L.1.6 - Imp Linux Commands

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Ques: Which command is used to assign only read permission to all three categories of file 'note'.

© chmod ugo=r note.

Ques: chmod ugo+rw note command can be represented in octal notation as :-

(B) chmod 666 note.

Ques: Suppose you have a file "f1" whose contents are :-

1234567890abcdefghij

here 'lseek' is used two time sequentially.

lseek(n, 10, SEEK_CUR);

lseek(n, 5, seek_SET); n is file descriptor.

After applying lseek two times, what will be current position of R/W head ?

(Index starts from 0).

(B) 5.

L-1.7 : System calls in O.S

→ If we want to access any functionalities of O.S then we have to use kernal mode.

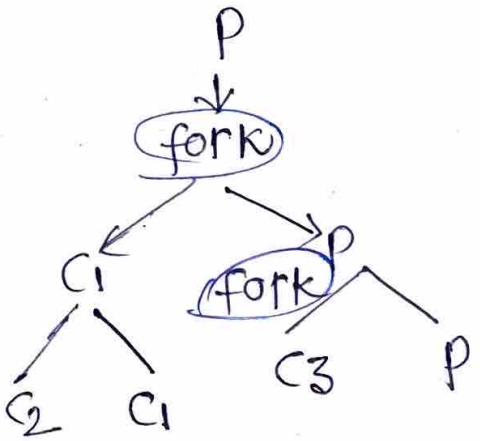
→ System call is a programatical way through which we can shift from user mode to kernal mode.

System call :-

- → File related :- open( ), Read( ), Write( ), close( ), create file etc.
- → Device related :- Read, write, Reposition, ioctl, fcntl(file control)
- → Information :- get pid, attributes, get system time and data.
- → Process control :- Load, execute, abort, fork, wait, signal, allocate, etc. **
- → Communication : Pipe( ), create/delete connections, Shmget( ).

L. 1.8 :- Fork System call

Fork() system call is used to create a child process. → Chid process Id :- 0 (zero)
Parent process Id :- +ve no.



Q. fork
fo*k
for k
Pf("hello")

Ans :- 7 child
1 parent

$2^n - 1$

2^n

Q.

```
#include <stdio.h>
#include <unistd.h>
int main()
{
  int a;
  for (a=1; a<5; a++)
      fork();
  printf ("1");
```

How many time it will print "1" in output.

Q.
```
#include <stdio.h>
#include <unistd.h>
int main()
{
  if (fork() && fork())
      fork();
  printf ("Hello");
  return 0;
}
```

How many times it will print "Hello" in output?.

→ 4.

L-1.10- User mode and kernal mode:

User mode :-

The system is in user mode when the O.S is running a user application such as handling a text editor.

→ The transition from user mode to kernal mode occurs when the application requests the help of operating system or an interupt or a system call occurs.

→ The mode bit set to 1 in the user mode. It is changed from 1 to 0 when switching from user mode to kernal mode.

kernal mode:

→ The system starts in kernal mode when it boots and after the O.S is loaded, it executes applications in user mode. There are some privileged instructions that can only be executed in kernal mode.

→ These are interrupt instructions, input output management etc. If the privileged instructions are executed in user mode, it is illegal and a trap is generated.

→ The mode bit set to 0 in the kernal mode. It is modified from 0 to 1 when switching from kernal mode to user mode.