HW 4

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Spin Locking:

b) acquire() ensures interrupts are off. But sti() makes them enable. cli() makes interrupt off. release() makes them enable.

As these are interrupts in local processor the Kernel goes to a trap state while it panics, due to 'ide' locks, as ~~there is another acquired~~ we enabled other interrupts to come and take our lock.

c) file_table_lock's critical section are less likely to trigger interrupts compared to ide_locks. Perhaps they are shorter and thus have less chance for external interrupts to occur.

a)
```
struct spinlock(lk);
initlock(&lk, "test lock");
acquire(&lk);
acquire(&lk);
```

There will be panic cause two 'acquires' ask for same lock.

d) If we do lk → locked first, other process can acquire the lock have access to that information. If interrupt / panic happens and have a stack trace before setting the old pcs and cpu after clearing locked, i.e, we have an inconsistent looking lock.

XV6 File System:

a) Output: log_write 34
log_write 34
log_write 59

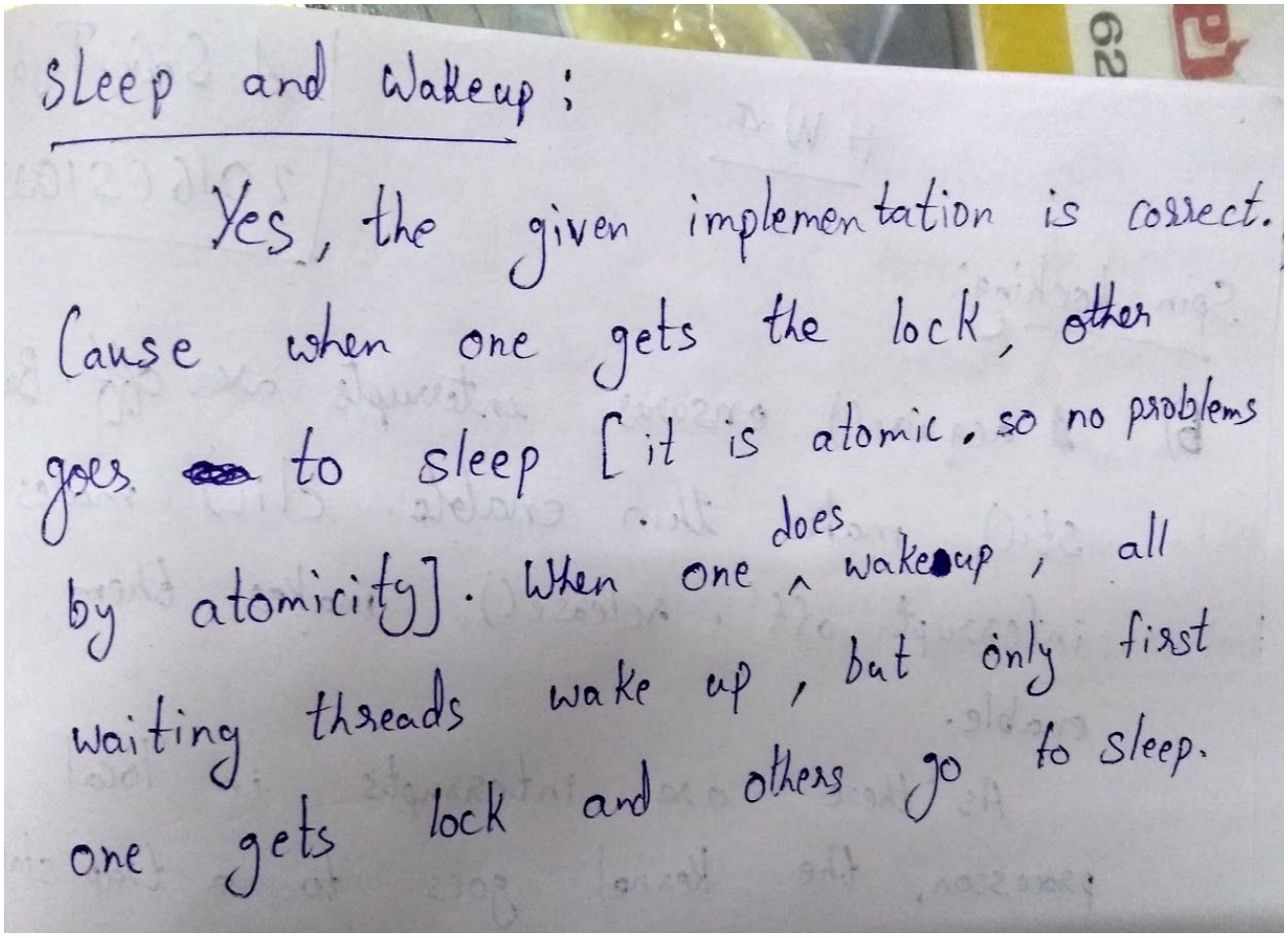
Here first we write the output file to get it from the folder. On third line as the file is missing we create it.

b) Output: log_write 58, 568, 568, 34, 568, 34

We open the file and write given chas in it.

