threads in Distributed Systems -:

- used to express Communication in the form of multiple logical Connections at the same time.

- An important property of threads is that they can provide a Convenient means of allowing blocking system calls without blocking the entire process in which the thread is running.

- A main contribution g threads in D.s is that allow They clients and serves to be constructed such that communication and local processing can overlap, resulting in a high level of performance.

- Attractive to used in Distributed systems

Multithread client -> Web browser

Multithread server → Egi. web server

Multi thread clients

→ It can be used to hide delays/ latencies in b/w Communications

by initiating communication and immediately proceeding with

Something else.

Example: Web browser (such as IE are multithreaded)

A web browser can start up several threads like once main HTML file has been fetched , separate threads can be activated to take care of fetching the other parts.

one each for images on page animations l'applets etc.

Multi thread servers

→ A multi threaded Server organized in a dispatcher/ worker model.

→ Server implementation scheme

-: single threaded server

-: Multi-threaded server

-: Finite-state me serves

use non-blocking system call

hand to program

Model	**Characteristics**
Threads	Parallelism, blocking system calls
Single -threaded process	Non parallelism, blocking system calls
Finite state machine	Parallelism, non blocking system calls

Three ways to construct a server?.

1. Blocking system calls make programming easier & parallelism improves performance.
2. The Single-threaded Server retains the ease & simplicity of blocking system calls, but gives up performance.
3. The finite-state machine approach achieves high performance through parallelism & uses non blocking calls, this is hard to program.