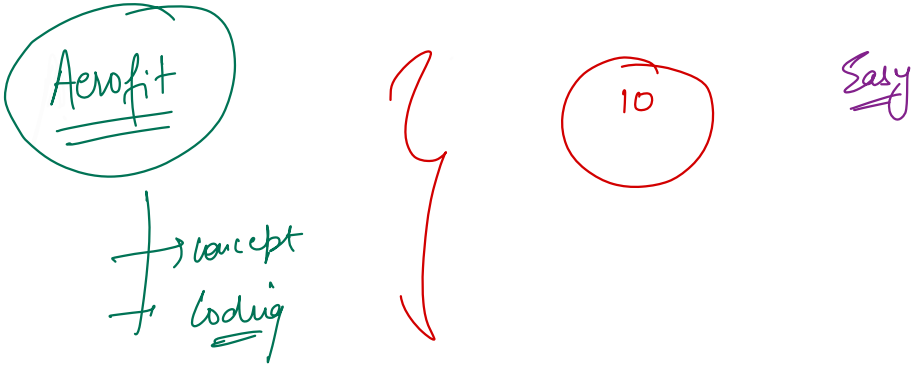
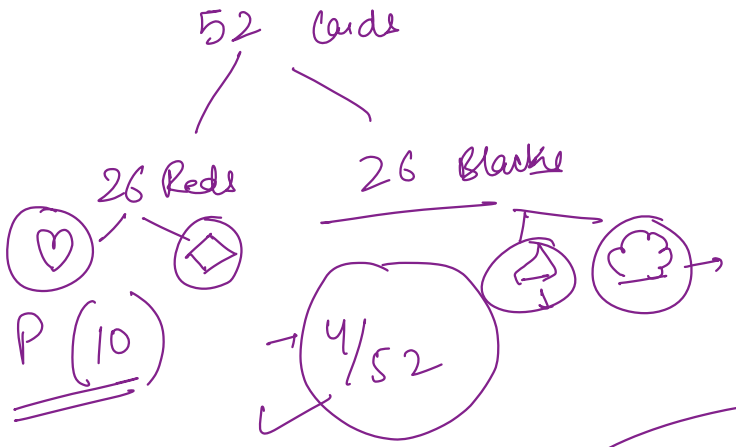
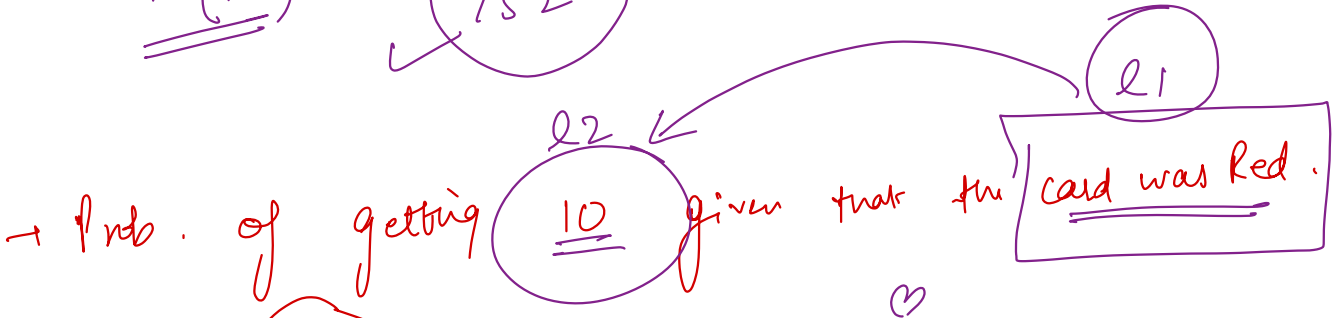


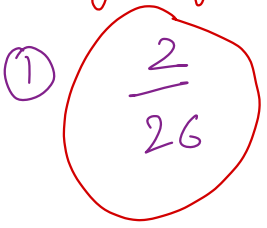
- Concept → Probability | Univariate & Bivariate
  - ✓ (1) Marginal →
  - ✓ (2) Joint →
  - ✓ (3) Conditional →

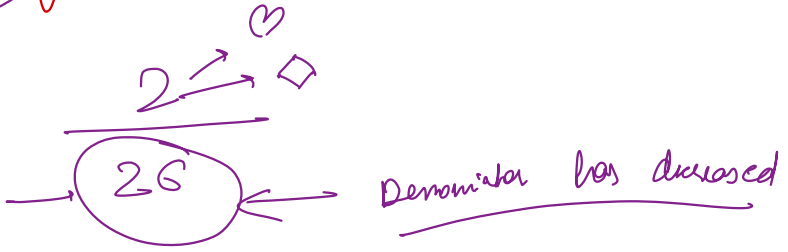
Marginal → Total prob. of an event happening. / Simple prob.

