

## SQL CODE

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library(DBI)
library(RSQLite)

# Read data from CSV file
data <- read.csv("/Users/sathvikreddy/Desktop/ModifiedDataset.csv")

# Create an in-memory SQLite database connection
conn <- DBI::dbConnect(RSQLite::SQLite(), ":memory:")

# Write data to the database
DBI::dbWriteTable(conn, "data", data)

# Set options for knitr
knitr::opts_chunk$set(connection = "conn")

# Query 1: Select top 5 records ordered by GreenhouseGas_Emission
top_emissions <- dbGetQuery(conn, "
  SELECT Building_Adress, Postal_Code, Category
  FROM data
  ORDER BY GreenhouseGas_Emission DESC
  LIMIT 5
")

# Query 2: Select average GreenhouseGas_Emission grouped by Category
avg_emissions_by_category <- dbGetQuery(conn, "
  SELECT Category, AVG(GreenhouseGas_Emission) AS Avg_GHG_Emission
  FROM data
  GROUP BY Category
  ORDER BY Avg_GHG_Emission DESC
")

# Query 3: Select average Site_EnergyuseIntensity grouped by Property_Type
avg_site_energy <- dbGetQuery(conn, "
  SELECT Property_Type, AVG(Site_EnergyuseIntensity) AS Avg_SiteEnergy
  FROM data
  GROUP BY Property_Type
  ORDER BY Avg_SiteEnergy DESC
")

# Query 4: Select count of buildings and average Energy_Starscore grouped by
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```
Category
building_count_energy_score <- dbGetQuery(conn, "
  SELECT Category, COUNT(*) AS BuildingsCount,
    AVG(Energy_Starscore) AS AvgEnergyScore
  FROM data
  WHERE Energy_Starscore IS NOT NULL
  GROUP BY Category
  ORDER BY AvgEnergyScore DESC
")
```

```
# Query 5: Select average Source_EnergyuseIntensity grouped by Property_Type
avg_source_energy <- dbGetQuery(conn, "
  SELECT Property_Type, AVG(Source_EnergyuseIntensity) AS Avg_SourceEnergy
  FROM data
  GROUP BY Property_Type
  ORDER BY Avg_SourceEnergy DESC
")
```