**Project:** Using Dataset perform operations and make plot and pie from that database data and make subset from dataset and write into another file.

**Code:**

if(!require(DBI)) {

install.packages("DBI")

library(DBI)

}

if(!require(RSQLite)) {

install.packages("RSQLite")

library(RSQLite)

}

if(!require(dbplyr)) {

install.packages("dbplyr")

library(dbplyr)

} else {

library(dplyr)

}

if(!require(RMySQL)) {

install.packages("RMySQL")

library(RMySQL)

}

print("\n\nPackage DBI, RSQLite, & dbplyr are installed")

constring <- dbConnect(MySQL(), user="root", password="", dbname="22it608", host="localhost")

if(dbIsValid(constring)) {

cat("\n\nDatabase connection successfull.")

cat("\n\nThe 22it608 database has tables : \n")

tables <- dbListTables(constring)

print(tables)

sql\_query <- "SELECT \* FROM used\_bikes"

data <- dbGetQuery(constring, sql\_query)

cat("\nRows in the used\_bikes dataset is :",nrow(data))

cat("\nColums in the used\_bikes dataset is :",ncol(data))

cat("\nNames of variables in the used\_bikes dataset is :")

print(names(data))

cat("\nUsing used\_bikes dataset for perform operations\n")

cat("\nCity Column First 5 Row data in the used\_bikes dataset is :\n")

print(head(data$city, 5))

cat("\nCity Column Last 5 Row data in the used\_bikes dataset is :\n")

print(tail(data$City, 5))

cat("\nPrice Column First 10 Row data without sort in the used\_bikes dataset is :\n")

print(head(data$Price, 10))

cat("\nPrice Column First 10 Row data with sort in the used\_bikes dataset is :\n")

print(sort(head(data$Price, 10)))

cat("\nPrice Column First 10 Row data with summary in the used\_bikes dataset is :\n")

print(summary(head(data$Price, 10)))

cat("\nPrice Column First 10 Row data sum in the used\_bikes dataset is :\n")

print(sum(head(data$Price, 10)))

cat("\nPrice Column First 10 Row data with square root in the used\_bikes dataset is :\n")

print(head(data$Price, 10))

cat("\n")

print(sqrt(head(data$Price, 10)))

cat("\nGlimpse with 5 head data of used\_bikes dataset is :\n")

print(glimpse(head(data, 5)))

cat("\nBikes data which price is greater than 70000 of used\_bikes dataset is :\n")

print(filter(data, Price > 70000))

cat("\nBikes apply on EMI than per month EMI amount column added in used\_bikes dataset for first 10 records is :\n")

data <- mutate(data, EMI = Price/12)

print(head(data$EMI, 10))

View(data)

plot(head(data$Power, 10), head(data$Age, 10), col="#cc0020", main ="Power vs. Age", xlab= "Power", ylab="Age")

pie(head(data$Price, 10), head(data$Power, 10), main="Brand : Power",col=rainbow(length(head(data$Price, 10))))

data <- read.csv("ProjectCsv.csv")

Power = data$Power

Name =data$Name

Values <- NULL(data$Name, nrow = 1 , ncol = 4, byrow = TRUE)

png(file = "Project\_bar.png")

barplot(Values, main = "Name : Power", names.arg = month, xlab = "Power", ylab = "Name", col = colors)

dev.off()

Data\_Frame <- data.frame(

Brand = data$Brand,

Name = data$Name,

Price = data$Price,

Kms = data$Power

)

cat("\nWrite New File With Brand, Name, Price & Kms column 100 \n")

setwd("D:/SEM 5/APP/Project")

write.csv(head(Data\_Frame, 100), "ProjectCsv.csv")

if(dbDisconnect(constring)) {

cat("\n\nThe connection disconnected")

}

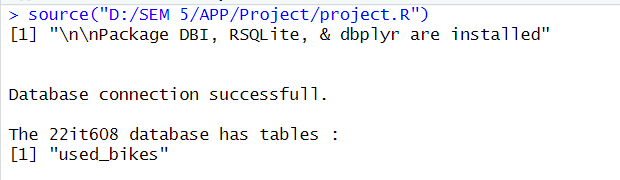
} else {

print("\n\nDatabase connection failed.")

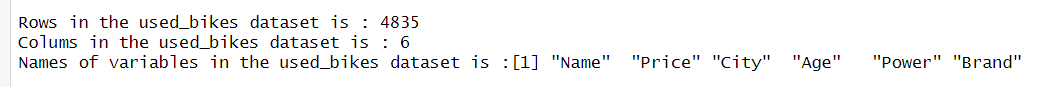
}

**Output:**

* **List of tables n database by dbListTables()**



* **Raws & column of used\_bikes by nrow() & ncol():**



* **Head & Tail operation on used bikes**

A white background with black text

Description automatically generated

* **Sort & Summary operation on used bikes**

A white background with black text

Description automatically generated

* **Sum & Square Root operation on used bikes**

A close-up of numbers

Description automatically generated

* **Glimpse & Filter operation on used\_bikes:**

A close-up of a computer screen

Description automatically generated

* **Mutant operation for add EMI on used\_bikes based on price:**

A screenshot of a computer

Description automatically generated

* **Ploting on price vs. milege from used\_bikes of 20 data:**

A white screen with black text

Description automatically generated

* **Prepare pie on power and brand from used\_bikes of 10 data:**

A colorful pie chart on a white background

Description automatically generated

* **Bar graph representation on power corresponding to brand:**

A computer screen shot of a computer

Description automatically generated

* **Top 100 data of Brand, Model, Price & EMI write into another file:**

A screenshot of a computer

Description automatically generated

* **Dataset check with View():**

