

R Coding Assignment 2: BMW Viewing Interest Simulation

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Scenario

The BMW of Carlsbad dealership wants to know which BMW models have the most interest from customer requests to view each vehicle. The models available at the BMW dealership are:

- 2 Series
- 3 Series
- 4 Series
- 5 Series
- 7 Series
- i4
- i5
- i7
- ix
- x2
- x3
- x5
- x6
- x7
- XM

In order to estimate the interest in the BMW models from customers, the simulation will sample 1000 customer requests to view the models available at the BMW Carlsbad location.

```
# Define vector of all BMW models available at the dealership
bmw_models = c("2 Series",
              "3 Series",
              "4 Series",
              "5 Series",
              "7 Series",
              "i4",
              "i5",
              "i7",
              "ix",
              "x2",
              "x3",
              "x5",
              "x6",
              "x7",
              "XM")
```



```
# Initialize empty vector to store simulated customer requests
```

```

view_intrest = c()

# Simulate 1000 customer viewing requests
# Each iteration randomly selects one BMW model with equal probability
for (i in 1:1000) {
  model = sample(bmw_models, 1)
  view_intrest = c(view_intrest, model)
}

# Create frequency table showing number of requests per model
# Uses kable for formatted table output
library(knitr)
kable(as.data.frame(table(view_intrest)), col.names = c("Model", "Requests"))

```

Model	Requests
2 Series	77
3 Series	65
4 Series	59
5 Series	65
7 Series	54
i4	59
i5	78
i7	57
ix	61
x2	70
x3	73
x5	73
x6	62
x7	64
XM	83