- No condt
- No event happening b/fore & after.









$P(10 \mid Red)$

→ Prob of finding 10 of Reds. [e1 or e2

$\frac{2}{26}$, $\frac{2}{52}$ ✓

$\frac{2}{52}$ ✓ }

Joint prob

Joint prob = Conditional × $\frac{26}{52}$ → Prob (Red)

$$P(A \cap B) = P(A|B) \times P(B)$$

Walmart → Retail giant

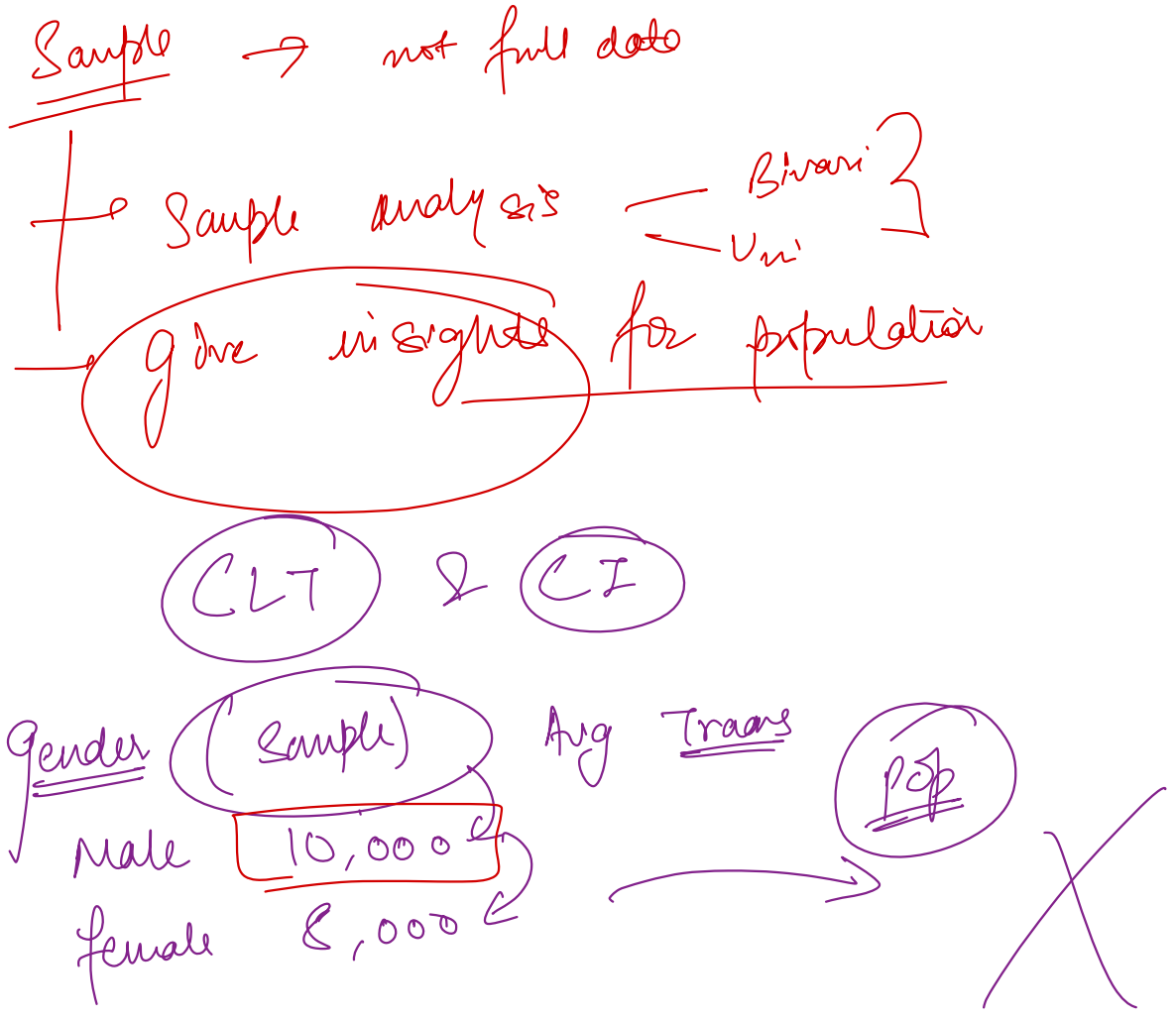
↳ DMart

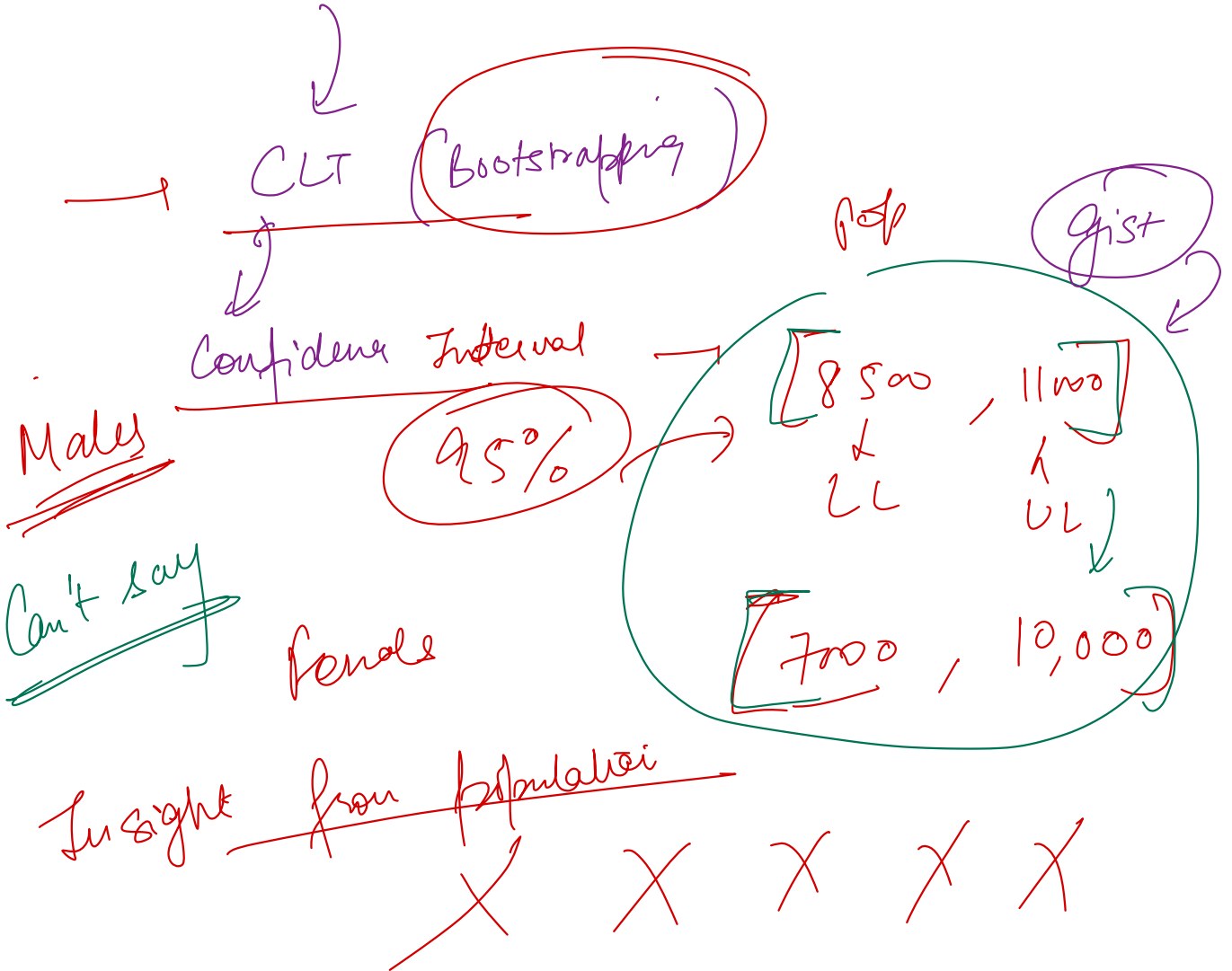
→ Lot inventory

→ Too many customers

→ Very big Database of customers.

Optimise


Sample → not full data
Sample analysis
Bivari
Uni
give insights for population
CLT & CI
Gender
(Sample)
Avg Trans
Male 10,000
female 8,000
Pop


CLT
Bootstrapping
Confidence Interval
95%
Males
Can't say
Females
Insight from population
pop
gist
[8500 , 11000]
LL
UL
[7000 , 10,000]

Overlapping → Play Sample Size, or confidence interval.

→ Overlapping