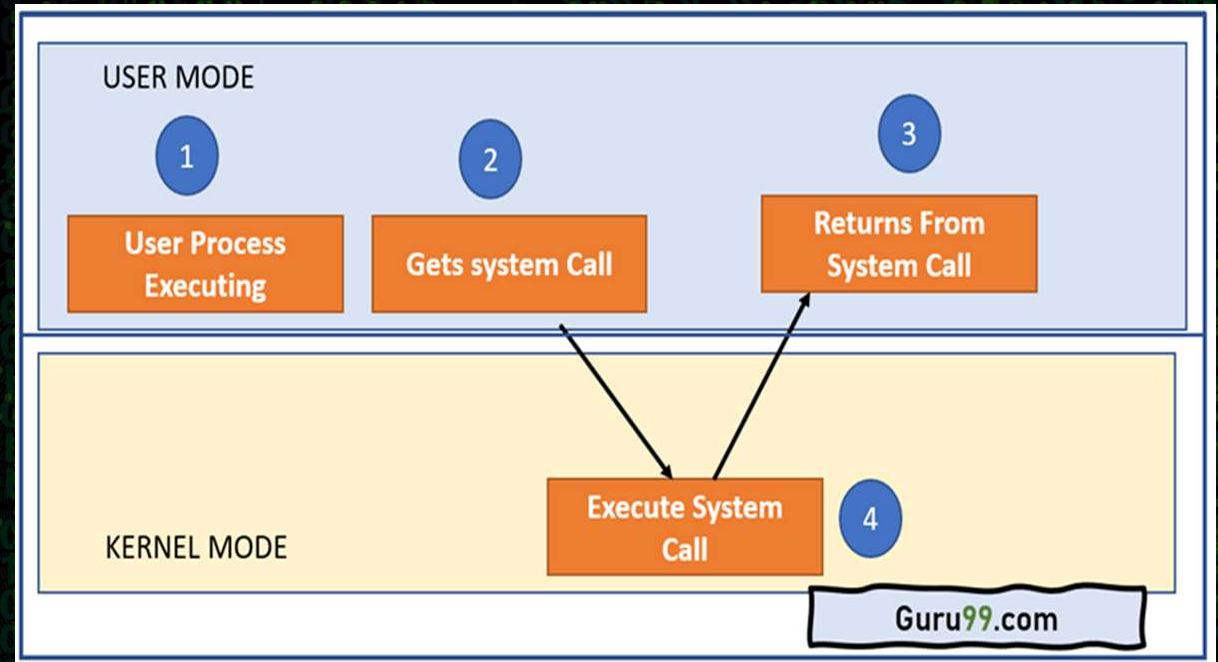


WHY DO YOU NEED SYSTEM CALLS IN OPERATING SYSTEM?

