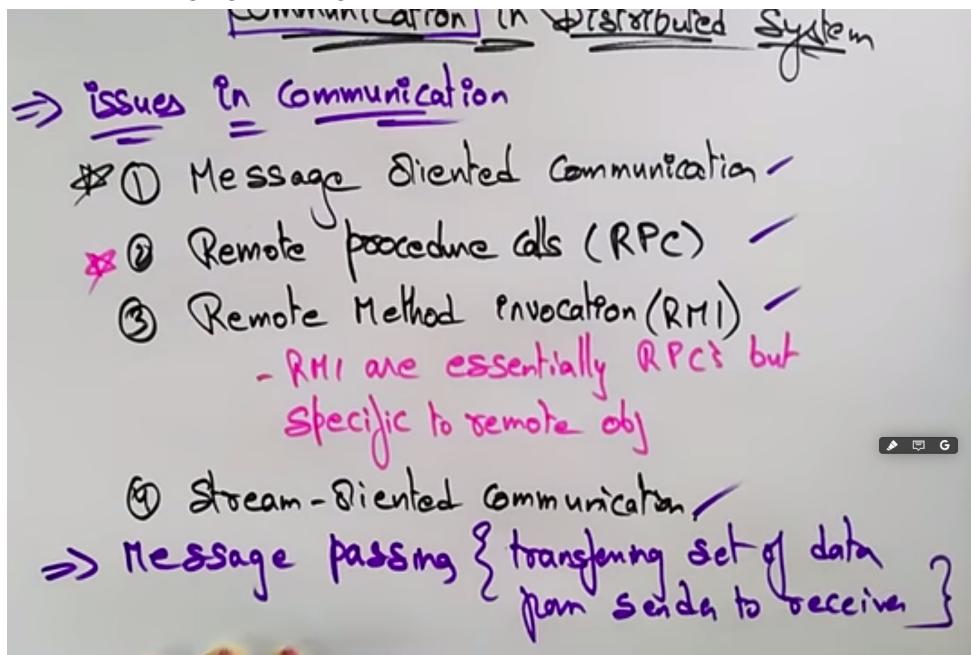
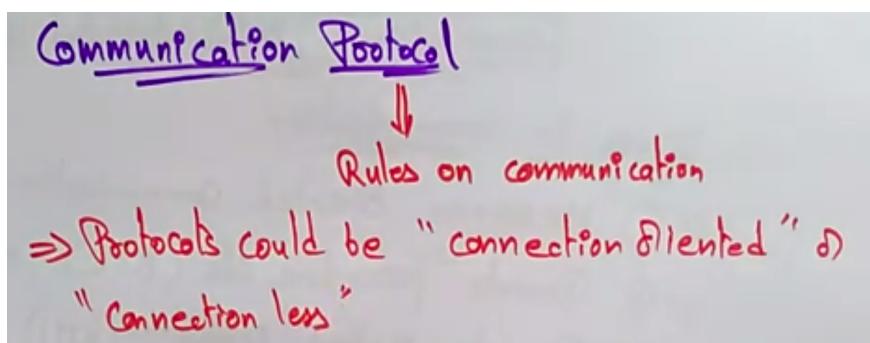


Communication in Distributed Systems

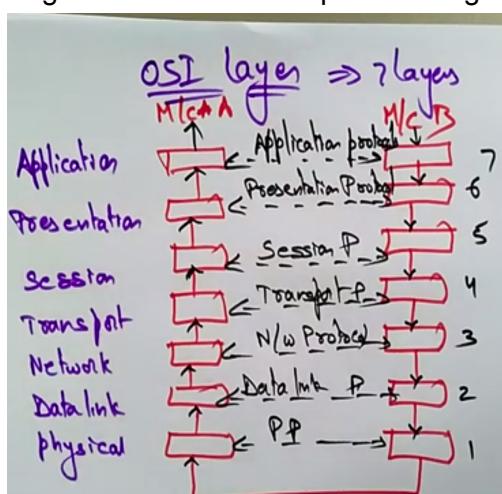
- Messaging passing from one end to the other end.



1- how??

