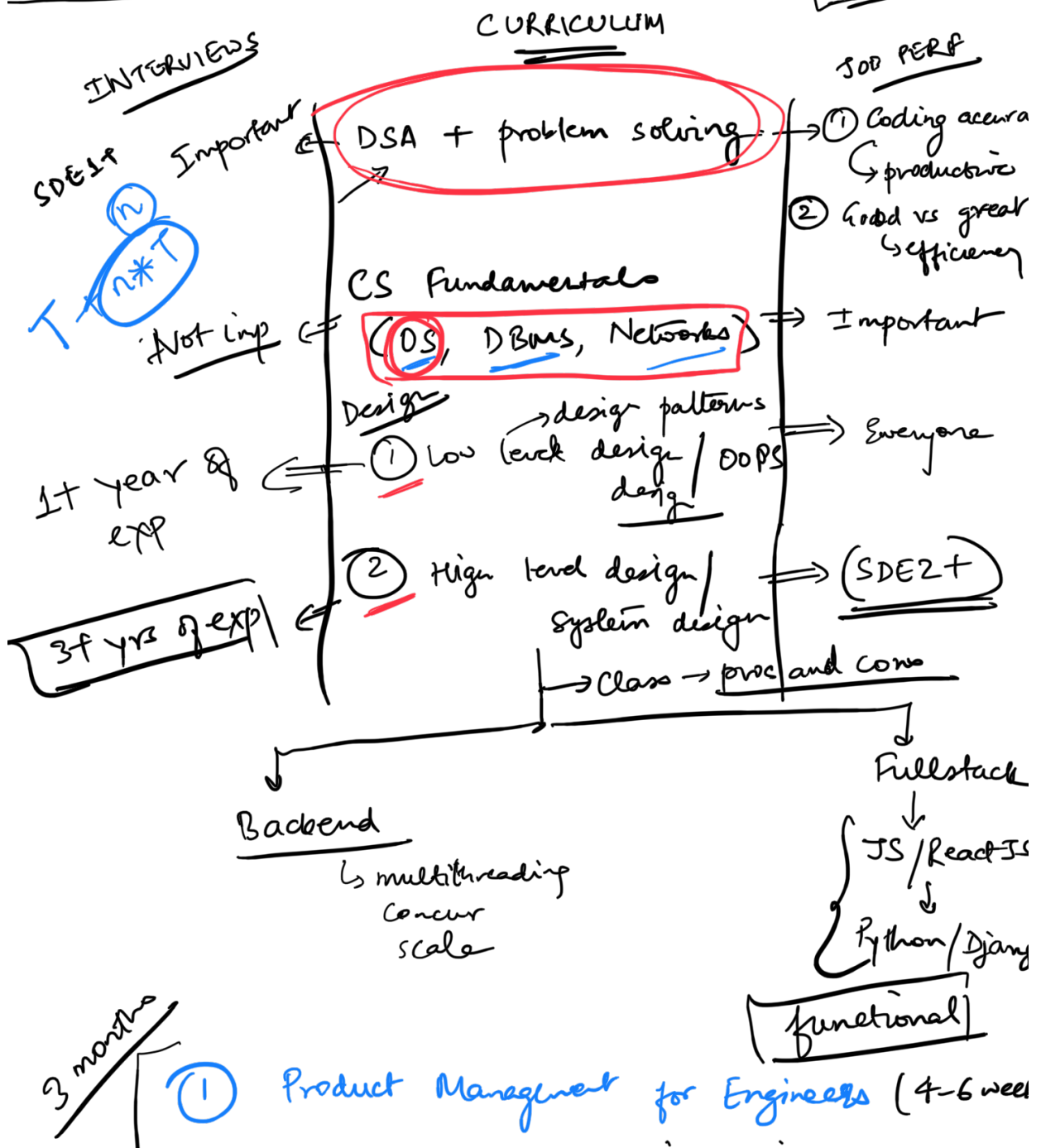


# CLASS #1 - DARE TO DREAM

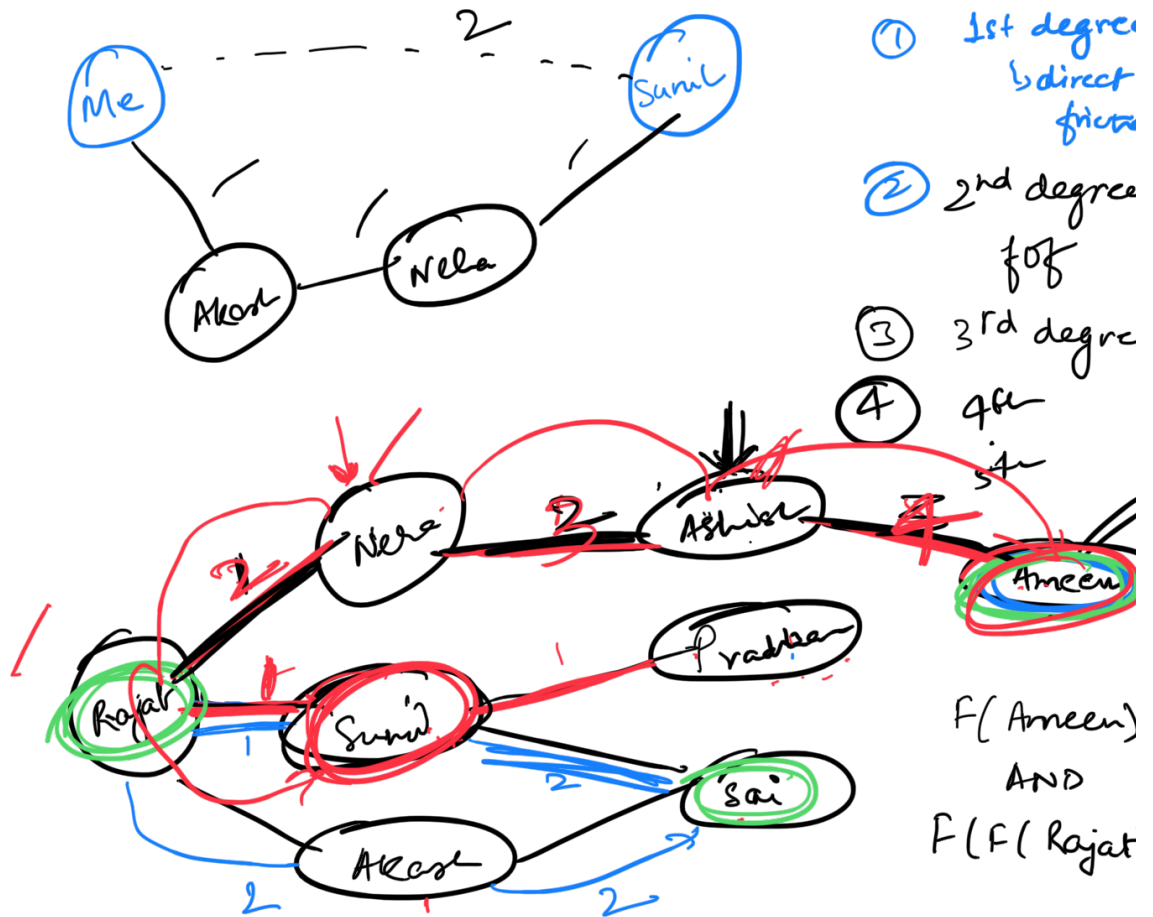
## Inputs

- Hard work
- Direction
- Consistency ←

INTERMEDIATE  
ADVANCED



- ② Advance HLD
  - ↳ microservices
  - ↳ Concurrency
  - ↳ Dockerisation
- ③ Advance DSA

