

S3 storage classes

① General purpose.

② Infrequent Access (IA)

③ One Zone Infrequent Access.

④ Glacier Instant Retrieval.

⑤ Glacier Flexible Retrieval -

⑥ Glacier Deep Archive.

S3 intelligent Tiering

① General Purpose -

Durable → high Durability.

Highly Available.

ex. → 1 yrs. → 5 minutes.

+ frequent access
of data.

- - - - - Analytic, Moltile &

2.ii.

Highly Available.

Big Data Analysis, Mobile & Gaming Apps, website.

②

Infrequent Access:-

Standard -
IA

99.9% Available.

Disaster Recovery
Backups

One zone -
IA

99.99% Available

Secondary Storage.

③

Glacier Storage classes:- → Low cost storage.

Instant
Retrieval.

Flexible
Retrieval.
min 90 days

Glacier Deep
Archive.

Min 180 days
Standard → 12 hours

Retrieval.
Min storage
90 days
Millisecond data
retrieval time
Decentralized.

Delivery
Min 90 days
Up to 5 min
3 to 5 hr.
Bulk > 5 hours

Min
Standard \rightarrow 12 hours
Bulk \rightarrow 48 hours

Application on EC2 create images, thumbnail after profile photo are uploaded to Amazon S3. These thumbnail you can be easily recreated and only be kept for 60 days. The source images should be able immediately retrieved for these 60 days, and afterward the user can wait up to 6 hours. What should be the design.