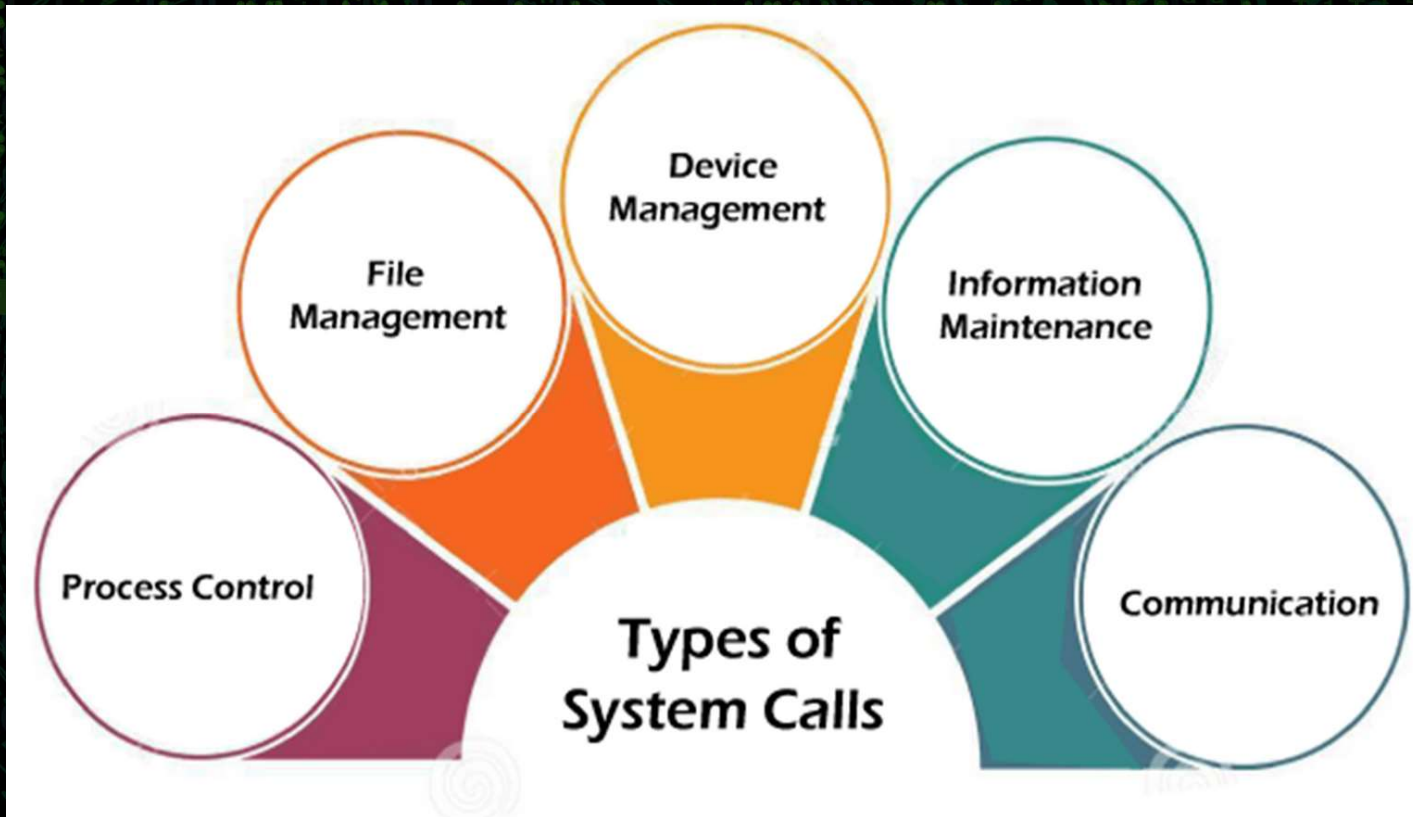
1. It must require when a file system wants to create or delete a file.
2. Network connections require the system calls to sending and receiving data packets.
3. If you want to read or write a file, you need to system calls.
4. If you want to access hardware devices, including a printer, scanner, you need a system call.
5. System calls are used to create and manage new processes



ARCHITECTURE OF SYSTEM CALLS



TYPES OF SYSTEM CALLS



PROCESS CONTROL



THIS SYSTEM CALLS PERFORM THE TASK OF PROCESS CREATION, PROCESS TERMINATION, ETC.

Functions:

- End and Abort
- Load and Execute
- Create Process and Terminate Process
- Wait and Signal Event
- Allocate and free memory

FILE MANAGEMENT



FILE MANAGEMENT SYSTEM CALLS HANDLE FILE MANIPULATION JOBS LIKE CREATING A FILE, READING, AND WRITING, ETC.

Functions:

- Create a file
- Delete file
- Open and close file
- Read, write, and reposition
- Get and set file attributes

DEVICE MANAGEMENT



DEVICE MANAGEMENT DOES THE JOB OF DEVICE MANIPULATION LIKE READING FROM DEVICE BUFFERS, WRITING INTO DEVICE BUFFERS, ETC.

Functions:

- Request and release device
- Logically attach/ detach devices
- Get and Set device attributes

INFORMATION MAINTENANCE »

IT HANDLES INFORMATION AND ITS TRANSFER BETWEEN THE OS AND THE USER PROGRAM.

Functions:

- Get or set time and date
- Get process and device attributes

COMMUNICATION

THESE TYPES OF SYSTEM CALLS ARE SPECIALLY USED FOR INTERPROCESS COMMUNICATIONS.

