

NOTICE

With all respects to all

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## Atomic OP

↳ small  
not interrupted

atomic +=

CAS

lock  
semaphore  
monitor

make big atomic  
things

↳ code regions

↳ OS areas

R/W lock

make selectively  
atomic

Barrier

split into past/future

↳ remove some locks

# Transaction

Set of actions that happen all-or-nothing

Shopping

enter

select

go to checkout

scan

pay

buy

leave

begin transaction

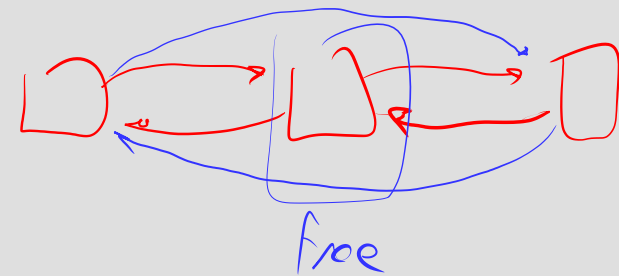
do

stuff

commit transaction

rollback

pointer-based DS  
DLL



implement:

• mutex

• Try & check

```
lock {  
  read var  
}
```

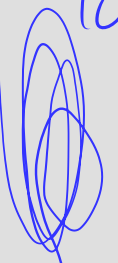
```
compute  
write var steal
```

```
lock {  
  check  
  write var  
}
```

Thread

```
main ( ) {
```

```
loop {
```



```
}  
return
```

```
}
```

```
pthread_create ( ... function )
```

```
void * function ( void * ) {
```

```
}
```