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*****
Ejercicio1.c
*****
#include<stdio.h>
#include <unistd.h>
#include <stdlib.h>
#include <sys/types.h>
#include <sys/stat.h>
#include <fcntl.h>

main(int argc, char **argv)
{
int fd, t1[2], t2[2];
char dato;

pipe(t1);
if (fork()!=0)
{
close(0);
dup(t1[0]);
close(t1[0]);
close(t1[1]);

execlp("sort","sort","-n",NULL);
perror("Error en ejecucion de sort");
exit(-1);
} else {
pipe(t2);
if (fork()!=0)
{
close(t2[1]);
close(t1[0]);

fd=open(argv[4],O_WRONLY|O_CREAT|O_APPEND,0700);

while (read(t2[0],&dato,sizeof(dato))>0)
{ write(t1[1],&dato,sizeof(dato));
write(fd, &dato,sizeof(dato));
}
close(t2[0]);
close(t1[1]);
close(fd);
exit(0);
} else {
close(t1[1]);
close(t1[0]);

close(1);
dup(t2[1]);
close(t2[1]);
close(t2[0]);

close(2);

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        open(argv[3],O_WRONLY|O_CREAT|O_APPEND,0700);

        execlp("grep","grep",argv[1],argv[2],NULL);
        perror("Error en ejecucion de grep argv[2]");
        exit(-1);
    }
}
}

```

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Ejercicio2.c

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```

#include<stdio.h>
#include <unistd.h>
#include <stdlib.h>
#include <sys/types.h>
#include <sys/stat.h>
#include <fcntl.h>

```

```

main(int argc, char **argv)
{
    int fd, t1[2], t2[2];
    char dato;

```

```

    pipe(t1);
    if (fork()!=0)
    {
        close(0);
        dup(t1[0]);
        close(t1[0]);
        close(t1[1]);

        execlp("sort","sort","-n",NULL);
        perror("Error en ejecucion de sort");
        exit(-1);

```

```

    } else {
        pipe(t2);
        if (fork()!=0)
        {
            close(t2[1]);
            close(t1[0]);

            close(0);
            dup(t2[0]);
            close(t2[0]);

            fd=open(argv[4],O_WRONLY|O_CREAT|O_APPEND,0700);

            while (read(0,&dato,sizeof(dato))>0)
            {
                write(t1[1],&dato,sizeof(dato));
                write(fd, &dato,sizeof(dato));
            }
            close(t1[1]);

```

```
    close(fd);
    exit(0);
} else {
    close(t1[1]);
    close(t1[0]);
    close(1);
    dup(t2[1]);
    close(t2[1]);
    close(t2[0]);

    close(2);
    open(argv[3],O_WRONLY|O_CREAT|O_APPEND,0700);

    execlp("grep","grep",argv[1],argv[2],NULL);
    perror("Error en ejecucion de grep argv[2]");
    exit(-1);
}
}
```