Functions:

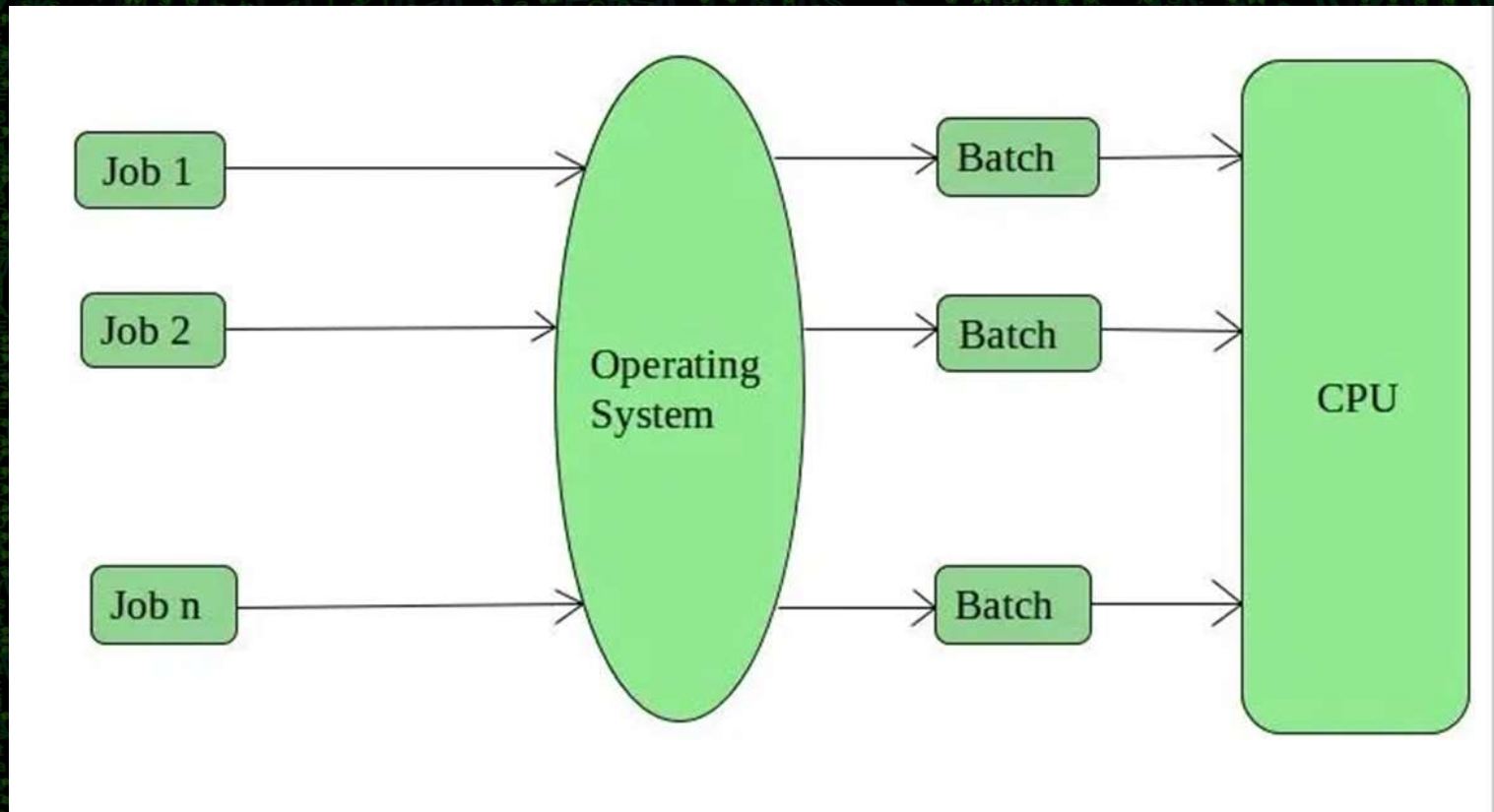
- Create, delete communications connections
- Send, receive message
- Help OS to transfer status information
- Attach or detach remote devices