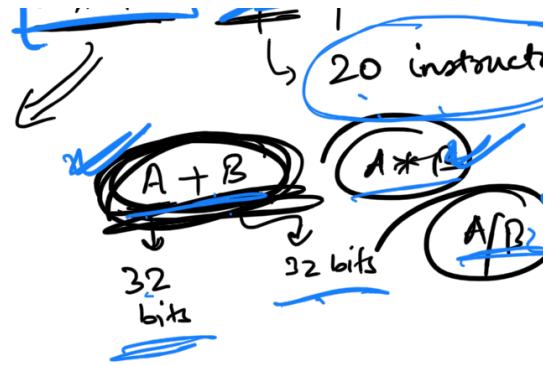


③ ① 1, 2, 3, 4, >4 ← disconnected

2 GHz →  $2 \times 10^9$  instructions per second

$$\frac{1 \rightarrow 10^{12}}{10^{12}}$$

$10^8$



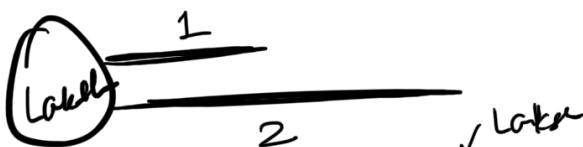
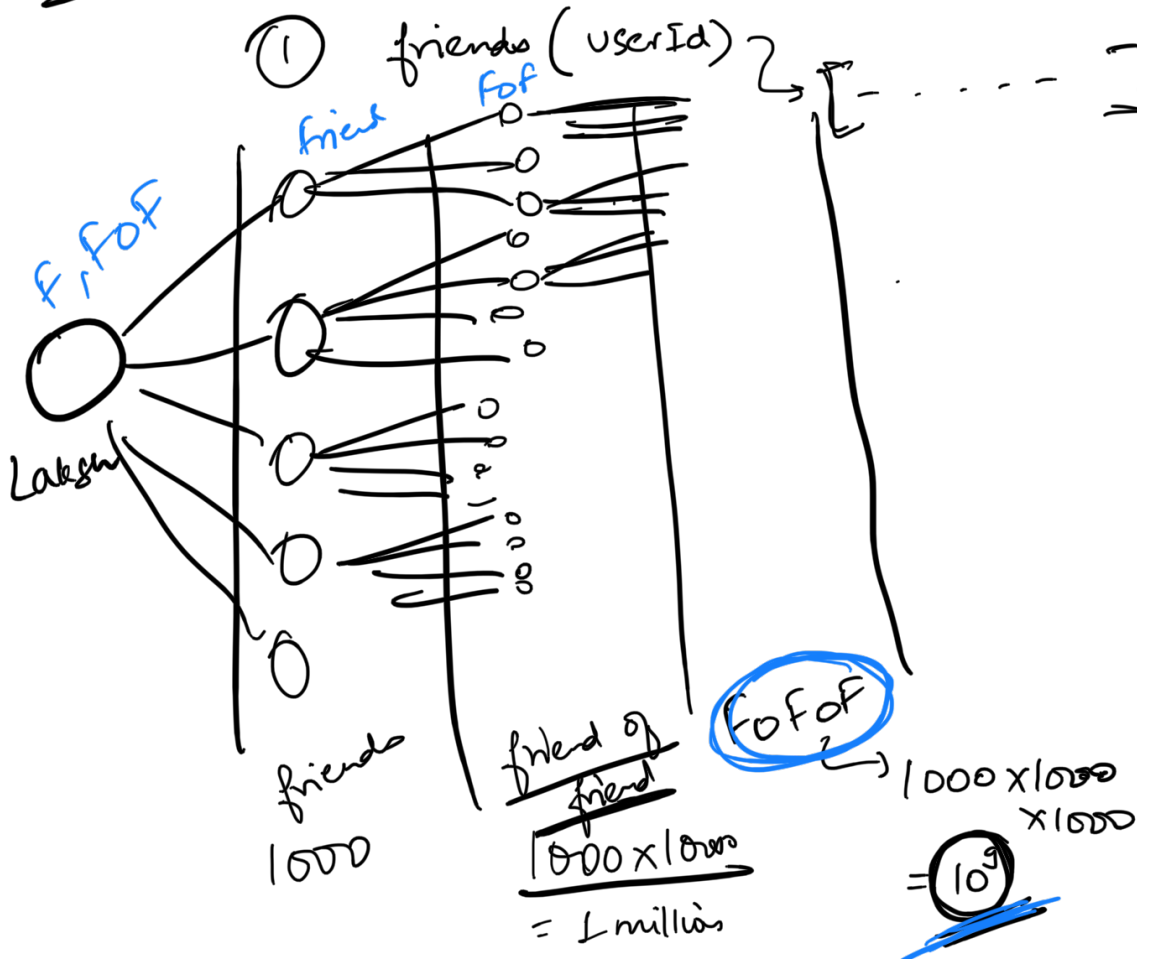
$$10^8 \rightarrow 1 \text{ sec}$$

$$10^{12} \rightarrow \frac{10^{12}}{10^8} \text{ seconds} = 10,000 \text{ sec}$$

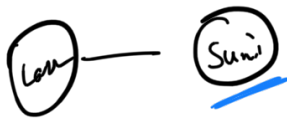
Laksh

1, 2, 3, 4, >4

Sunil



Case 1:



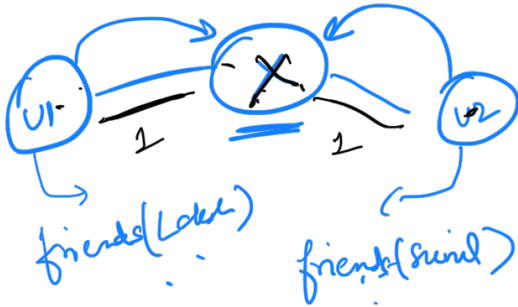
$U1$

$U2$

deg of sep = 1

if  $U2$  in friends( $U1$ ):  
return 1 X

Case 2:



deg of sep = 2

if intersect( $f(U1)$ ,  $f(U2)$ ):  
return 2 X

Case 3:

deg of sep = 3

if intersect( $F(F(U1))$ ,  $F(U2)$ ):  
return 3 X

Case 4:



deg of sep = 4

if intersect( $F(F(U1))$ ,  $F(F(U2))$ ):  
return 4 X



return > 4

True/False

intersect( $L1$ ,  $L2$ ):

① Store  $L2$  in hashmap  
for ele in  $L1$ :  
if  $L2 \cap (ele)$ :

binary search

$N^2$

(2) SORT LL  
for ele in LI:

userid	First Name	Last Name	City	Country
10	Ajay	Singh	-	-

⇒ INDEX (First Name, Last Name)

(1) SELECT \* FROM TABLE  
WHERE fname = "Ajay"

(2) SELECT \* FROM TABLE  
WHERE lname = "Singh"

(3) SELECT \* FROM TABLE  
WHERE fname = "Ajay" AND lname = "Singh"

