

write(1, "1234", 4);

Parent fd Table

0
1
2

Struct Files

f\_mode: READ  
f\_pos: 0  
f\_count: 1  
f\_flag: 0

f\_mode: WRITE  
f\_pos: 4  
f\_count: 2  
f\_flag: 0

In-core Inodes

in.txt

out.txt

pid = fork();

Parent

0
1
2

...  
f\_count: 2  
...

in.txt

Child

0
1
2

...  
f\_count: 4  
...

out.txt

case 0:

dup2(2, 5);

Parent

0
1
2

...  
...  
...

in.txt

Child

0
1
2
5

...  
f\_count: 5  
...

out.txt

break;

fd = open("out.txt", O\_WRONLY | O\_APPEND);

Parent

0
1
2
fd

...  
...

in.txt

Child

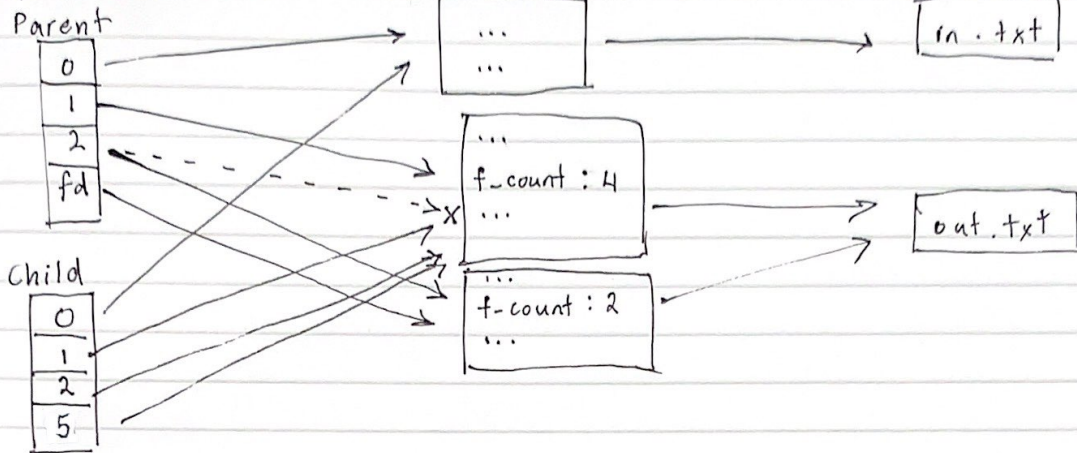
0
1
2
5

...  
...

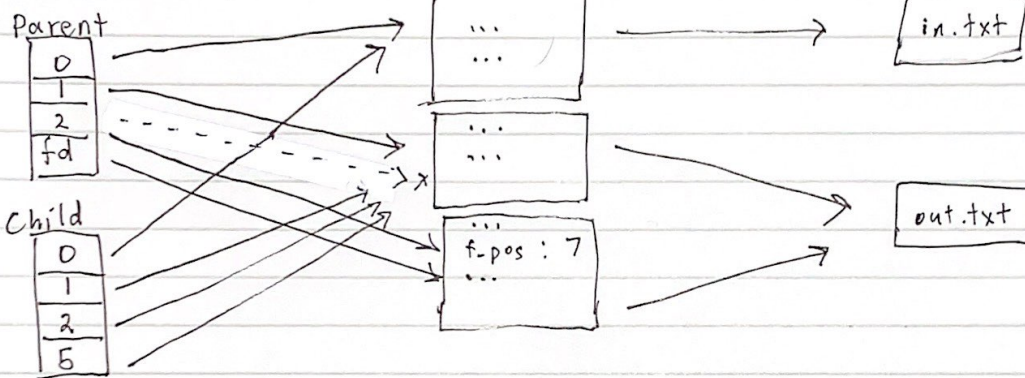
out.txt

f\_mode: WRITE  
f\_pos: 4  
f\_count: 1  
f\_flag: O\_APPEND

dup2(fd, 2);



write(2, "XYZ", 3);



break;

final outcome :

Parent File Descriptor Table

0
1
2
fd

struct Files

f\_mode: READ  
f\_pos: 0  
f\_count: 2  
f\_flag: 0

In-core Inodes

in.txt

Child File Descriptor Table

0
1
2
5

f\_mode: WRITE  
f\_pos: 4  
f\_count: 4  
f\_flag: 0

out.txt

f\_mode: WRITE  
f\_pos: 7  
f\_count: 2  
f\_flag: O\_APPEND