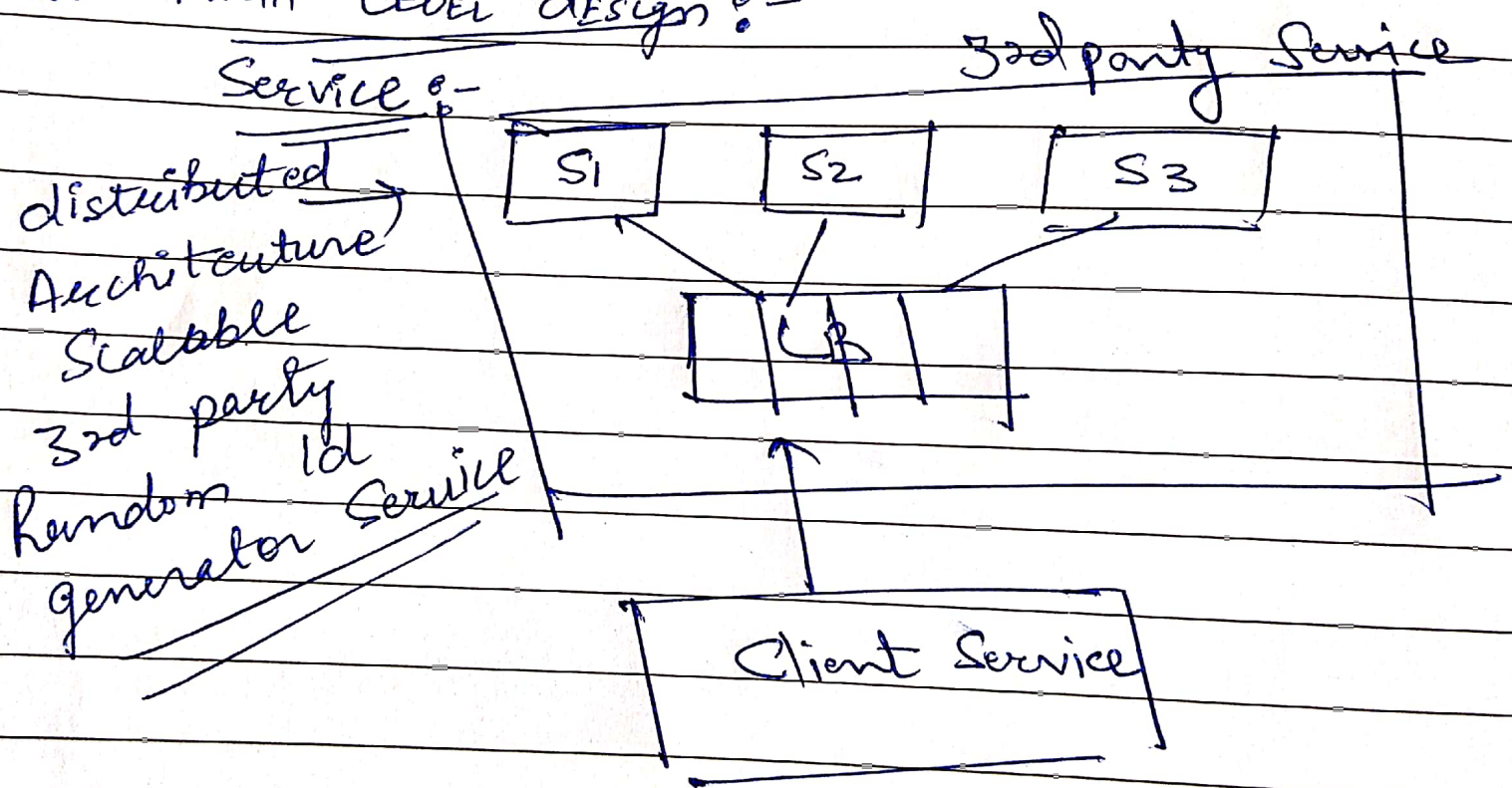


Random Id generator

1. USE CASE :-

1. distributed System
2. Unique Random Id
3. Reasonable Size of the Random Id
4. 100% Availability of the system

2. HIGH LEVEL design :-



3. POSSIBLE DESIGN :-

1. UUID

2. Flickr Centralized database

3. Twitter Snowflake Architecture.

4. CONSTRAINTS:-

1. UUID — 128 Bit Size
difficult to index
(Not a good solution)
2. Flickr database Service
Centralized Server on more
load Response lag time will
increase ; Bottleneck
[Not a good solution]
3. Twitter Snowflake:-

5. ALGORITHM:- 64 Bits

1. Epoch timestamp — 41 bits
69 years
2. Machine Id — 10 bits
1024 machines
3. Sequence Number — 12 bits
4096