TYPES OF OS



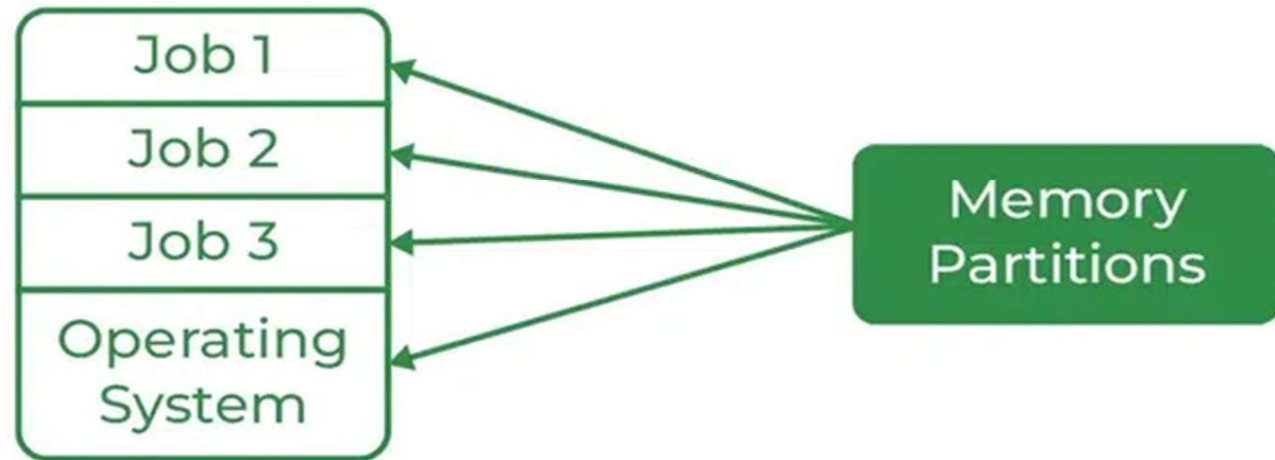
- Batch Operating System
- Multi-Programming System
- Multi-Processing System
- Multi-Tasking Operating System
- Time-Sharing Operating System
- Distributed Operating System
- Network Operating System
- Real-Time Operating System

