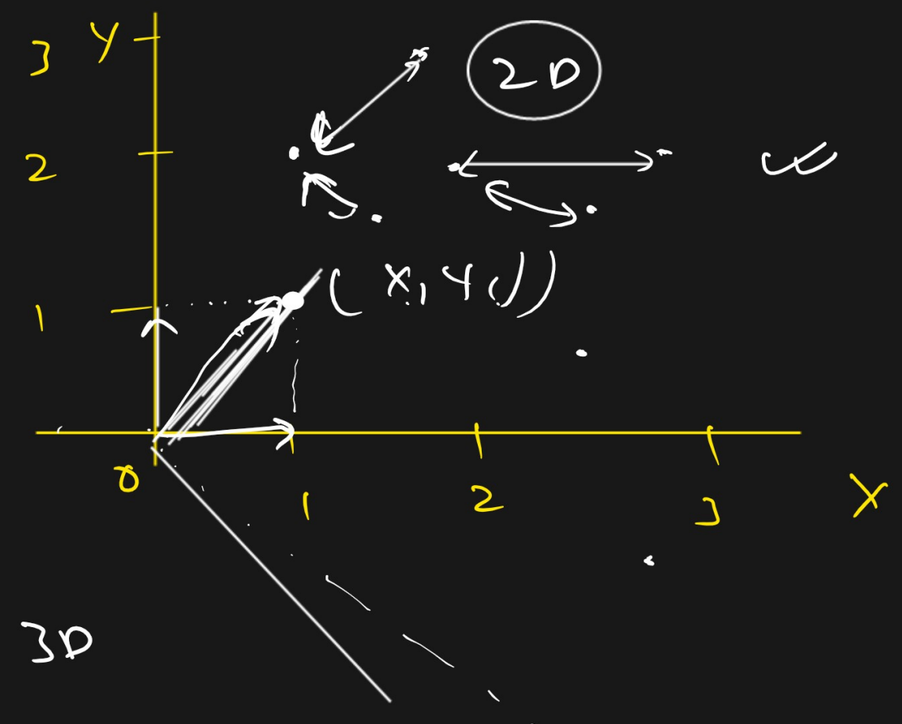
= Vector DB

10 > 8

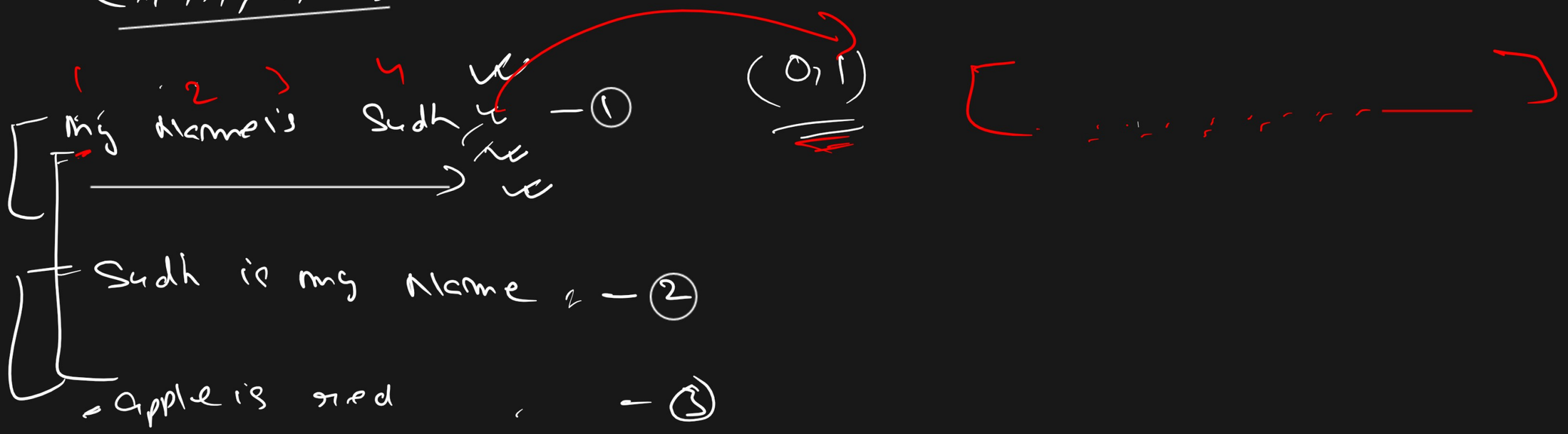
Vector

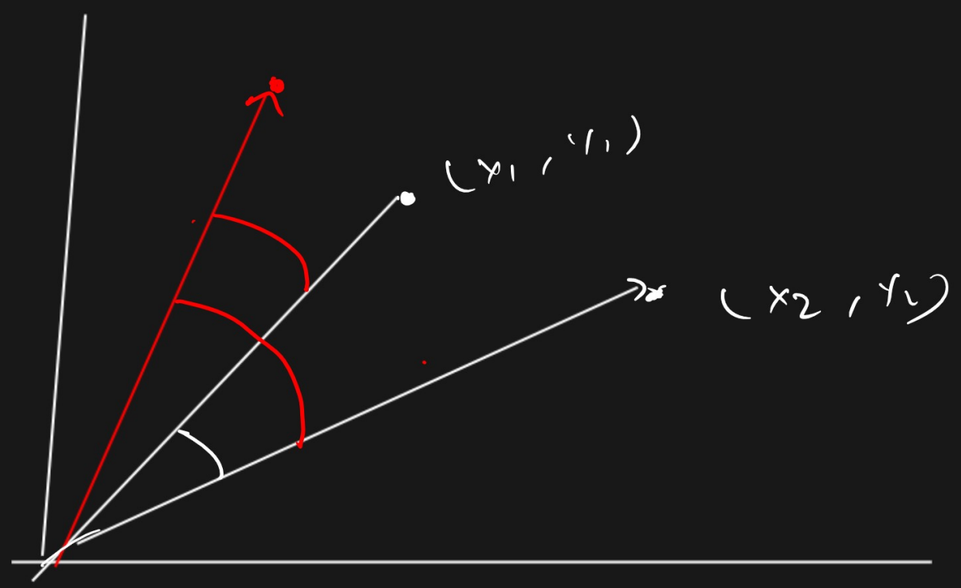
$x_1, y_1 = [\ 1, 1\ ]$



$(x_1, y_1, z_1) = [\ 1, 0, 2\ ] \rightarrow 3D$

$(x_1, y_1, z_1, A_1) =$




(x1, y1)
(x2, y1)

ED = $\sqrt{(1-1)^2 + (0-0)^2 + (0-1)^2}$

= 1

D1 :- [1, 0, 1]

D2 :- [0, 1, 1]

D3 :- [1, 1, 0] 1, 1, 0 1, 2, 3, 3, 1, 4]

D4 :- [1, 0, 0]

Cosine Similarity = $\left(\frac{A \cdot B}{\|A\| \times \|B\|}\right)$ ↳

1 → highly similar

0 → no similarity

-1 → Completely diff

Cosine :- $\frac{D4 \cdot D1}{\|D4\| \times \|D1\|} = \frac{1\times1 + 0\times0 + 0\times1}{\sqrt{1^2+0^2+0^2} \times \sqrt{1^2+0^2+1^2}} =$

$= \frac{1}{1 \times 1.414} \approx 0.707$