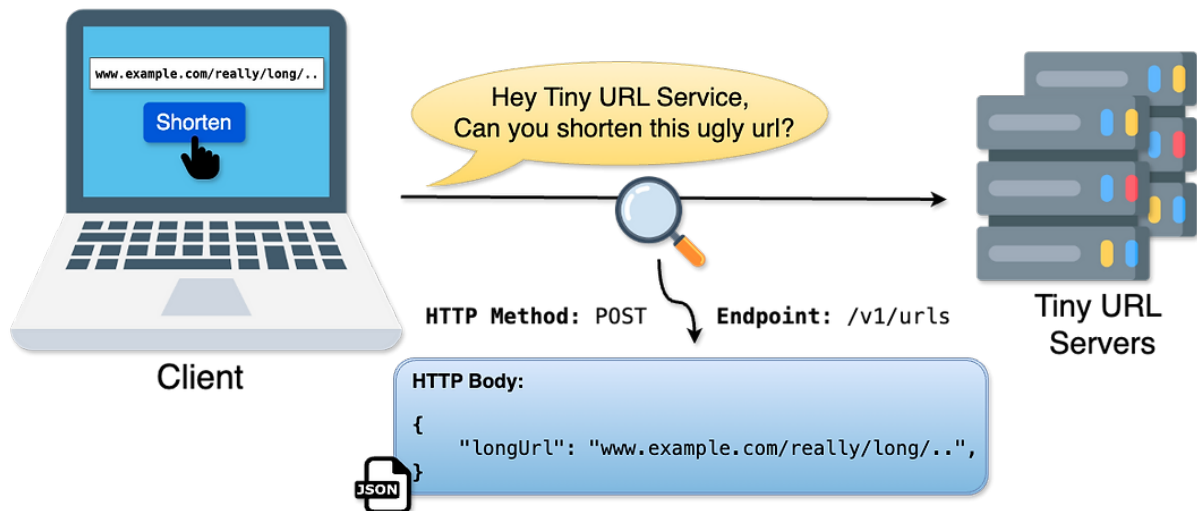


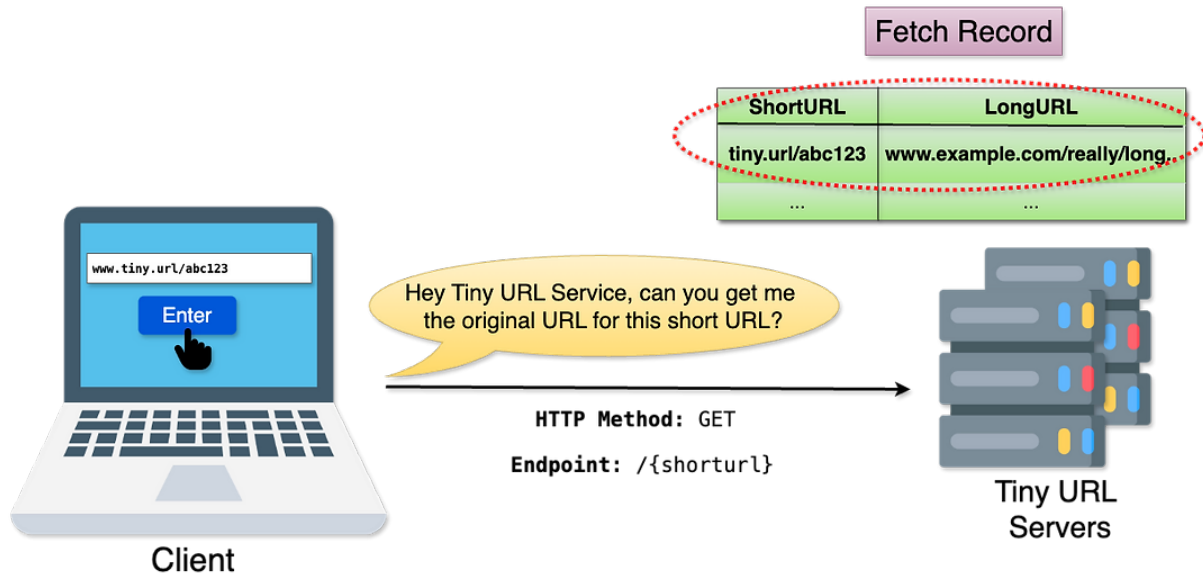
What is a Tiny URL?



