Atomicity
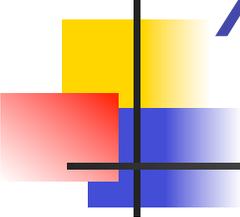
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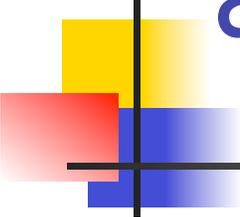
Xfer

- xfer(A, B, amt)
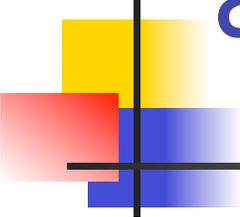 A <- A – amt;
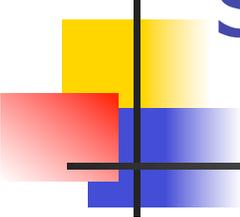 B <- B + amt;

all or nothing put

```
all_or_nothing_put(data,X)
    flag <- careful_get(X.D0,buff);
    if flag = ok {
        careful_put(X.D1,data);
        careful_put(X.D0,data); }
    else {
        careful_put(X.D0,data);
        careful_put(X.D1,data); }
```

all or nothing get

```
all_or_nothing_get(data,X)
    flag <- careful_get(X.D0,data);
    if flag = ok return;
    careful_get(X.D1,data);
```

salvage

```
salvage(X)
    flag0<- careful_get(X.D0,buff0);
    flag1 <- careful_get(X.D1, buff1);
    if (flag0 = bad) {careful_put(X.D0,buff1);}
    if (flag1 = bad) {careful_put(X.D1, buff0);}
```