卌 (SIT)

DataBase Management System

Data ⟹ Bits / Bytes
  ↳ Collection of raw bytes ——— ~~Info~~ → raw, unorganised facts
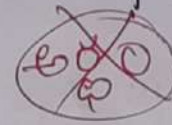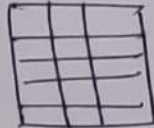
Image: ▦ — Collection of bytes ☆

Integers: Collection of bytes | 10101110...
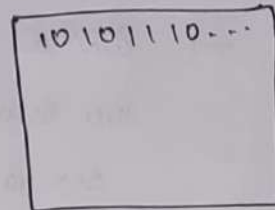
BMI	Weight	Height
21·16	112	61
21·79	135	66
25·29	213	73

Memory

Meaning
Mind
Process
Information

Information → Enables Decision Making

Processed, Organized, Structured — Data — Info

☿ ⟶ Business ⟶ Social Media — Market
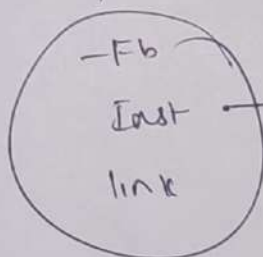
◯ —Fb
   Inst ⟶ Marketing
   link

       ⇓
      Posts ⟵ Fb
              Inste
              link

Fb - 1 — 8 likes
Inst 1 — 800 lik
Link 1 — 21·

Data — likes Count

(nstyr
Down Inste
     ↑
← Conclusion ← (Process) ← 4 bytes
                            Int

Data — likes Count

Amazon → Product → feedback

Feedback → text → (Bytes)
                      Data

         Process
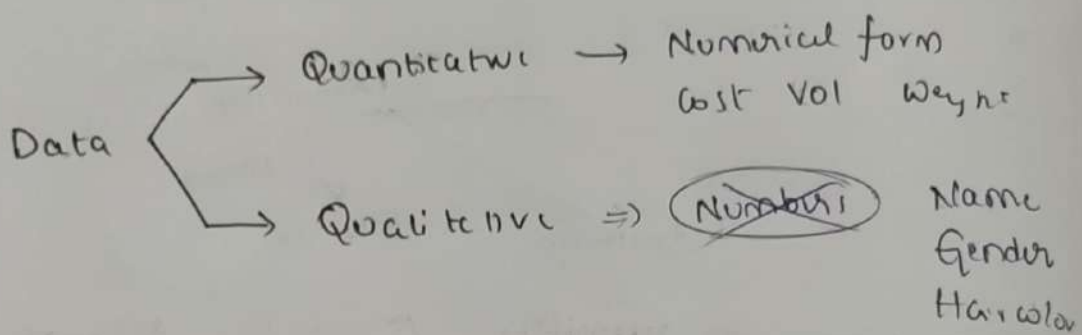
① Cust Age   Data is the new Oil

② Cust ☆

③ Cust Recomm

     ⇒ ಜನಾಬ ತಕ್ಕಲು

     100 senior citi7

     Sex ratio 1:1

     New Born

         → Quantitative → Numerical form
                             Cost Vol Weyht

Data ⟨

         → Qualitative ⇒ (N~~umbers~~)   Name
                                       Gender
                                       Hair color