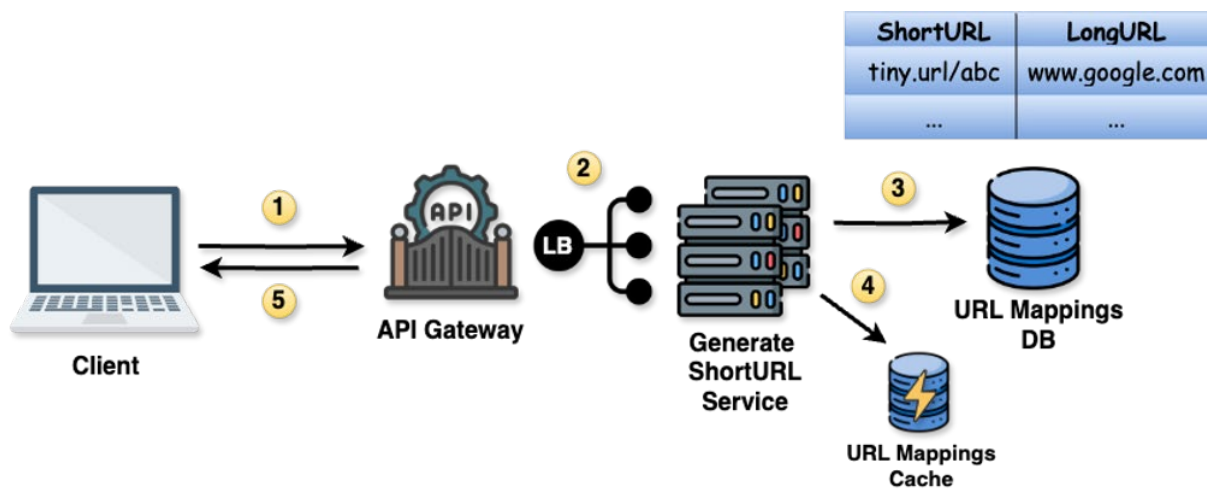
API Design- Generate Short URL



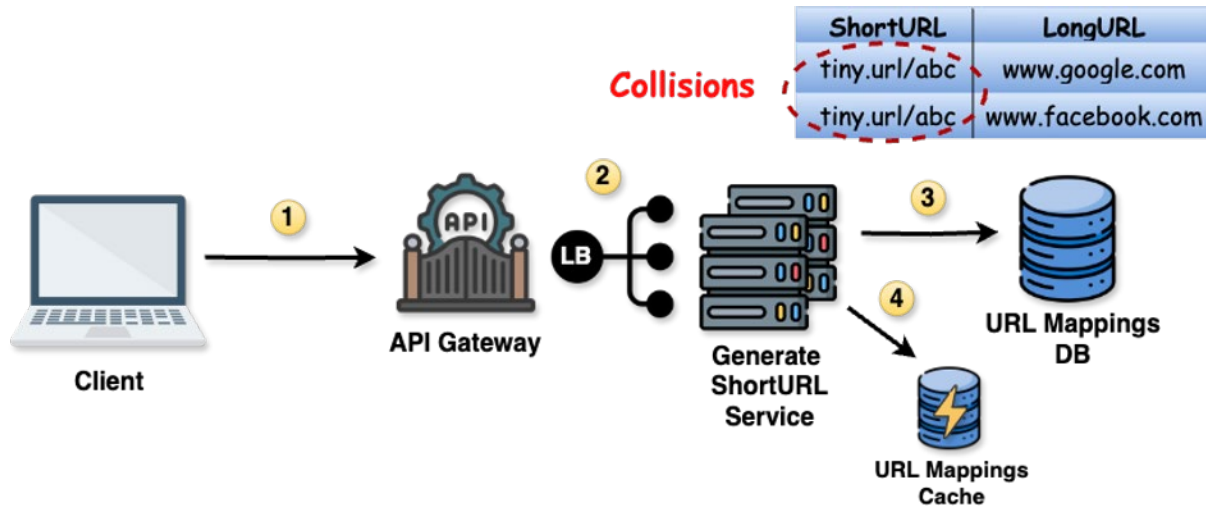
API Design- Get Long URL



High Level Design-Generate Short URL

