

Section 5 Beginning with R

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Introduction

The following code snippets showcase basic operations and conditional statements in R.

Display Time and Date

```
now <- Sys.time() # Store the current time and date
class(now)        # Display the class of 'now' (Output: [1] "POSIXct" "POSIXt")
```

```
## [1] "POSIXct" "POSIXt"
```

```
typeof(now)       # Display the data type of 'now' (Output: double)
```

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

```
unclass(now)      # Unclass the value
```

```
## [1] 1701388675
```

The code in this section demonstrates how to capture the current time and date using `Sys.time()` in R. It then showcases functions like `class()` and `typeof()` to identify the class and data type of the stored timestamp. Finally, `unclass()` is used to remove class attributes from the stored time object.

Handling NA Values

```
mean(c(NA, 1:50)) # Compute mean (Output: NA)
```

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

```
mean(c(NA, 1:50), na.rm = TRUE) # Compute mean excluding NA (Output: 25.5)
```

```
## [1] 25.5
```

```
mean(1:50)           # Compute mean without NA (Output: 25.5)
```

```
## [1] 25.5
```

```
is.na(NA)            # Check if it's NA (Output: TRUE)
```

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

```
is.na(c(1, 2, 3, NA)) # Check for NA in vector (Output: FALSE FALSE FALSE TRUE)
```

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

In this section, the code demonstrates operations related to handling NA (Not Available) values in R. It calculates the mean of a vector that contains NA values using `mean()`, showcasing the difference between including and excluding NA values. It also illustrates the usage of `is.na()` to identify NA values within a vector.

Conditional Statements

```
trunc(2.56) # Truncate decimal part (Output: 2)
```

```
## [1] 2
```

```
a <- 2.5
b <- 5.0

if (a == trunc(a)) {
  print("A wins!")
} else if (b == trunc(b)) {
  print("B wins!")
} else {
  print("Tie.")
}
```

```
## [1] "B wins!"
```

This section demonstrates the use of conditional statements (`if`, `else if`, `else`) in R. It uses the `trunc()` function to remove the decimal part of a number and then compares two variables (`a` and `b`) to determine the outcome based on whether they are integers or not.