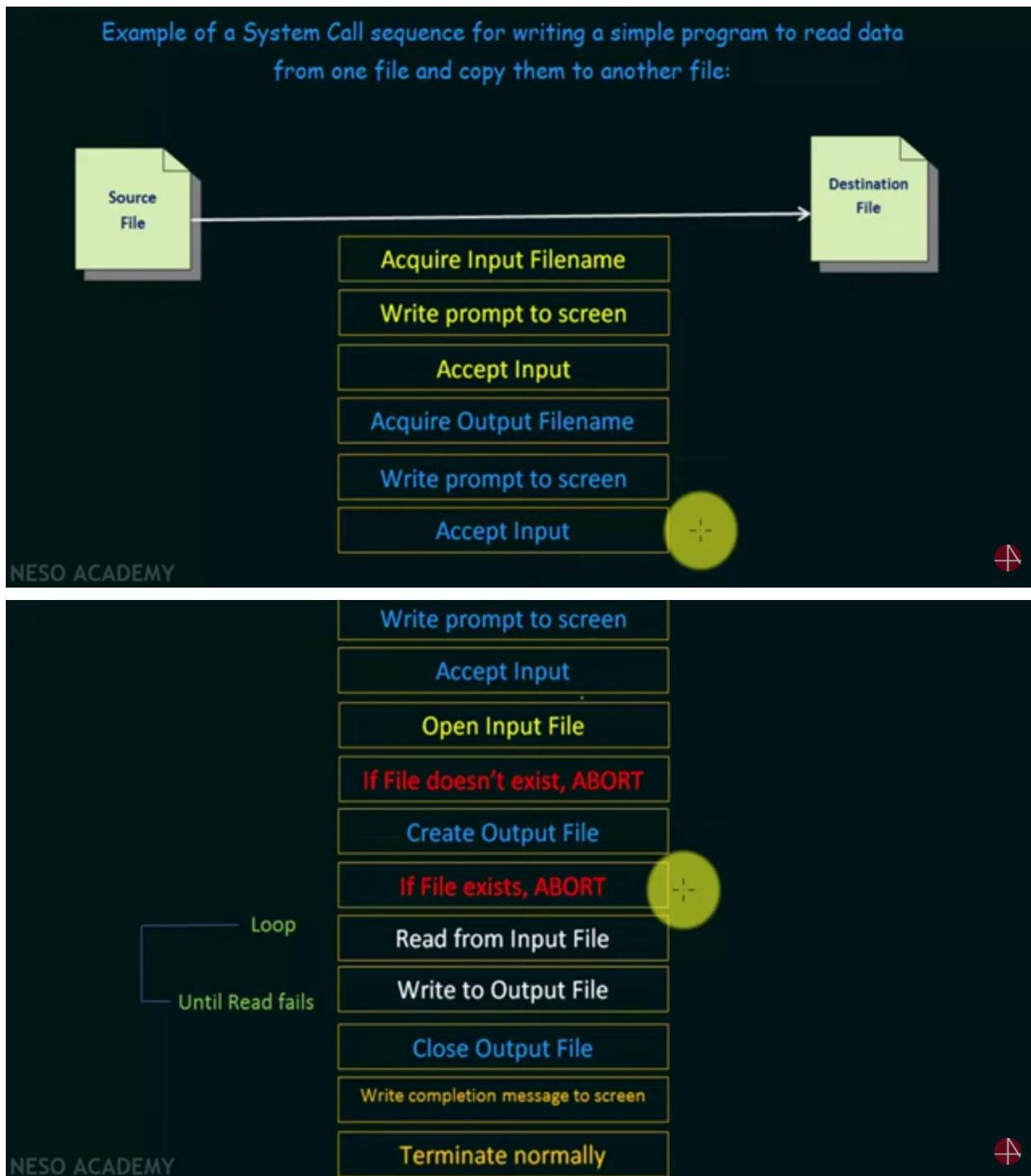


Msg transfer from some protocols eg OSI & TCP layers. They're responsible for communication.



System Calls

`ls -l` (The `-l` option signifies the long list format.



Types of System Calls

System calls can be grouped roughly into five major categories:

1. Process Control
2. File Manipulation
3. Device Management
4. Information Maintenance
5. Communications

1. Process Control

- end, abort
- load, execute
- create process, terminate process
- get process attributes, set process attributes
- wait for time
- wait event, signal event
- allocate and free memory

2. File Manipulation

- create file, delete file
- open, close
- read, write, reposition
- get file attributes, set file attributes

3. Device Manipulation

- request device, release device
- read, write, reposition
- get device attributes, set device attributes
- logically attach or detach devices

4. Information Maintenance

- get time or date, set time or date
- get system data, set system data
- get process, file, or device attributes
- set process, file, or device attributes

5. Communications

- create, delete communication connection
- send, receive messages
- transfer status information
- attach or detach remote devices

The fork() and exec() System Calls

fork() : The fork() system call is used to create a separate, duplicate process.

exec() : When an exec () system call is invoked, the program specified in the parameter to exec () will replace the entire process — including all threads.

The screenshot shows a terminal window titled "jaision@neso-academy ~/Desktop/Fork" with the following content:

```
/ You will be awarded a medal for \n \
\ disregarding safety in saving someone. /\n \
\\ ^ ^\n \
(oo)\_\n \
(_)\_\n \
)---w |\n \
\n \
jaision@neso-academy ~/Desktop/Fork $ gcc fex1.c\njaision@neso-academy ~/Desktop/Fork $ ./a.out\nHello Neso Academy!\nPID = 5824\njaision@neso-academy ~/Desktop/Fork $ gcc fex1.c\njaision@neso-academy ~/Desktop/Fork $ ./a.out\nHello Neso Academy!\nPID = 5837\nHello Neso Academy!\nPID = 5838\njaision@neso-academy ~/Desktop/Fork $
```

A warning message is displayed above the terminal output:

/ You will be awarded a medal for \n \
\ disregarding safety in saving someone. /\n \
\\ ^ ^\n \
(oo)_\n \
(_)_\n \
)---w |\n \
\n \
jaision@neso-academy ~/Desktop/Fork \$ gcc fex1.c\njaision@neso-academy ~/Desktop/Fork \$./a.out\nHello Neso Academy!\nPID = 5824\njaision@neso-academy ~/Desktop/Fork \$ gcc fex1.c\njaision@neso-academy ~/Desktop/Fork \$./a.out\nHello Neso Academy!\nPID = 5837\nHello Neso Academy!\nPID = 5838\njaision@neso-academy ~/Desktop/Fork \$

