R
Cheat Sheet

Become Data Analyst With Me!

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Basics

```
x <- 5              # Assign value
y <- "hello"        # Character string
TRUE | FALSE        # Logical values
class(x)            # Check type
str(x)              # Structure info
is.na(x)            # Check for NA
```

View Data

```
head(df)            # First 6 rows
tail(df)            # Last 6 rows
names(df)           # Column names
summary(df)         # Summary stats
str(df)             # Structure of df
nrow(df)            # Number of rows
ncol(df)            # Number of columns
```

Select & Access

```
df$col              # Access column
df[1, ]             # First row
df[, 2]             # Second column
df[1, "col"]        # Specific cell
df[, c("a", "b")]   # Multiple columns
df[1:5, ]           # First 5 rows
```

Filter & Sort

```
df[df$col > 10, ]              # Filter rows
subset(df, col == "Yes")       # Filter using subset
df[order(df$col), ]            # Sort ascending
df[order(-df$col), ]           # Sort descending
na.omit(df)                    # Remove NA rows
```

Clean Data

```
df$new <- df$a + df$b          # Add new column
df$col <- NULL                 # Delete column
names(df)[1] <- "new_name"     # Rename column
df$col[df$col == 0] <- NA      # Replace values
as.numeric(df$col)             # Convert type
```

Apply Functions

```
mean(df$col)                   # Column mean
table(df$col)                  # Frequency table
aggregate(x ~ y, df, mean)     # Group summary
apply(df, 1, sum)              # Row-wise sum
apply(df, 2, mean)             # Column-wise mean
```

dplyr (Tidyverse)

```
library(dplyr)                          # Load dplyr
df %>% filter(col > 10)                 # Filter rows
df %>% select(a, b)                     # Select columns
df %>% mutate(c = a + b)                # Add column
df %>% group_by(cat) %>%
  summarise(mean = mean(val))           # Group summary
```

Plotting (Base R)

```
plot(df$a, df$b)                        # Scatter plot
hist(df$col)                            # Histogram
boxplot(df$col ~ df$group)              # Boxplot by group
barplot(table(df$col))                  # Bar chart
```

Plotting (ggplot2)

```
library(ggplot2)
ggplot(df, aes(x, y)) + geom_point()        # Scatter plot
ggplot(df, aes(col)) + geom_histogram()     # Histogram
ggplot(df, aes(group, val)) +
  geom_boxplot()                            # Boxplot
```

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Learning R is like learning a superpower for data!

Keep practicing, stay curious, and don't be afraid to experiment. Every line of code gets you one step closer to mastery.

If this cheatsheet helped you, please share it with others and support the mission of making tech simple for everyone .

If you wish to download this pdf file please find it on my github (github.com/Nazishkhalid11/CheatSheets)

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