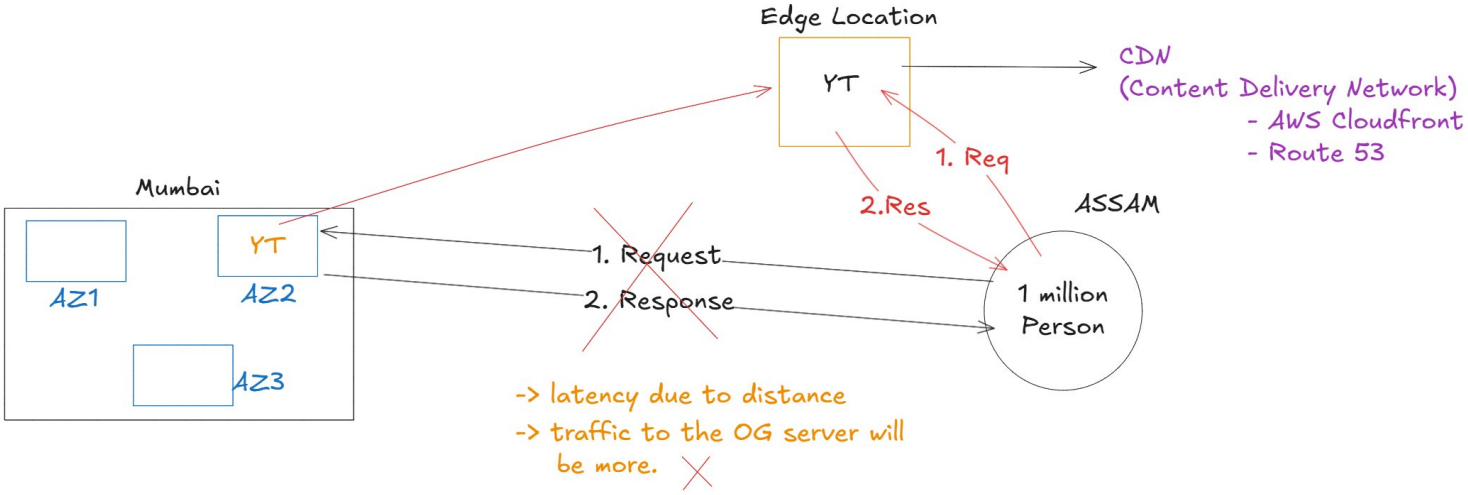
3. Edge Location(EL)

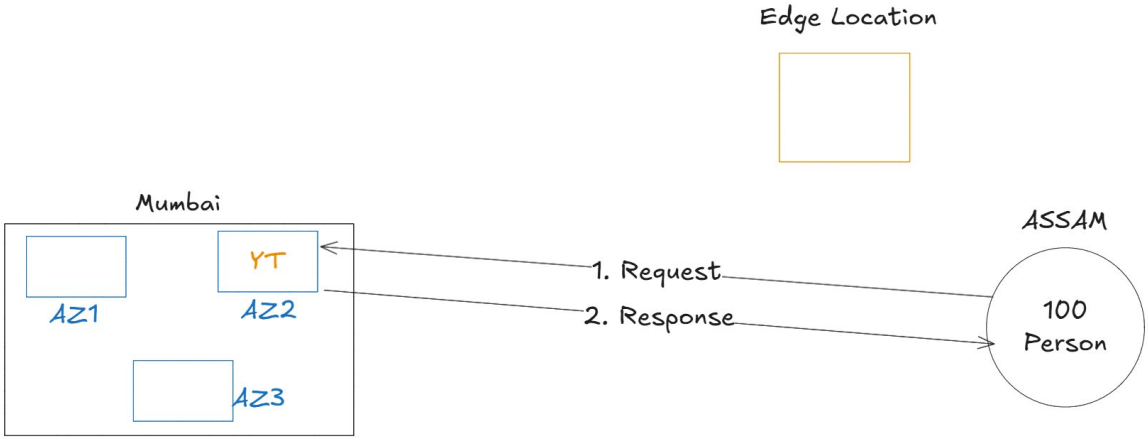
Cache -> data storing layer which holds the subset of data, usually for shorter period of time, so that future requests for the data can be served much faster.

