

# SP HW\_1

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1.

(a)

`./a.out < infile 2>&1 > outfile` means that we

- set "infile" to "standard output"
- redirect "standard error" to "standard output"
- set "standard output" to "infile."

(b)

Code

```
dup2(fd1, 1);
dup2(2, 1);
close(2);
dup2(1, fd2);
```

2.

(a)

`write_to_fn()` function should be an atomic operation because

if another function writes **A.txt** before `write_to_fd()` writes **B.txt** to the file, \* it will append the **B.txt** written by `write_to_fd()` to the **A.txt** written by \*`write_to_fd()` because they use the same offset in the same open file.

(a)

`write_to_fn()` function should be an atomic operation because

if another function writes **A.txt** before `write_to_fd()` writes **B.txt** to the file, the **A.txt** written by another function may be displaced by the **B.txt** written by `write_to_fd()`.

Although `write_to_fd()` create a new open file and a new open file descriptor, the offset in the new open file may be same as the offset in another open file. Thus, the **A.txt** written by another function will be displaced by the **B.txt** written by `write_to_fd()`.