BATCH OPERATING SYSTEM

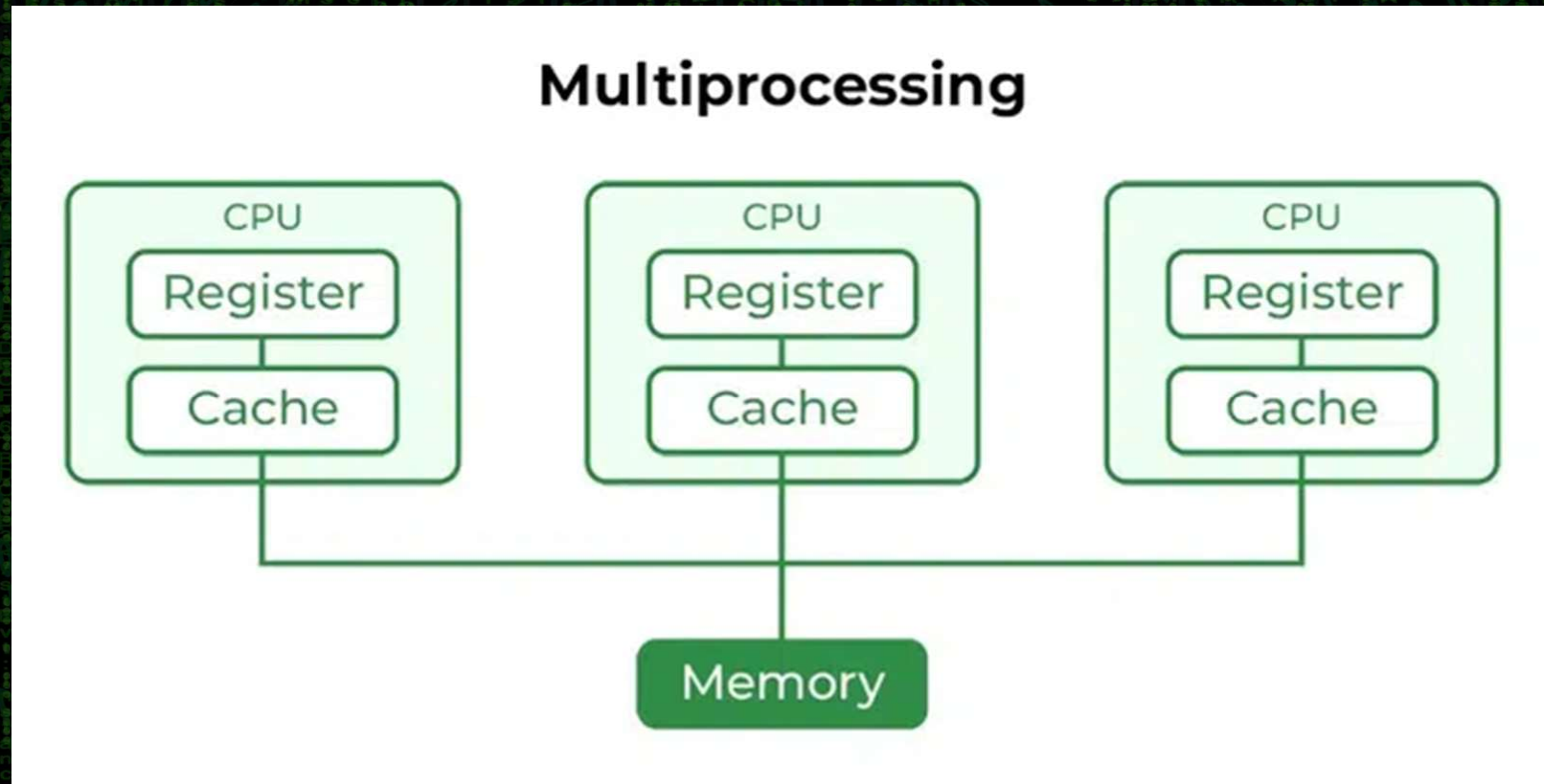


MULTI PROGRAMMING

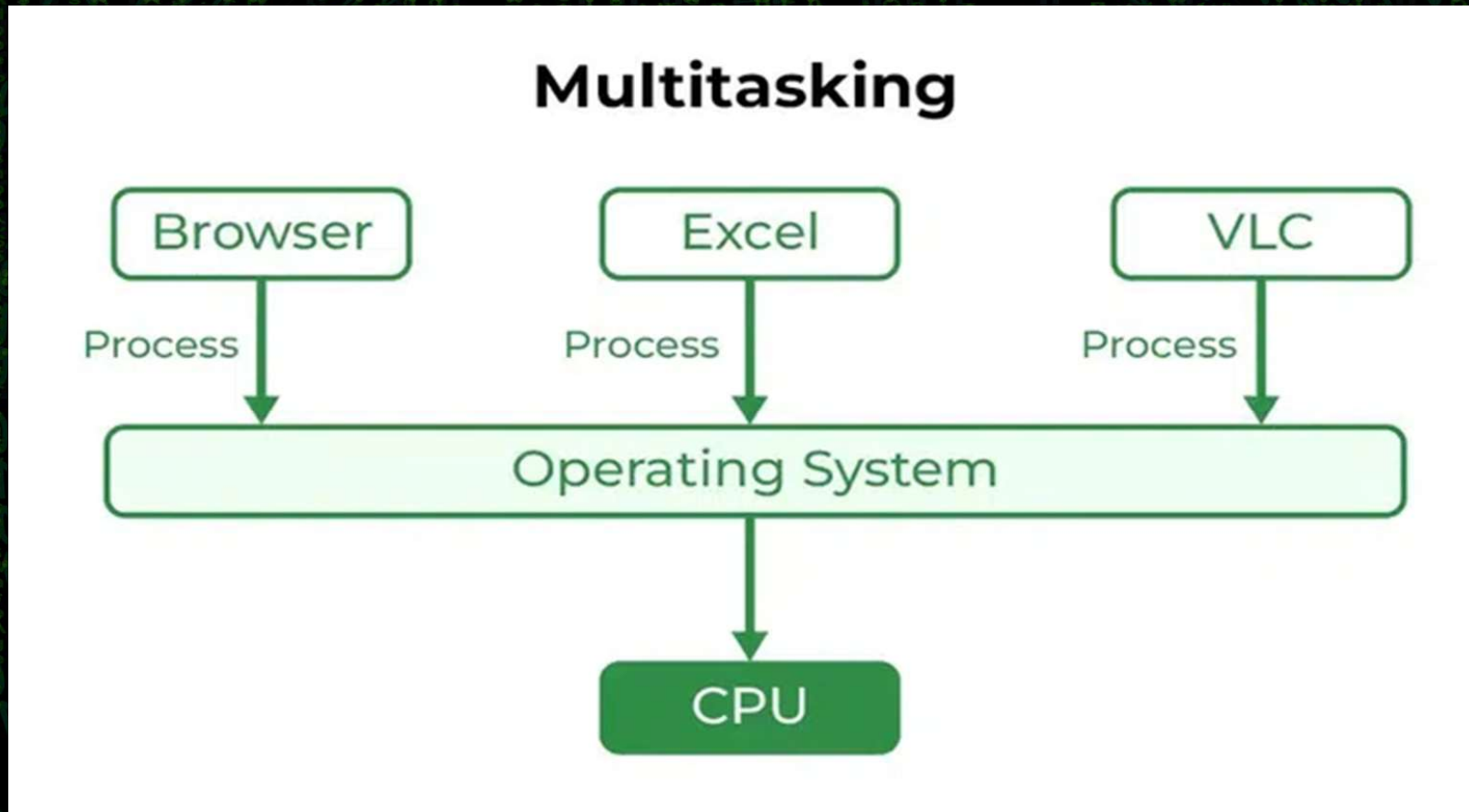
