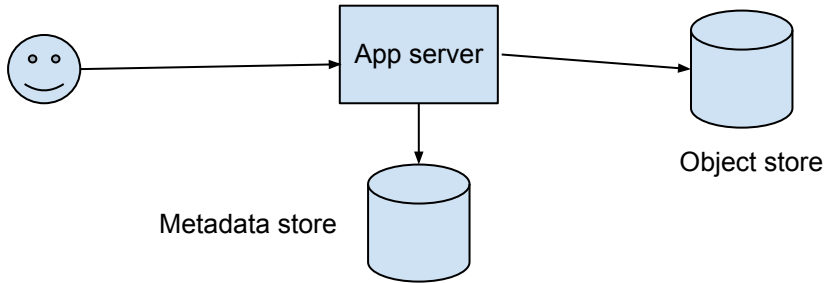**<u>Step 5: High-Level Design</u>**

- App layer to serve read and write requests
- App layer talk with storage layer (split into metadata and object store) to store and retrieve data
- Metadata using Distributed Key-Value store e.g., Cassandra, Object store using blob storage e.g., S3

<u>Step 6: Detailed Design</u>

Write request
- App server generates 6-letter random string as key of paste
- Create key generation service with multiple replicas for high availability
- Possible to pre-cache unused keys for assignment on each app server

Load balancer between
- Client and app servers
- App servers and object and metadata store
- App servers and object and metadata cache