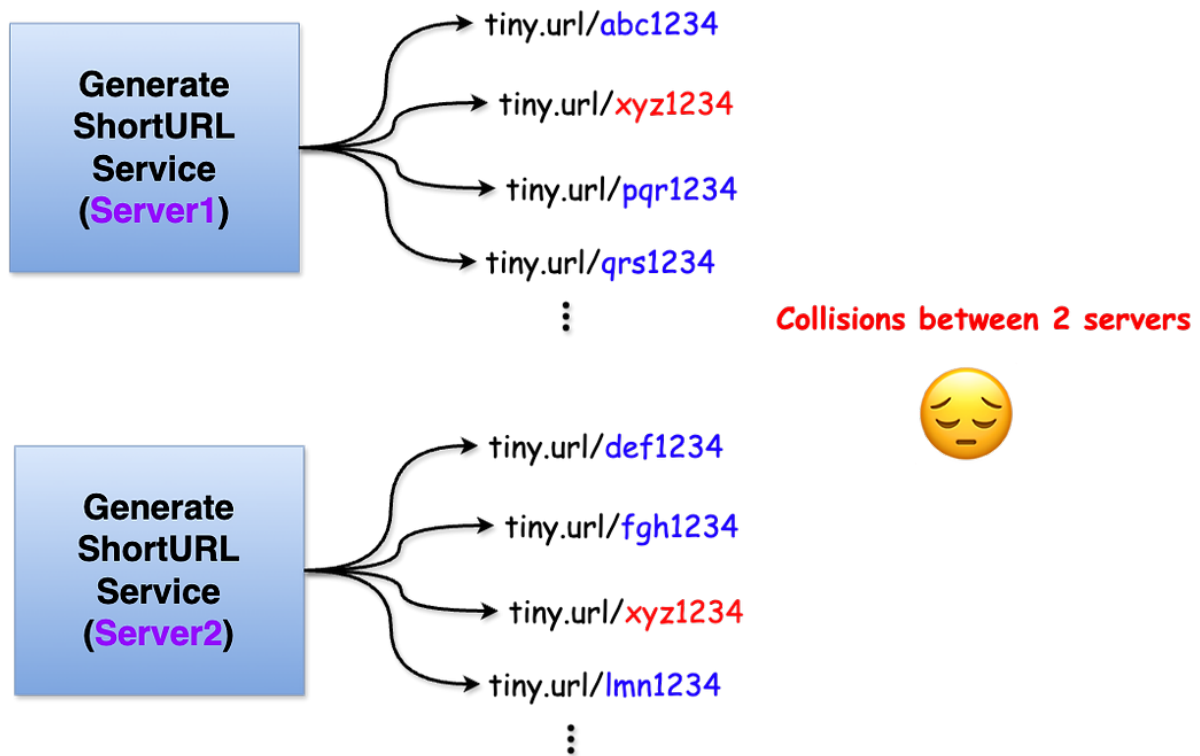


High Level Design-Collison's

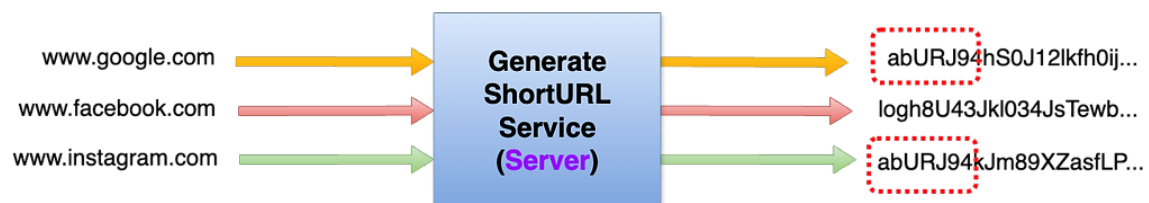
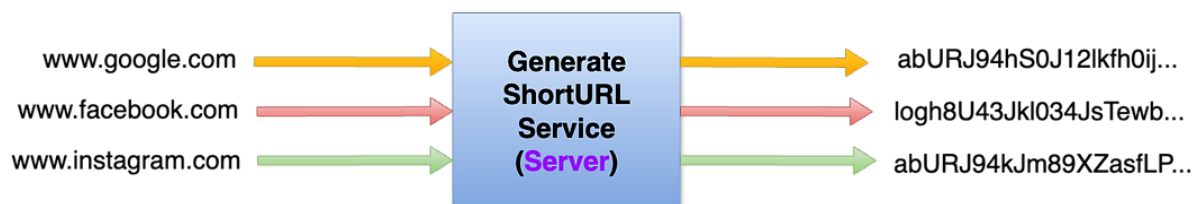


High Level Design-Approach1(Random String Generation)



