

Lab 2 Tutorial

CS4740 : Cloud Computing

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Key-value Store API

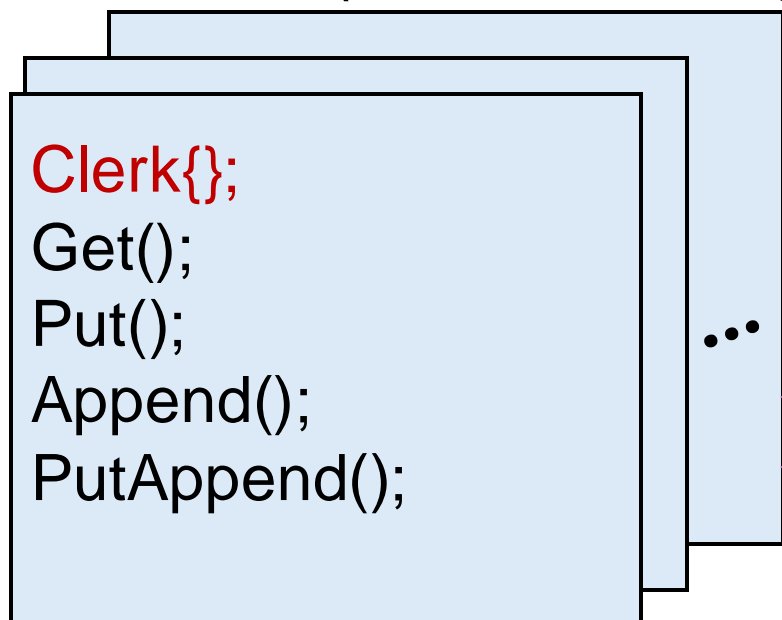
- GET
 - Client sends request with a specific key
 - Server returns the value if found; otherwise, returns an empty result
- PUT
 - Client sends a key and its value
 - Server adds the key-value or updates the value if the key already exists
- APPEND
 - Client provides a key and a value to be added
 - Server appends the new value to the existing value for that key

Exactly-once Schema

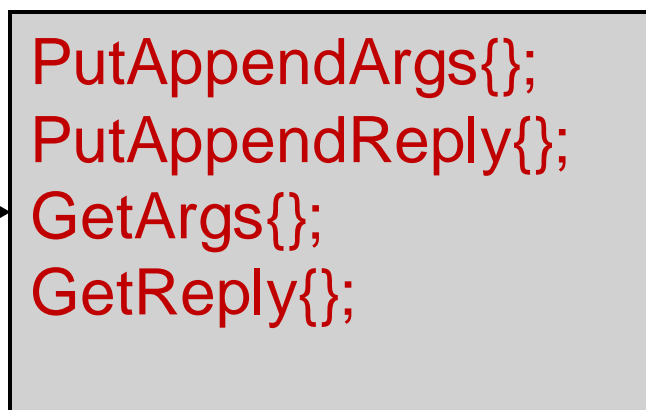
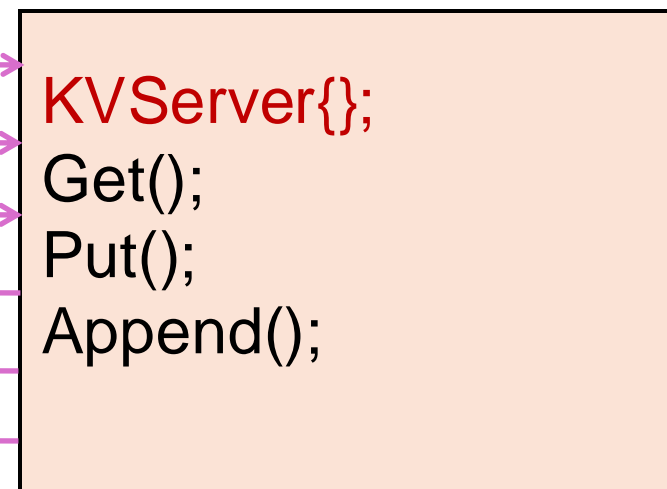
- Combines **retransmission** of at least once and **duplicate filtering** at-most-once schemes
 - Client sends a request with a unique ID
 - Client **Retries** until server returns **reply**
 - Server needs to maintain a table to keep track of finished request IDs.

Client-server Architecture

Clients (kvsrv/client.go)



kv-server (kvsrv/server.go)



Message (kvsrv/common.go)

Requests

Replays

