Practice

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```r
# Create data frame of Philippine-made cars and their engines
PH_cars <- data.frame(
  Brand = c("Aurelio", "Sarao Motors", "Toyota PH", "Honda PH", "Mazda PH", "Mitsubishi PH", "Chariot M
  Model = c("Aurelio Supercar", "Jeepney", "Vios", "City", "3 Sedan", "Mirage G4", "Chariot EV"),
  Engine = c("Mitsubishi 4G63 Turbo",
             "Diesel Inline-4",
             "1.3L Dual VVT-i",
             "1.5L i-VTEC",
             "1.5L SkyActiv-G",
             "1.2L MIVEC",
             "Electric Motor"),
  Type = c("Sports Car", "Utility", "Sedan", "Sedan", "Sedan", "Sedan", "EV"),
  Assembled_in_PH = c(TRUE, TRUE, TRUE, TRUE, TRUE, TRUE, TRUE)
)

# View the data frame
print(PH_cars)
```

```
##            Brand            Model                 Engine       Type
## 1        Aurelio Aurelio Supercar Mitsubishi 4G63 Turbo Sports Car
## 2   Sarao Motors          Jeepney       Diesel Inline-4    Utility
## 3      Toyota PH             Vios       1.3L Dual VVT-i      Sedan
## 4       Honda PH             City           1.5L i-VTEC      Sedan
## 5       Mazda PH          3 Sedan       1.5L SkyActiv-G      Sedan
## 6  Mitsubishi PH        Mirage G4            1.2L MIVEC      Sedan
## 7 Chariot Motors       Chariot EV        Electric Motor         EV
##   Assembled_in_PH
## 1            TRUE
## 2            TRUE
## 3            TRUE
## 4            TRUE
## 5            TRUE
## 6            TRUE
## 7            TRUE
```

```r
# ------------------------------
# Convert the data frame to a matrix
# ------------------------------
PH_cars_matrix <- as.matrix(PH_cars)

# Print the matrix
cat("\nMatrix version:\n")
```

```
##
## Matrix version:
```

```
print(PH_cars_matrix)
```

```
##      Brand            Model              Engine                   Type
## [1,] "Aurelio"        "Aurelio Supercar" "Mitsubishi 4G63 Turbo" "Sports Car"
## [2,] "Sarao Motors"   "Jeepney"          "Diesel Inline-4"       "Utility"
## [3,] "Toyota PH"      "Vios"             "1.3L Dual VVT-i"       "Sedan"
## [4,] "Honda PH"       "City"             "1.5L i-VTEC"           "Sedan"
## [5,] "Mazda PH"       "3 Sedan"          "1.5L SkyActiv-G"       "Sedan"
## [6,] "Mitsubishi PH"  "Mirage G4"        "1.2L MIVEC"            "Sedan"
## [7,] "Chariot Motors" "Chariot EV"       "Electric Motor"        "EV"
##      Assembled_in_PH
## [1,] "TRUE"
## [2,] "TRUE"
## [3,] "TRUE"
## [4,] "TRUE"
## [5,] "TRUE"
## [6,] "TRUE"
## [7,] "TRUE"
```

```
# ------------------------------
# Save the data frame to a CSV file
# ------------------------------
write.csv(PH_cars, "PH_cars.csv", row.names = FALSE)

cat("\nCSV file 'PH_cars.csv' has been created in your working directory.\n")
```

```
##
## CSV file 'PH_cars.csv' has been created in your working directory.
```

```
# ------------------------------
# (Optional) Read it back from CSV
# ------------------------------
PH_cars_loaded <- read.csv("PH_cars.csv")

cat("\nLoaded back from CSV:\n")
```

```
##
## Loaded back from CSV:
```

```
print(PH_cars_loaded)
```

```
##            Brand            Model                Engine       Type
## 1        Aurelio Aurelio Supercar Mitsubishi 4G63 Turbo Sports Car
## 2   Sarao Motors          Jeepney       Diesel Inline-4    Utility
## 3      Toyota PH             Vios       1.3L Dual VVT-i      Sedan
## 4       Honda PH             City           1.5L i-VTEC      Sedan
## 5       Mazda PH          3 Sedan       1.5L SkyActiv-G      Sedan
## 6  Mitsubishi PH        Mirage G4            1.2L MIVEC      Sedan
```

```
## 7 Chariot Motors       Chariot EV        Electric Motor         EV
##   Assembled_in_PH
## 1            TRUE
## 2            TRUE
## 3            TRUE
## 4            TRUE
## 5            TRUE
## 6            TRUE
## 7            TRUE
```