

Computers

Exercises File System

Computadors

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Exercise 1

- Assume the file “input.dat” have an even number of integers
- What are the final contents of “file.bin” if both programs are executed at the same time and from the same folder?

TTY A

```
./program > /home/alumne/file.bin
```

```
fd = open("../input.dat", O_RDONLY);  
while ((len = read(fd, buf, 2*sizeof(int))) > 0)  
    write(1, buf, len);
```

TTY B

```
./program > /home/alumne/file.bin
```

```
fd = open("../input.dat", O_RDONLY);  
while ((len = read(fd, buf, 2*sizeof(int))) > 0)  
    write(1, buf, len);
```

Exercise 2

- What are we doing with the following code?
- The program is called by the command line: **#>./program file.dat**

```
...
char c;
int fd,fd1,s,pos=0;
fd=open(argv[1],O_RDONLY);
fd1=open(argv[1],O_WRONLY);
s=lseek(fd1,0,SEEK_END);
while(pos!=s){
    read(fd,&c,sizeof(char));
    write(fd1,&c,sizeof(char));
    pos++;
}
...
```

Exercise 3

- What are we doing with the following code?
- The program is called by the command line: **#>echo hola | ./program file.dat**

```
...
char c;
int fd;
fd=open(argv[1],O_WRONLY|O_CREAT|O_TRUNC, 0640);
lseek(fd,0,SEEK_END);
fork();
while(read(0, &c, 1) > 0){
    write(fd, &c, 1);
    sleep(1);
}
...
```

Exercise 4

- Implement a code that inserts the character 'X' in the middle of any **text** file

File contents before execution

abcdef

File contents after execution

abcXdef