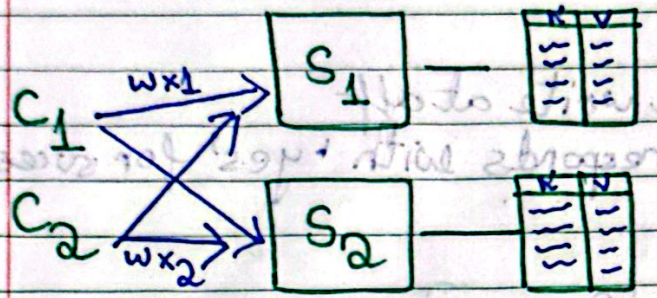
Property of the half blood prince
GFS

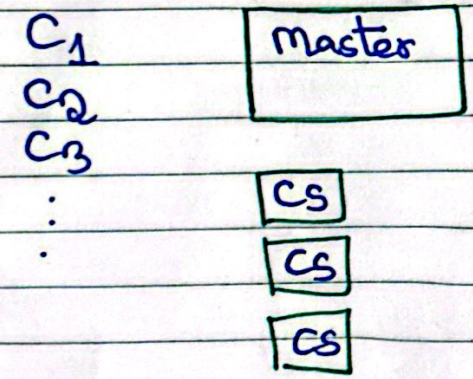
Big Storage

- We distribute all the data on many number of servers in order to be able to read many servers in parallel so thats called sharding. → performance
- Faults → tolerance → with replication just keep two or three or whatever copies of data.
- Replication → inconsistencies
- Consistency → low performances



this design will lead to inconsistencies.

GFS



master Data
filename → array of chunk handlers.
handle → list of chunk servers (v)
version # (nv)
primary (v)
lease expiration.
log, checkpoint → Disk.

— Read

① name, off → m
② m sends H, list of s (chunk handle)
cached → closest server.
③ c → cs
data

- Writes

Client makes a library call that says here's a file name and like to append this buffer of bytes of the file client asks the master look I want to append sends a master requesting for that file, and where to look for the last chunk in which server ← Find up to date replicas.

- Pick P, S
- Increment V#
- Tells P, S and V# — lease for few seconds so there
- M writes V# to disk are no two primary

- P Picks off
- all replicas told to write at off
- if all yes → then responds with 'yes' for success.
- else no.