Multiprogramming



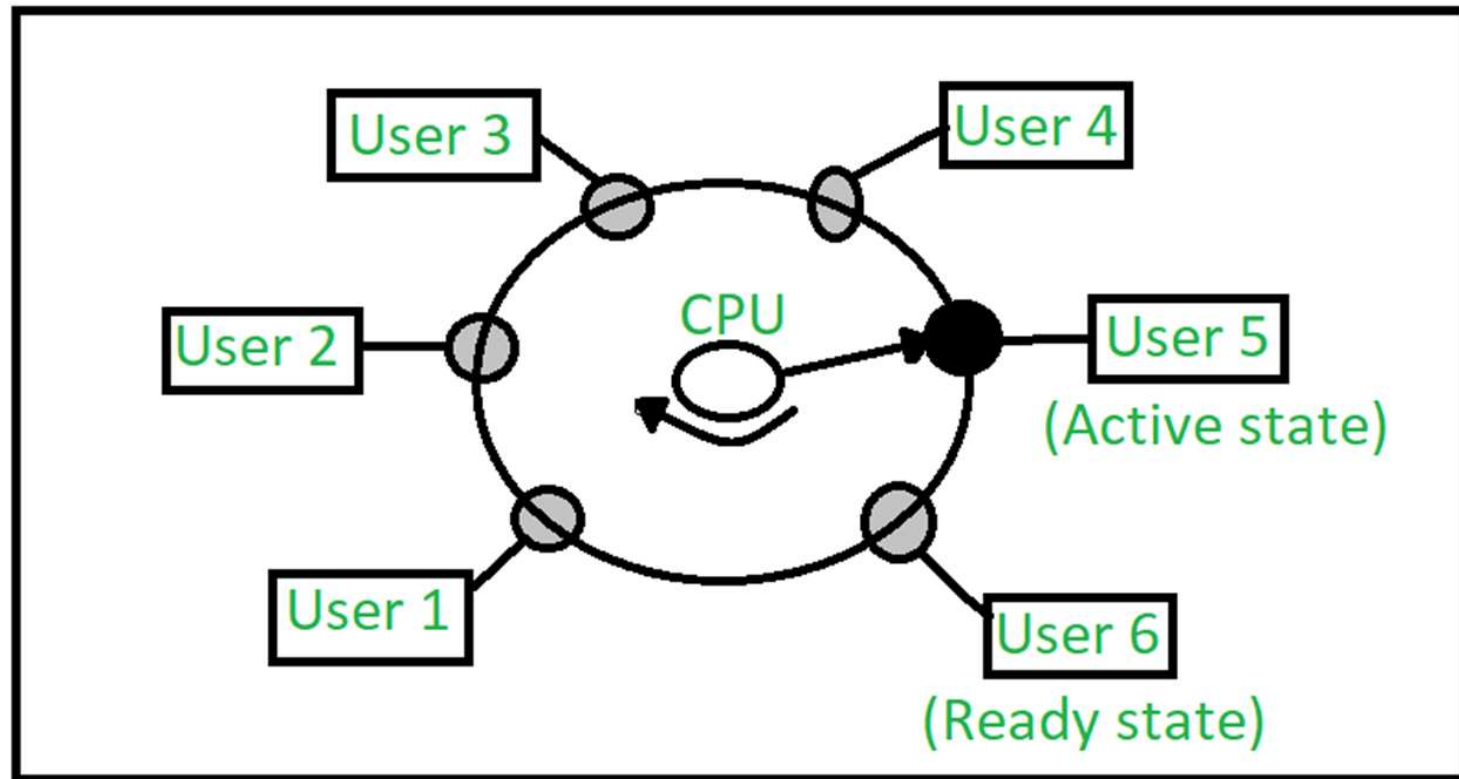
MULTIPROCESSING



MULTITASKING

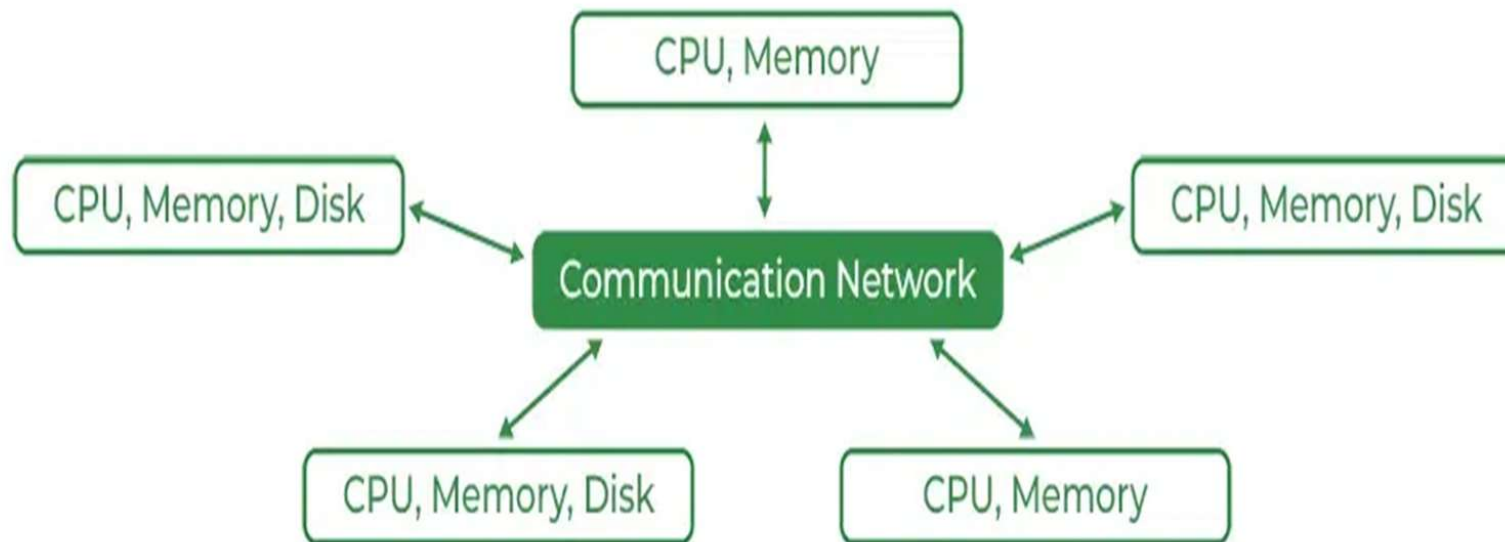


