

## OBJECTIVE

- 1.** Our first objective here is to look at  $\mathbb{R}^n$  as vector space. We also keep an objective in mind to have the glimpse of geometric representation of vector addition and scalar multiplication.
- 2.** Second objective in this module is to understand the notions of linear combination, linear independence, linear dependence, linear span and basis more in the context of  $\mathbb{R}^n$ . We also wish to define scalar product and the notion of orthogonality.
- 3.** Next objective of this module is to introduce with proper motivation the idea of Matrix. We desire to narrate all algebraic operations on Matrices, with proper examples which are useful in applying matrices.
- 4.** Last objective of this module is to understand the symmetric, orthogonal and idempotent matrices.