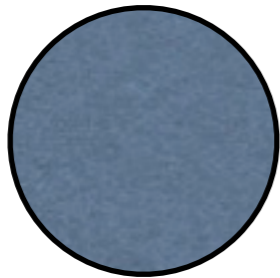
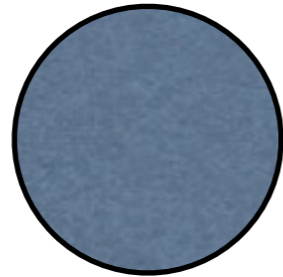
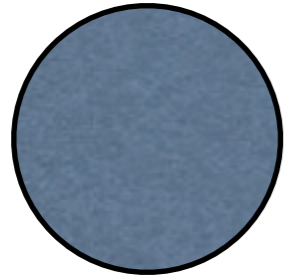


# System Properties and Project 3 tips

# Project 3

- The PAXOS algorithm described in class focused on one paxos consensus.
- How does this fit with project 3.

# Project 3



- **Node proposes a value**  
[or, makes request to a proposer]
- **Paxos runs, consensus learned**
- **client gets a response when its request is complete.**

# Project 3

Q: what if 2 requests occur  
at the same time?

- PAXOS will form consensus on 1 of them.
- Once consensus learned, other proposer can propose again in the next paxos round.

# Project 3

Q: what if the ordering  
from paxos is invalid?

- All file servers can see the log from paxos
- Since they agree, they will agree that invalid operation is invalid
- and therefore, can ignore it.

# Project 3

Q: what is the *value* in paxos?

- Context: The proposer / file server is committing a transaction.
- That transaction can be uniquely identified by proposer + transaction id.
- paxos orders transactions.

# System Properties

	D H T	Dynamo	Memcached	Spanner
Consistency when updating 1 record				
Consistency when updating multiple records				
Lookup Efficiency				

# System Properties

- Data center failure
- Network Partition
- When are reads 'local'?
- When are writes 'local'?