>> An Edge Location in AWS is a geographical distributed data centers designed for faster content delivery and cache.

>> It is a cache storage location physically present close to the end users, which is used to speed up the content delivery & reduces latency by providing cached data from the nearest possible server.



>> To reduce the latency and the traffic to the main server/AZ, we use the concept of Edge Location. It is basically a data center present in multiple different geographical location.



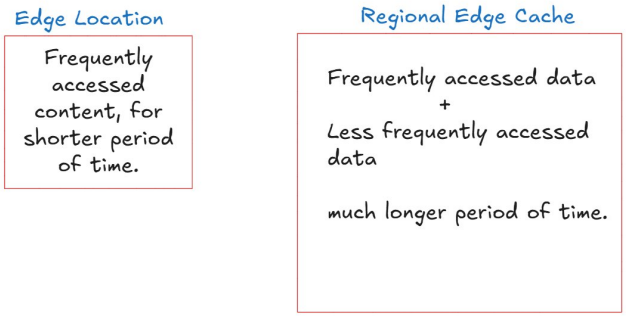
>> If only few people are accessing the same data/content, the request will directly go to the AZ.

>> If the request for the same content/data is much larger, and it increases from the same place, at that time, the content will be cached at the nearest Egde Location, and the request will be handled directly from the Edge Location itself.

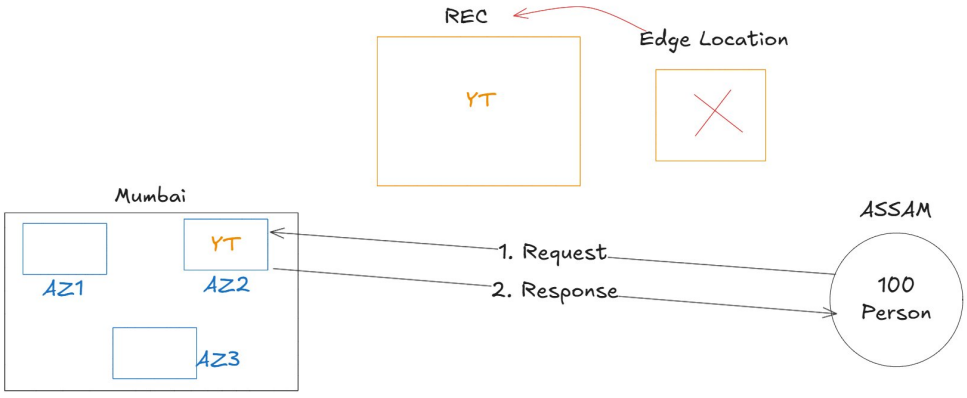
>> Edge Locations are also called as Point of Presence (PoP).

4. Regional Edge Cache(REC)

>> In Edge Location, the content is cached only until the requests are more, if the request is less then it will be uncached.
>> And only the frequently accessed content/data is present in the Edge Location.



>> A Regional Edge Cache is a special caching layer that sits between the original server (AZ) & the Edge Location.
>> It stores all the frequently accessed data/content as well as the less frequently accessed data/content for much longer period of time.
>> RECs are very big data centers and acts as intermediate storage location for content/data which is not popular enough to remain at PoP.



If a user requests for a data:

>> The request goes to the nearest Edge location, and if the data/content is present, it will be served to the user.

>> If the data is not cached/present in Edge Location, then EL sends/forwards the query to the REC, and if it present there, the content is served to the user.

>> Only if the data is not present in both the caches, the CloudFront (CDN service) will hit the original server in the AZ with the request.

5. Local Zones
6. Wavelength Zones

→ R&D and make a PDF

Catogeries:

1. Compute Category -> EC2, Lambda, ASG
2. Storage -> S3, EFS , EBS
3. Networking -> VPC, CloudFront, Route 53.
4. Database -> Dynamo DB, RDS
5. Containers -> EKS & ELB
6. Security, Identity & Compliance -> IAM; KMS
7. Monitoring -> CloudWatch
8. SNS

EC2 -> t2.micro -> 720 hours