Lecture 12

Basis

S = $\{v_1, v_2, \cdots, v_n\}$ is called a *basis* if $v_1, v_2, \cdots, v_n$ are linearly independent and spans the whole vector space V.

$$\Rightarrow span(s) = V$$

Ex: for $V = \mathbb{R}^2$

$$S = \{(1,0), (0,1)\}$$

is a basis of V as by changing the values of a & b in $a(1,0) + b(0,1)$ we can obtain whole vector space $V = \mathbb{R}^2$.

#semester-1 #mathematics #matrices