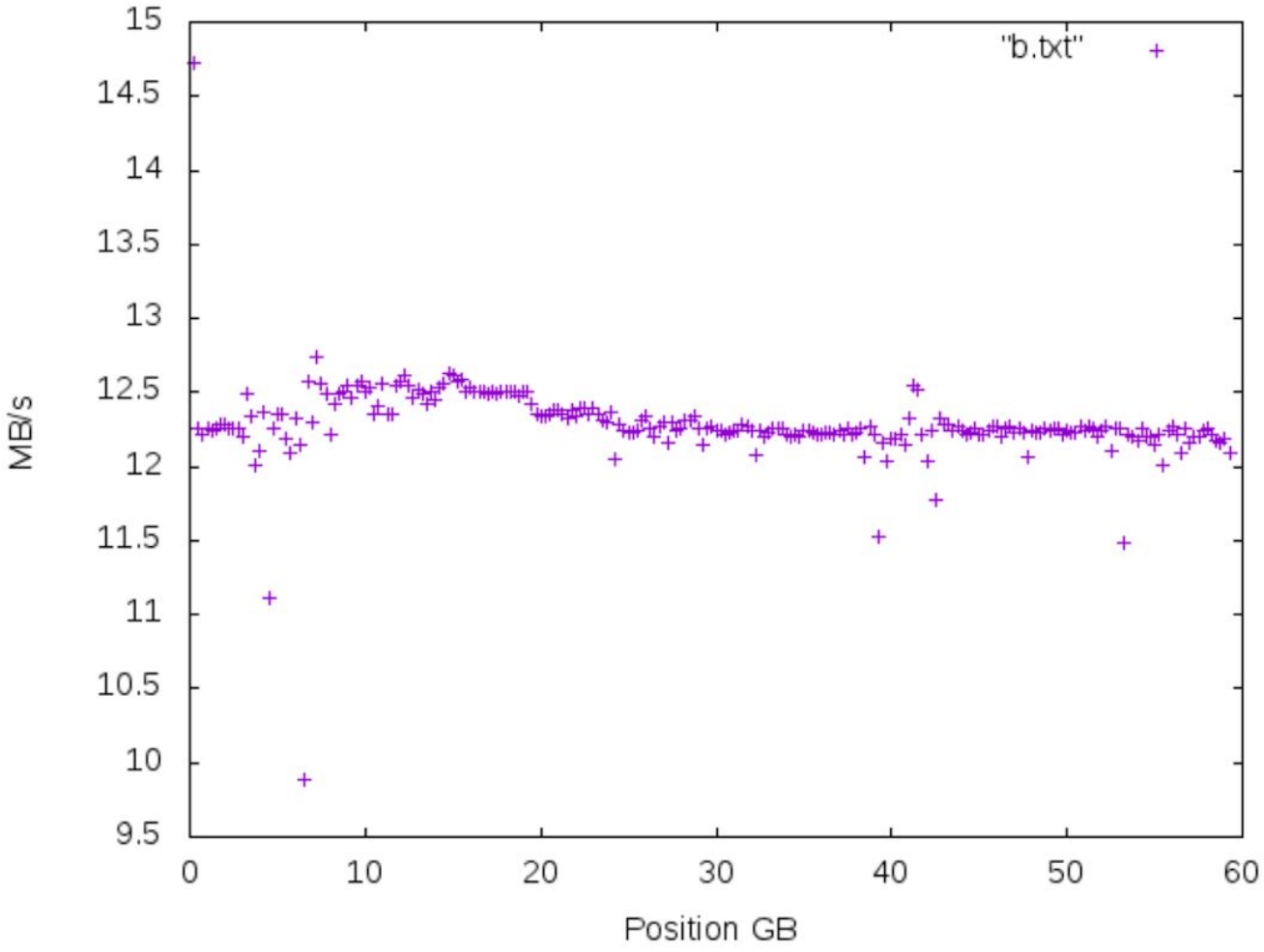
c) Output: log_write 59, 34, 58, 34, 34

We remove the file from the folder.