Data   In form

Raw Unorg   Org

(Deci~~sion~~ ~~Ma~~bim)   ✓

Person A | Restaurant | Person B

lo Dishes   lo Dish ⟋ 5 br
                                    Raw Material
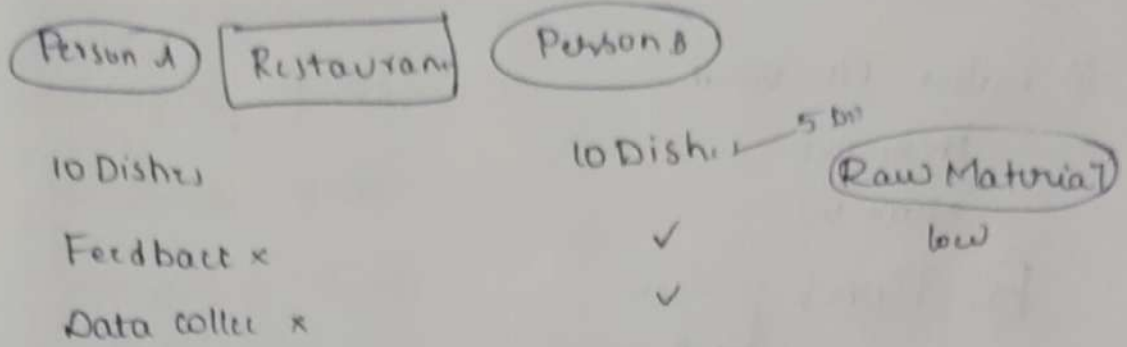Feedback ×   ✓   low
Data collec ×   ✓
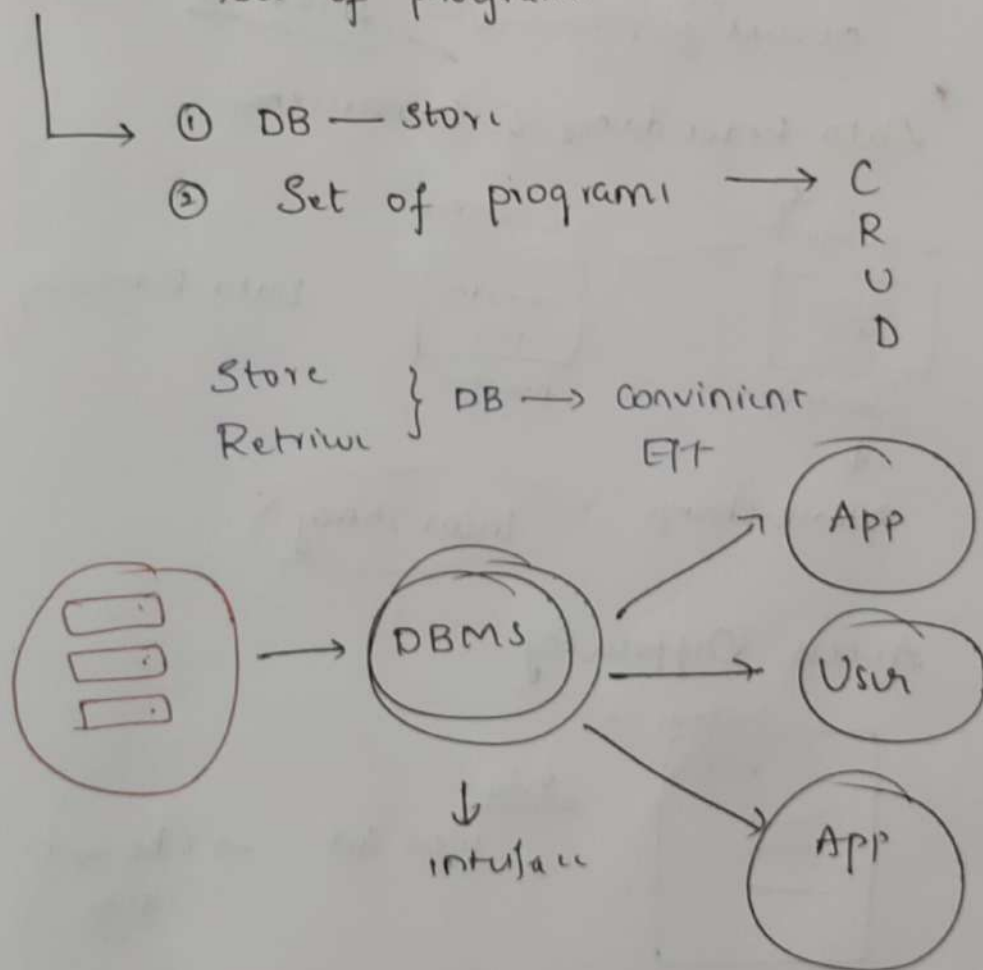
Data Base:

Electronic Place   → Data is stored ⎤
         Easily Accessed   ⎦
         Managed
         Updated
    To use Data ── DBMS

DBMS: Collection of Inter-Related Data
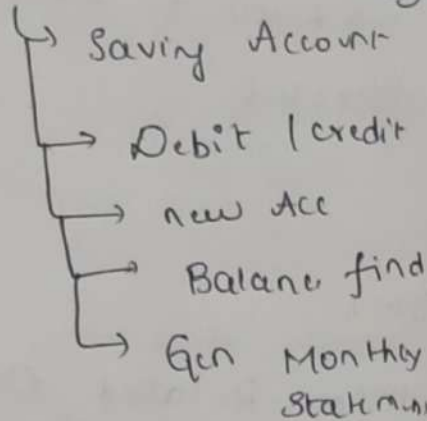   Set of programs to access thou den

         ┕→ ① DB ── Store
             ② Set of programs ──→ C
                                   R
                                   U
                                   D

         Store ⎫ DB ──→ Convinient
         Retrive ⎭   Eft

                                    ┌─→ App
     ⬚ ──→ DBMS ──→ User
                    ↓   ──→ App
                 intuface

File Systems

① Earlier File Systems

Phone.txt
Name.txt

Billions — store
└→ Acces ⊗

→ Bank → DBMS తెలుసుకో
└→ Saving Account
├→ Debit / credit
├→ new Acc
├→ Balance find
└→ Gen Monthly
Statement

Bank - After lay
Acc
current year No inter ／ **Disad of File System**

★
① **Data Redundancy & Inconsistency**

10 year ago → current Acc
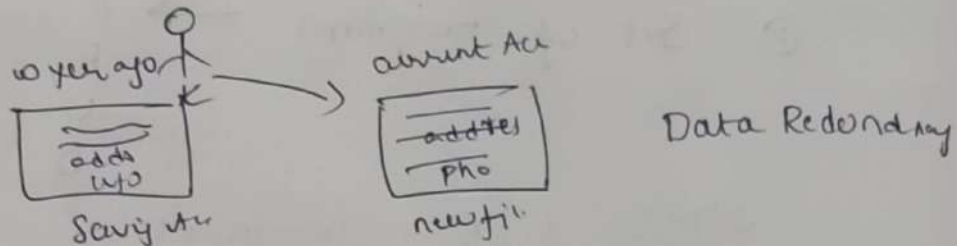
addres
info
Savig Acc | addres
pho
new file | Data Redundancy

↓
Address change ⟨Inconsistency⟩

② **Access Difficulty**

customer ah
Plt
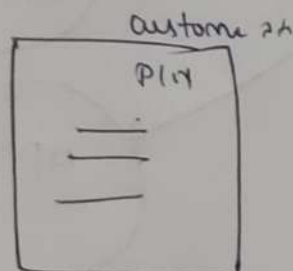
__Info__

1001 Code → who will
stay

③ Data Isolation

④ Integrity problem

⑤ Atomicity problem ⟨ ✓ ✗

⑥ Concurrent Access
   Anomales   → Account
                     Phone   Debit

⑦ Security problem,   ↓   wife
                        wiind
          └→ Access   ↓
              Rights   withdraw