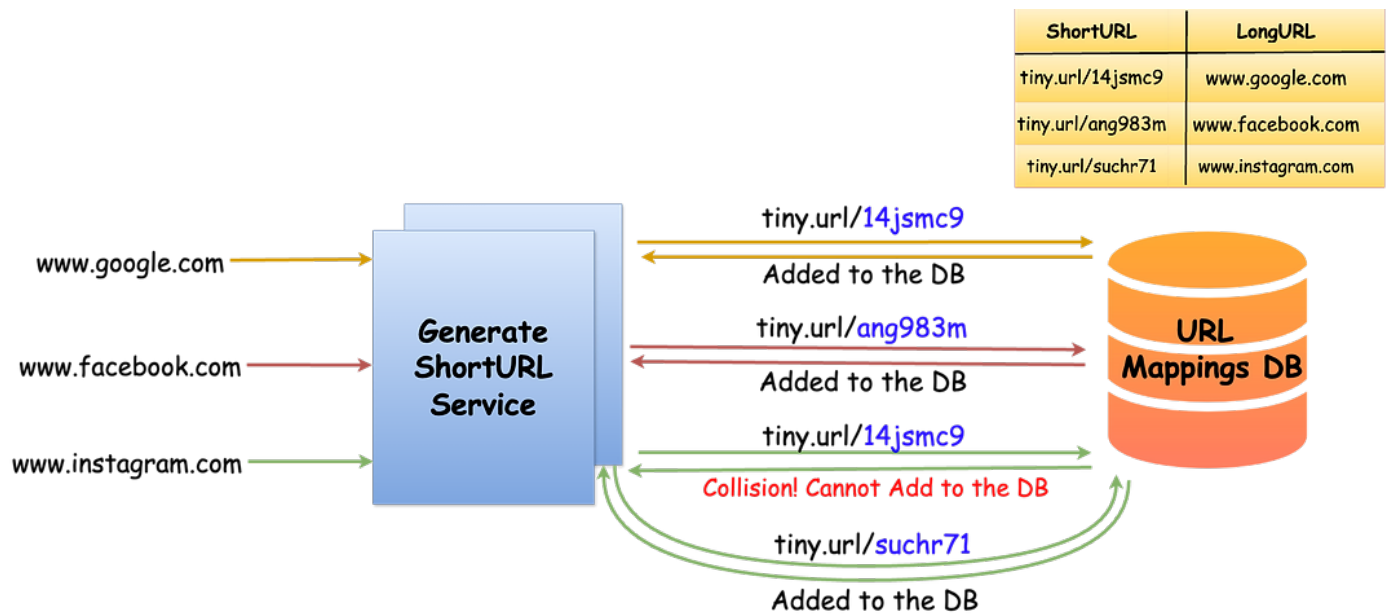


High Level Design- Approach 2: Random String Generation using Long URL

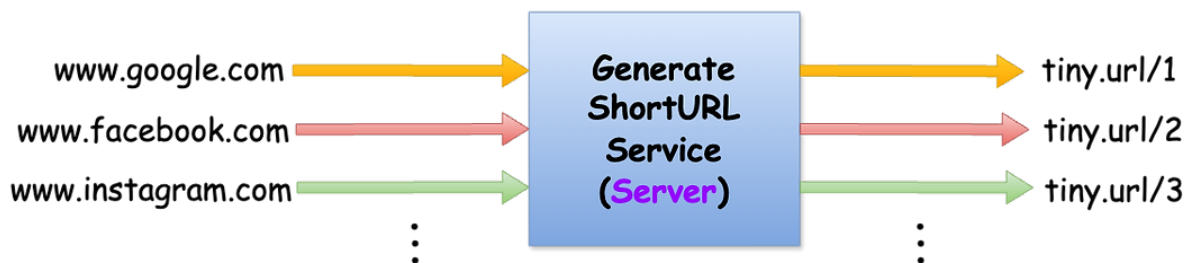


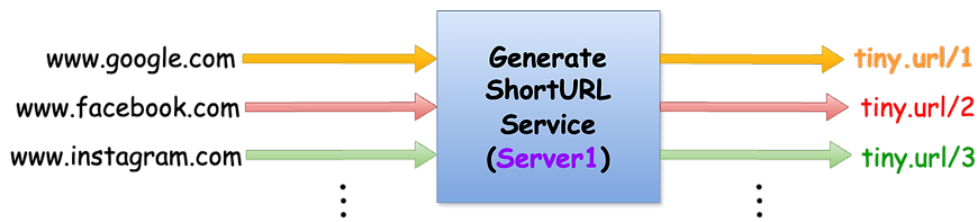
**Collision happens
if we take the first 7 characters**

