MULTI THREADING MODELS

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THREAD

1.A thread is a basic utilisation of cpu , actually thread is a program.

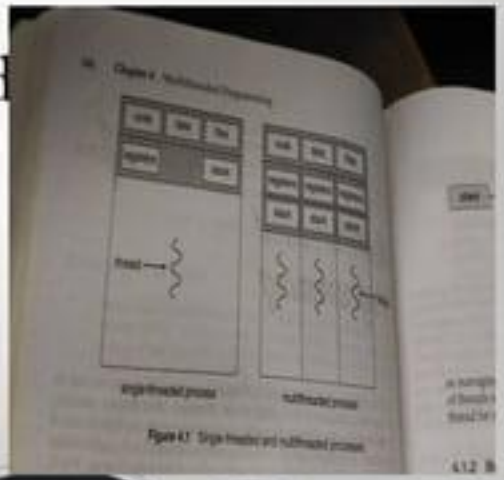
2.It shares with other threads belonging to the same process its operating systems,such as open files & signals

TYPES

There are two types of thread

.Single-threaded process

Multi-Threaded process



.multi-threaded process

threads may be provided either at user level for USER THREADS **or** by kernal for KERNAL USERS.

MULTITHREADING MODELS

There are three dominant models for thread libraries.

1. many-to-one

2.one-to-one

3.many-to-many

MANY-TO-ONE

It maps **MANY USER THREADS** to **ONE KERNAL THREAD**

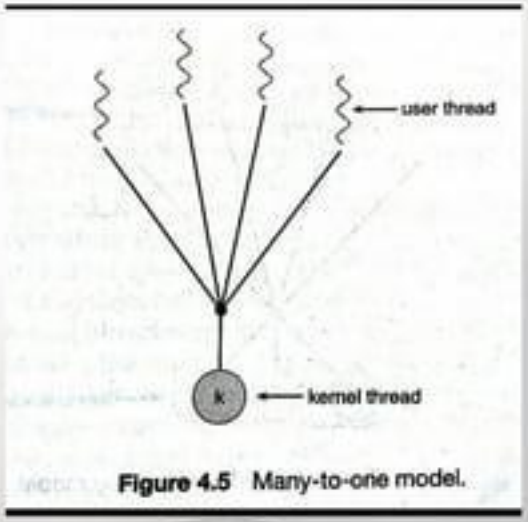


Figure 4.5 Many-to-one model.

ONE-TO-ONE

One-to-one model ,maps each **user** thread to each **kernal** thread **.**

Chapter 4 Multithreaded Programming

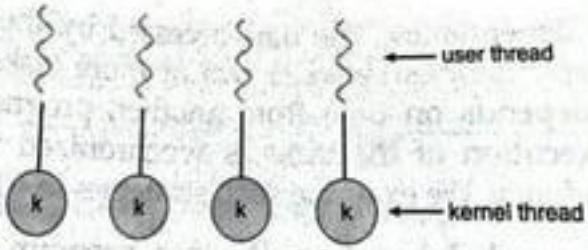


Figure 4.6 One-to-one model.

one to one model is more concurrent than **many to one** ,it allows another thread to run when a thread makes blocking call.

the only drawback is that creating a user thread requires creating the kernal thread.

"Because creating kernal thread is burden for the application");

MANY-TO-MANY

- Many-to-many model is many user threads to many (equal)kernal threads.

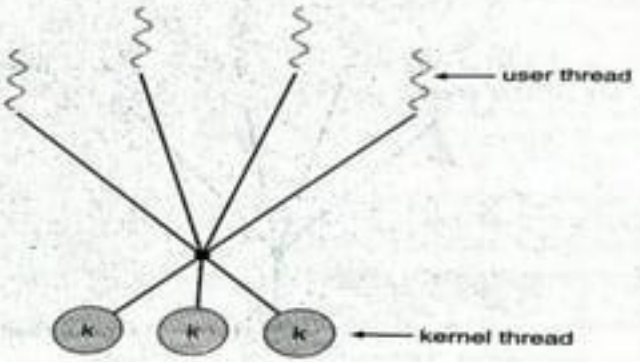


Figure 4.7 Many-to-many model.

many-to-many allows developper to craete more user threads as he wishes.

rue concurency is not gained .

("Because kernal can schedule only one thread at a time ,one-to-one model allows graeter concurrency ");

Then a thread perform blocking system call ,the kernal can schedule another thread for exucution.