

Atomicity

6.033 2008 Lecture 16

careful_put and _get

```
careful_put(s, data):
    cksun = hash(data)
    seek/rotate to s
    write s, cksun, data

careful_get(s, data):
    for i = 1 to N:
        seek/rotate to s
        read x, cksun, data
        if x == s and hash(data) == cksun
            return OK
    return BAD
```

all or nothing get

```
all_or_nothing_get(s, data):
    flag = D0.careful_get(s, data)
    if flag == ok:
        return ok
    return D1.careful_get(s, data)
```

all or nothing put

```
all_or_nothing_put(s, data):
    flag = D0.careful_get(s, temp)
    if flag == ok:
        D1.careful_put(s, data)
        D0.careful_put(s, data)
    else:
        D0.careful_put(s, data)
        D1.careful_put(s, data)
```

salvage

```
salvage(s):
    flag0 = D0.careful_get(s, temp0)
    flag1 = D1.careful_get(s, temp1)
    if flag0 == bad:
        D0.careful_put(s, buff1)
    if flag1 == bad:
        D1.careful_put(s, buff0)
```