High Level Design- Approach 3: Check DB for Collisions

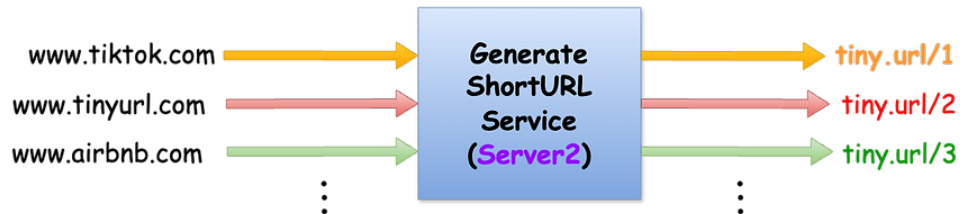


High Level Design- Approach 4: Let's Keep Counters

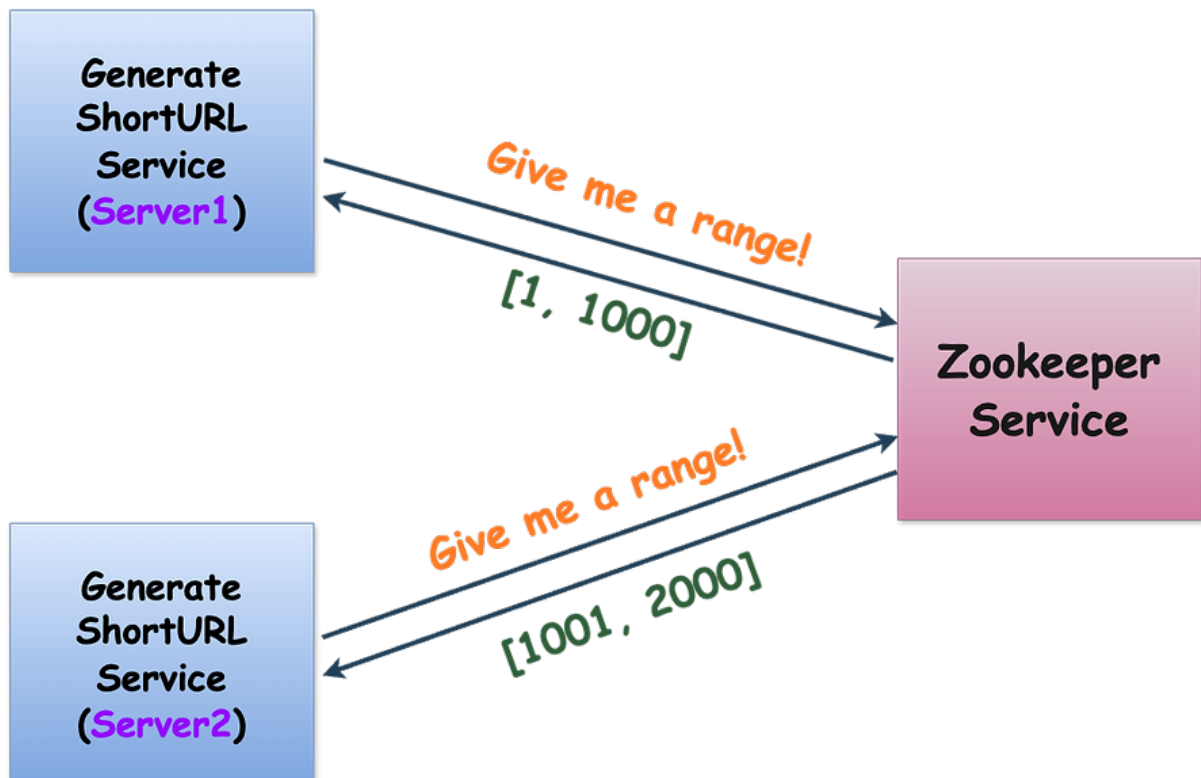


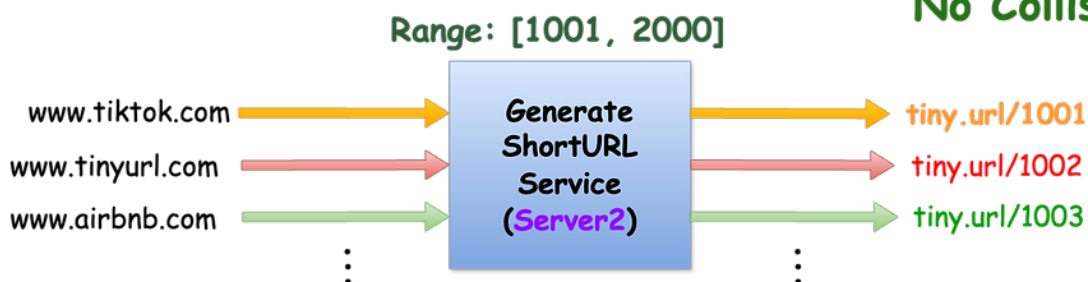
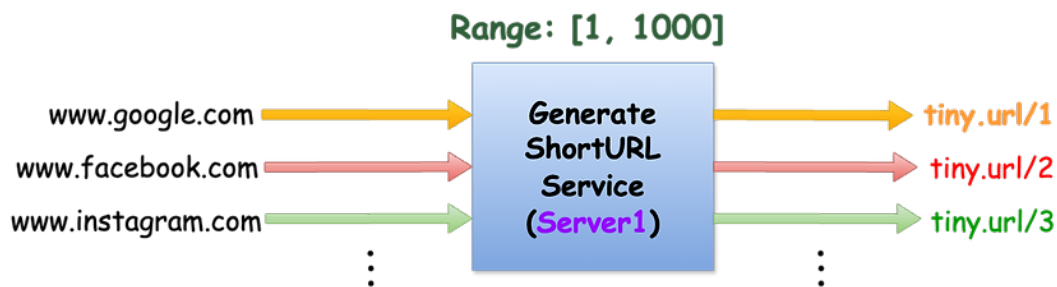