ZCAV:

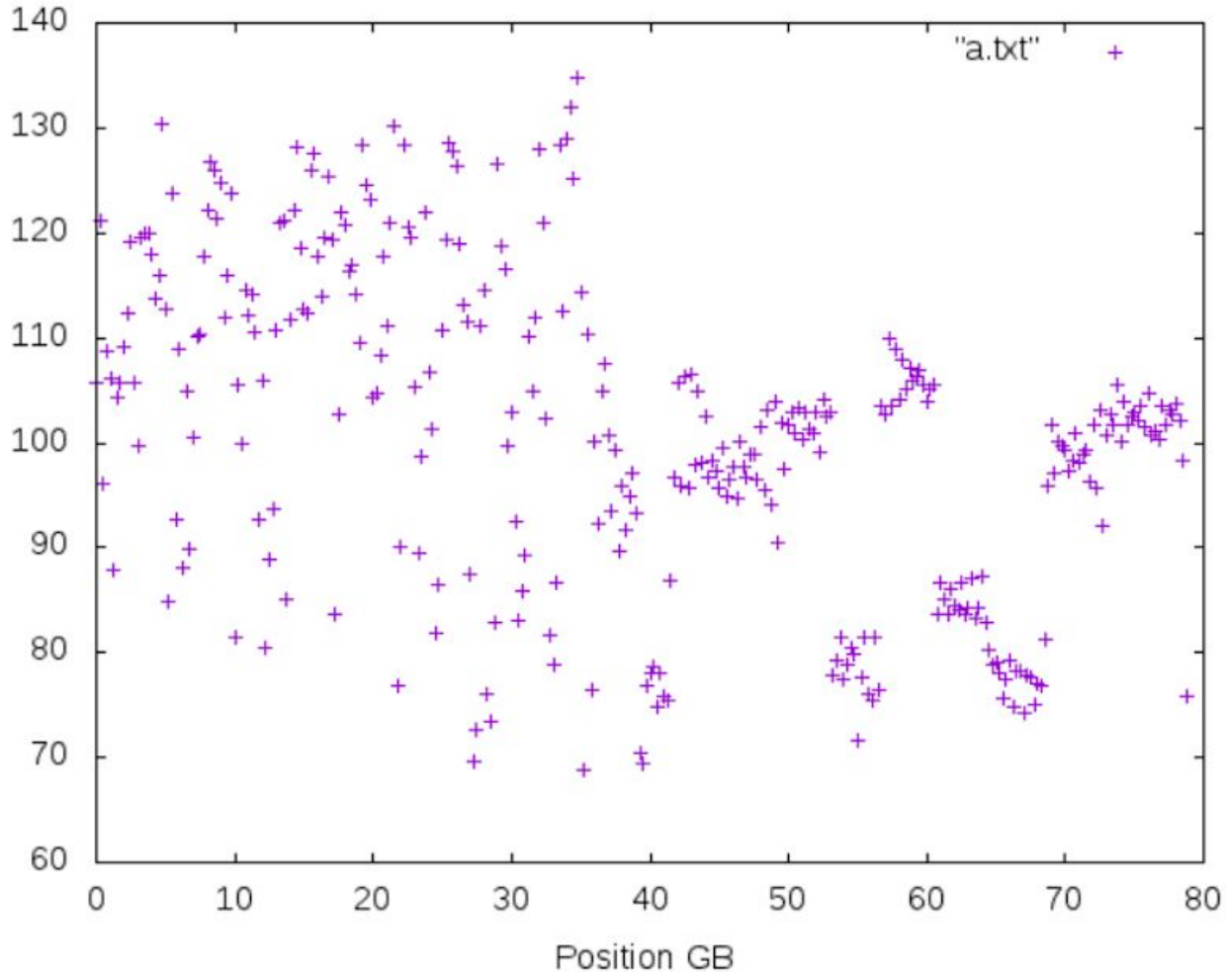
Laptop:TOSHIBA THNSNJ128G8NY
USB:SanDisk Cruzer Glide 64GB



USB:FROM ZCAV

59 GB in 4940 sec,

Throughput 12MB/s.



Laptop:From ZCAV

79 GB in 825 sec,

Throughput 98 MB/s.