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
```

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

```
## [1] "complex"
```

```r
is.complex(z)  # TRUE
```

```
## [1] TRUE
```

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

```
## [1] "character"
```

```r
is.character(character) # TRUE
```

```
## [1] TRUE
```

```r
typeof('R CODER')      # "character"
```

```
## [1] "character"
```

```r
typeof("R CODER")      # "character"
```

```
## [1] "character"
```

```r
nchar("A string")      # 8
```

```
## [1] 8
```

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

```
## [1] "raw"
```

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

```
## [1] "raw"
```

```r
is.raw(b)     # TRUE
```

```
## [1] TRUE
```

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

```
## [1] "Monday October 30 2023"
```

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

```
## [1] "double"
```

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

```
## [1] "integer"
```

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

```
## [1] 1
```

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

```
## [1] 0
```

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

```
## [1] "TRUE"
```

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

```
## Warning: NAs introduced by coercion
```

```
## [1] NA
```