Collisions! 🙄



High Level Design- Approach 4: Zookeeper



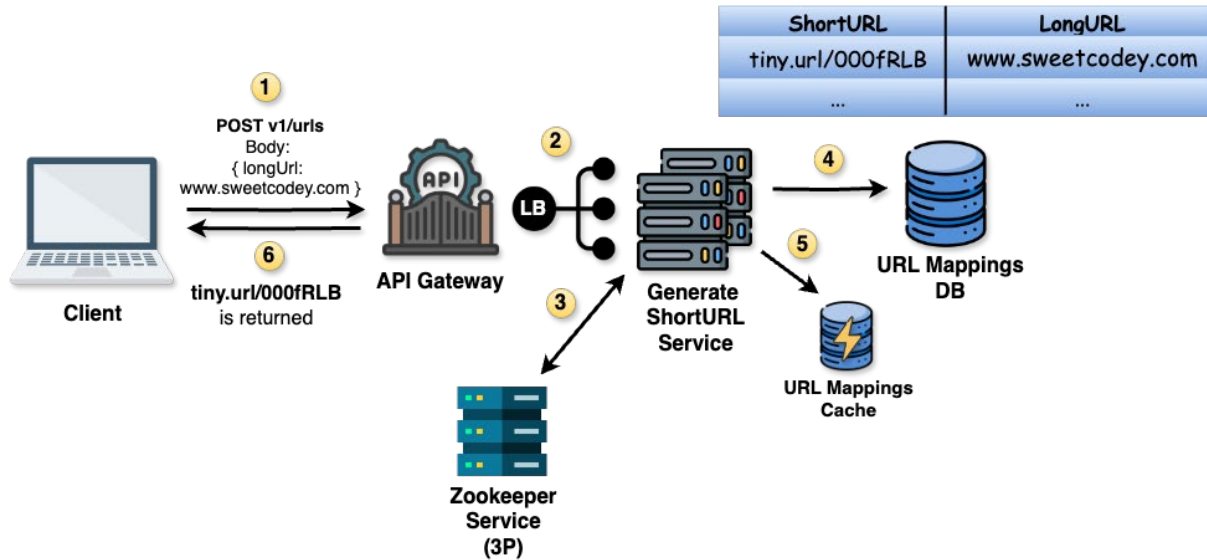


No Collisions! 😊

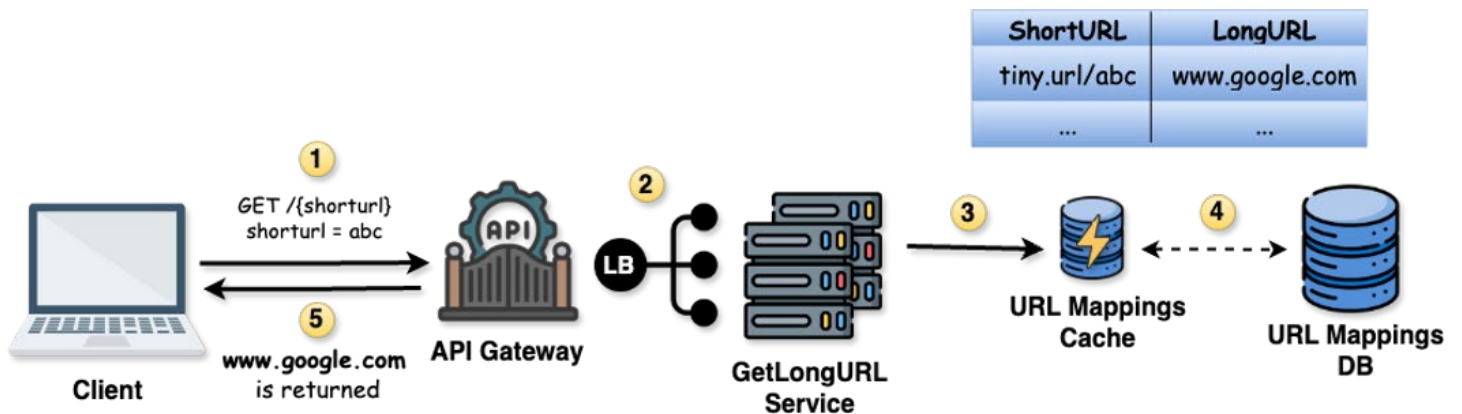
High Level Design- Base-62 Table

Decimal	Binary	Base62	Decimal	Binary	Base62	Decimal	Binary	Base62	Decimal	Binary	Base62
0	000000	0	16	010000	G	32	100000	W	48	110000	m
1	000001	1	17	010001	H	33	100001	X	49	110001	n
2	000010	2	18	010010	I	34	100010	Y	50	110010	o
3	000011	3	19	010011	J	35	100011	Z	51	110011	p
4	000100	4	20	010100	K	36	100100	a	52	110100	q
5	000101	5	21	010101	L	37	100101	b	53	110101	r
6	000110	6	22	010110	M	38	100110	c	54	110110	s