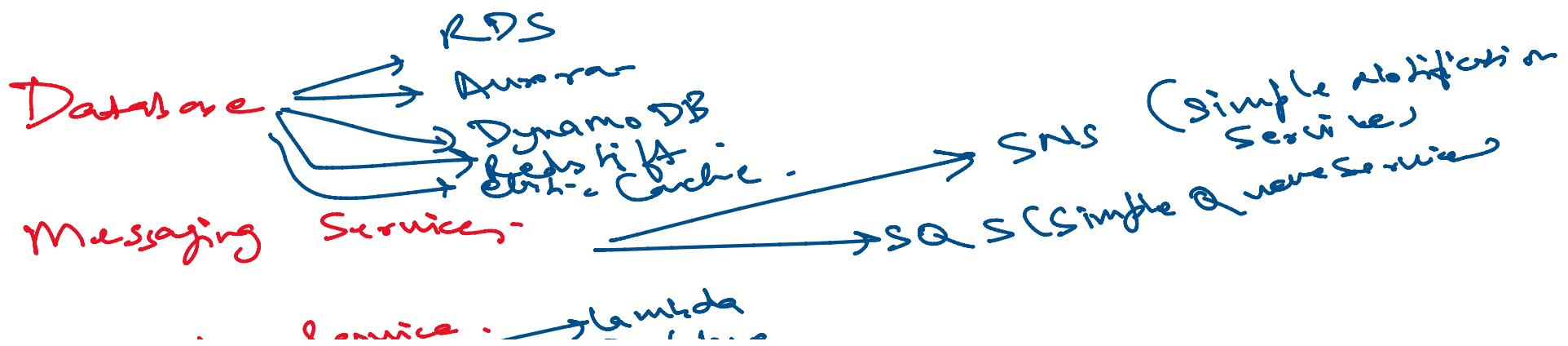
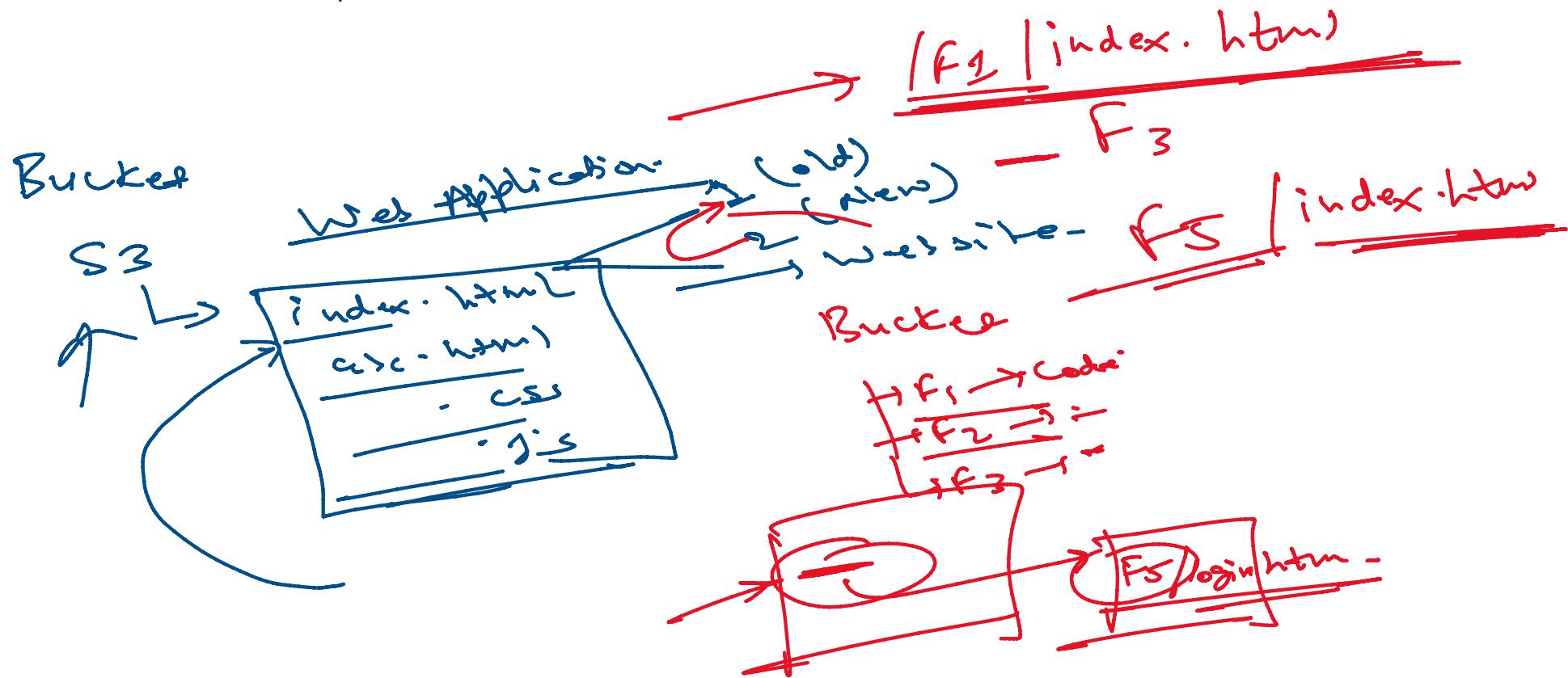
Images --- 60 days immediate (General Purpose) --- after 60 days waiting time 6 hours (Glacier)
Thumbnail --- 60 days --- One Zone IA --- Lifecycle Configuration expiration of 60 days

A rule in your company states that you should be able to recover your deleted S3 objects immediately for 30 days, although this may happen rarely. After this time, and for up to 365 days, deleted objects should be recoverable within 48 hours.

1. High Availability, Infrequent Access --- 30 days
2. Retention --- 365 Days
3. Recovery time --- 48 hours

Enable S3 Versioning

Standard IA ----> Glacier Deep Archive



Serverless Service:

```
graph TD; A[Serverless Service] --> B[Lambda]; A --> C[Step Functions]; A --> D[Appflow]
```

Amazon API

Amazon EMR
Monitoring

```
graph LR; A[Amazon EMR Monitoring] --> B[EventBridge]; A --> C[CloudWatch]
```

Amazon API
Apache Hadoop
Project

Amazon RDS

Relational Database Service.
SQL Query language

PostgreSQL

MySQL

MySQL

Oracle

Microsoft SQL Server

Amazon (AWS Relational Database)

EC2 instance → Database → MySQL → Java, JRE

EC2 instance → Database → MySQL

RDS → Managed Service.

- Automatic Provisioning, DS Patching.
- Monitoring Dashboard
- Backup feature
- Read Replica
- Multi AZ setup (Disaster Recovery)
- Scaling capabilities (Vertical & Horizontal)
- Storage Backed (EBS)

↑
No SQL
into RDS