Data Types in R

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##R Markdown

##Data Types in R

# Checking atomic data types  
is.atomic(3) # TRUE

## [1] TRUE

is.atomic("R CODER") # TRUE

## [1] TRUE

# Checking data types  
typeof(1) # "double"

## [1] "double"

class(2) # "numeric"

## [1] "numeric"

storage.mode(3) # "double"

## [1] "double"

mode(4) # "numeric"

## [1] "numeric"

str(5) # num 5

## num 5

# Numeric data types  
typeof(2) # "double"

## [1] "double"

typeof(Inf) # "double"

## [1] "double"

typeof(-Inf) # "double"

## [1] "double"

typeof(NaN) # "double"

## [1] "double"

typeof(3.12e3) # "double"

## [1] "double"

typeof(0xbade) # "double"

## [1] "double"

is.double(2) # TRUE

## [1] TRUE

is.double(2.8) # TRUE

## [1] TRUE

# Integer data type  
y <- 2L  
typeof(y) # "integer"

## [1] "integer"

is.integer(3) # FALSE

## [1] FALSE

is.integer(3L) # TRUE

## [1] TRUE

# Logical data type  
t <- TRUE  
f <- FALSE  
n <- NA  
typeof(t) # "logical"

## [1] "logical"

typeof(f) # "logical"

## [1] "logical"

typeof(n) # "logical"

## [1] "logical"

is.logical(T) # TRUE

## [1] TRUE

is.logical(TRUE) # TRUE

## [1] TRUE

# Complex data type  
z <- 1 + 3i  
typeof(z) # "complex"

## [1] "complex"

is.complex(z) # TRUE

## [1] TRUE

# Character data type  
character <- "a"  
typeof(character) # "character"

## [1] "character"

is.character(character) # TRUE

## [1] TRUE

typeof('R CODER') # "character"

## [1] "character"

typeof("R CODER") # "character"

## [1] "character"

nchar("A string") # 8

## [1] 8

# Raw data type  
a <- charToRaw("R CODER")  
typeof(a) # "raw"

## [1] "raw"

b <- intToBits(3L)  
typeof(b) # "raw"

## [1] "raw"

is.raw(b) # TRUE

## [1] TRUE

# Date and Time data type  
date <- as.Date("2023-10-30")  
format(date, "%A %B %d %Y")

## [1] "Monday October 30 2023"

# Data type coercion  
a <- 3  
typeof(a) # "double"

## [1] "double"

a <- as.integer(a)  
typeof(a) # "integer"

## [1] "integer"

b <- TRUE  
b <- as.numeric(b)  
b # 1

## [1] 1

c <- FALSE  
c <- as.numeric(c)  
c # 0

## [1] 0

d <- TRUE  
d <- as.character(d)  
d # "TRUE"

## [1] "TRUE"

# Invalid coercion example  
as.double("R CODER") # Outputs: NA

## Warning: NAs introduced by coercion

## [1] NA