TIME-SHARING OPERATING SYSTEMS

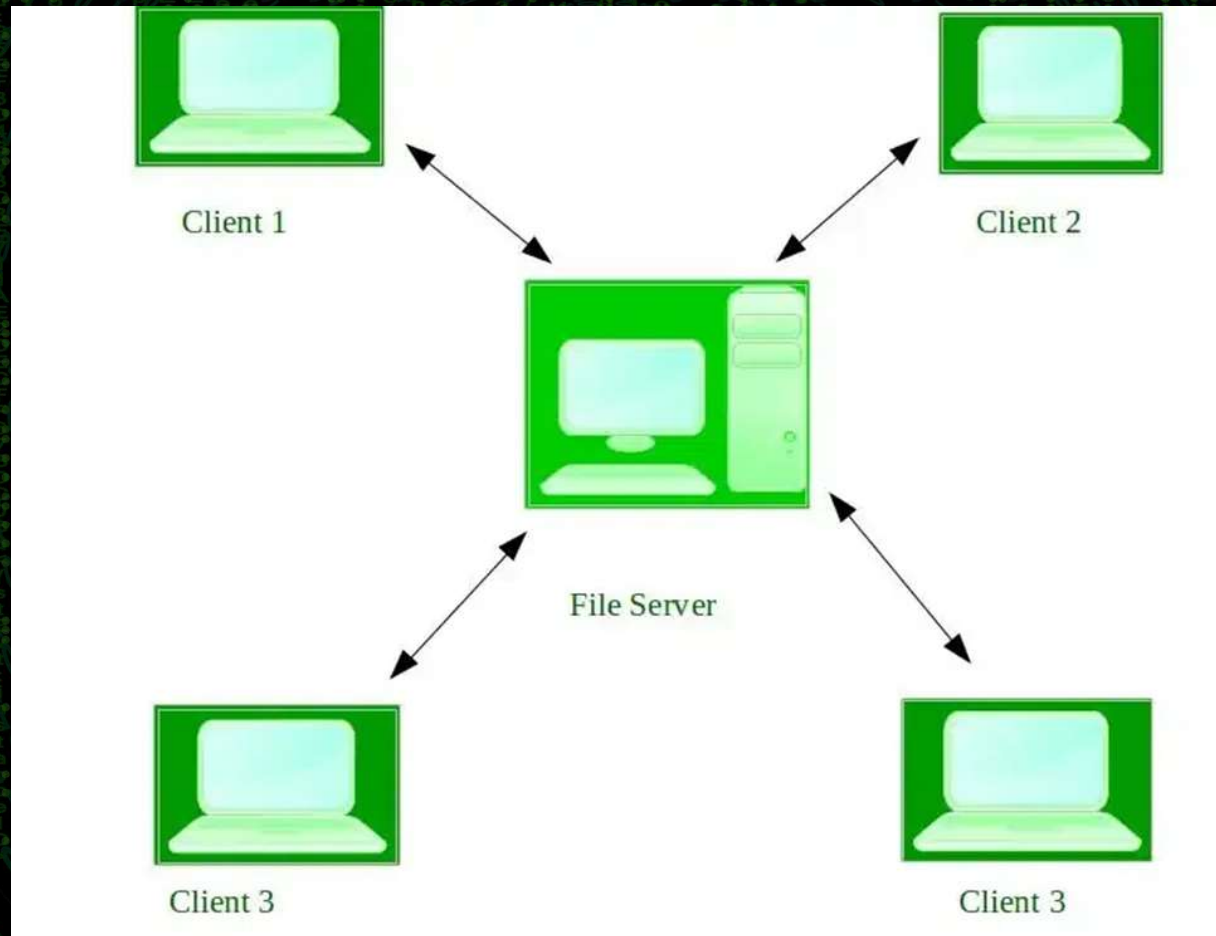


DISTRIBUTED OPERATING SYSTEM

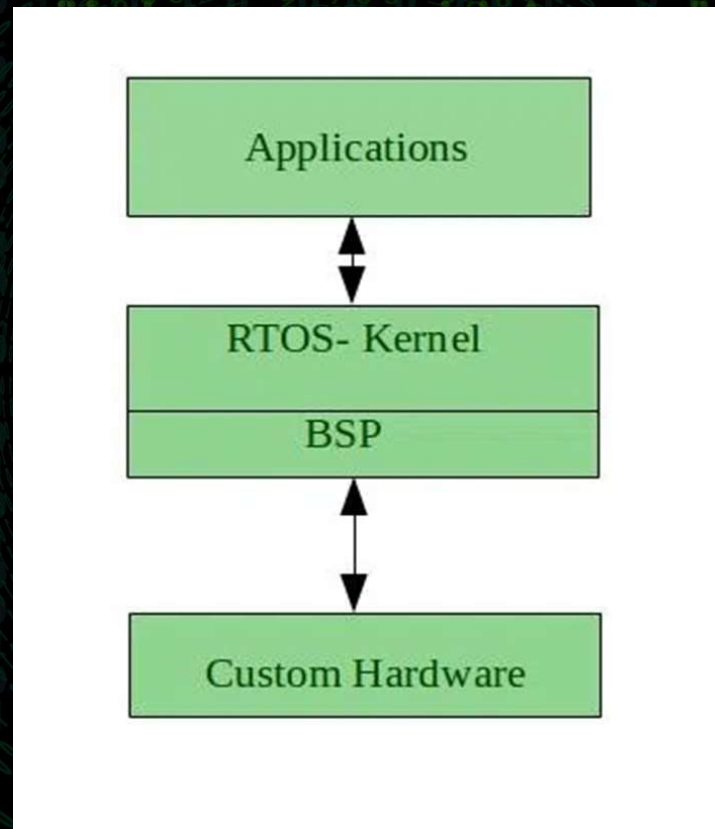
Architecture of Distributed OS



NETWORK OPERATING SYSTEM



REAL-TIME OPERATING SYSTEM - RTOS





THANK YOU