7	000111	7	23	010111	N	39	100111	d	55	110111	t
8	001000	8	24	011000	O	40	101000	e	56	111000	u
9	001001	9	25	011001	P	41	101001	f	57	111001	v
10	001010	A	26	011010	Q	42	101010	g	58	111010	w
11	001011	B	27	011011	R	43	101011	h	59	111011	x
12	001100	C	28	011100	S	44	101100	i	60	111100	y
13	001101	D	29	011101	T	45	101101	j	61	111101	z
14	001110	E	30	011110	U	46	101110	k			
15	001111	F	31	011111	V	47	101111	l			

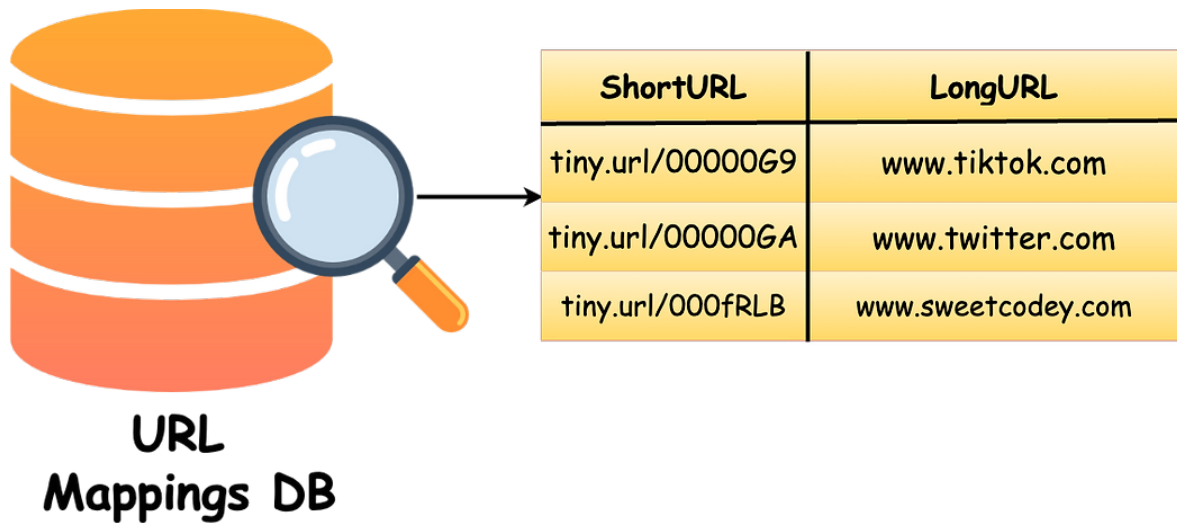
High Level Design-Approach:4-Final Design Diagram



High Level Design- Get Long URL



URL Mappings Schema



Redirection from Short URL

