10 Base R

27 A Field Guide to Base R

1. Working With Vectors
    - vectors are the fundamental data structure in base r
    - all elements in a vector must be the same type
    - c() combines values into a vector
    - typeof() and length() help inspect vector properties
2. Vectorized Operations
    - arithmetic automatically applies element-wise to vectors
    - logical comparisons also operate element-wise
    - recycling occurs when vectors of different lengths are combined
3. Indexing And Subsetting
    - use [] to extract elements by position
    - use logical vectors to filter elements
    - negative indices remove elements you do not want
4. Common Vector Types
    - numeric vectors store doubles by default
    - integers require an L suffix
    - characters store text enclosed in quotes
    - logicals store TRUE, FALSE, or NA
5. Important Base Functions
    - seq(), rep(), and sort() are core vector utilities
    - unique() finds distinct values
    - match() and %in% test membership
6. Attributes And Names
    - vectors can have names added with names()
    - attributes store metadata such as class or dimensions
    - names improve readability and subsetting efficiency
7. Base R Data Structures
    - lists can store elements of different types
    - matrices are vectors with dimensions
    - data.frames are lists of equal-length vectors
    - base structures underpin tibbles and tidyverse data
8. Base R vs Tidyverse
    - base r is compact but less consistent
    - tidyverse is more readable and predictable
    - understanding base r helps interpret underlying behaviors