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Week 2 – Tasks (teacher's perspective)

```
# Load required libraries
library(RCurl)
library(dplyr)
library(magrittr)
library(ggplot2)

# Load dataset
data <- read.csv("Hogwarts_enrolment_data.csv")

# Task 1: Calculate the statistics (median, mean, quartiles) of the Muggle
Studies grade for population of Slytherin.
# Hint: Use summary function:
https://www.rdocumentation.org/packages/base/versions/3.6.2/topics/summary
data %>% filter(Hogwarts.House == "Slytherin") %>% select(Muggle.Studies)
%>% summary()


# Task 2: Calculate the number of individuals left/right best handed in
each of Hogwarts House
# Hint: use count operation
(https://dplyr.tidyverse.org/reference/count.html)

data %>% select(Hogwarts.House, Best.Hand) %>% group_by(Hogwarts.House) %>%
count(Best.Hand)

# Task 3: Use a bar plot chart to present the number of individuals in each
of the Hogwarts Houses.
ggplot(data, aes(x = Hogwarts.House)) + geom_bar()

# Task 4: The code below generates a scatterplot showing the relationship
between scores of History of Magic versus Divination. It uses ggplot2
library, geom_point() (ref: http://www.sthda.com/english/wiki/ggplot2-
scatter-plots-quick-start-guide-r-software-and-data-visualization)


ggplot(data, aes(x=History.of.Magic, y=Divination)) + geom_point()

# a) Run the code above to generate the scatterplot.

# b) Alter the previous graph, by coloring the points according to the
student's House.
```

```
ggplot(data, aes(x=History.of.Magic, y=Divination, color=Hogwarts.House)) +
geom_point()
```
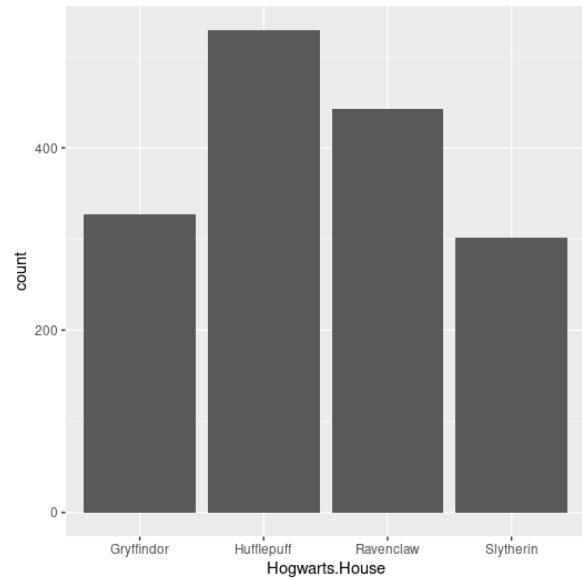
Responses to tasks

Task 1:

```
Muggle.Studies

 Min.   :-840.6

 1st Qu.:-591.3

 Median :-492.2

 Mean   :-474.5

 3rd Qu.:-398.9

 Max.   : 945.3
```

Task 2:

```
# A tibble: 8 × 3

# Groups:   Hogwarts.House [4]

  Hogwarts.House Best.Hand     n

  <chr>          <chr>     <int>

1 Gryffindor     Left        168

2 Gryffindor     Right       159

3 Hufflepuff     Left        263

4 Hufflepuff     Right       266

5 Ravenclaw      Left        213

6 Ravenclaw      Right       230

7 Slytherin      Left        146

8 Slytherin      Right       155
```
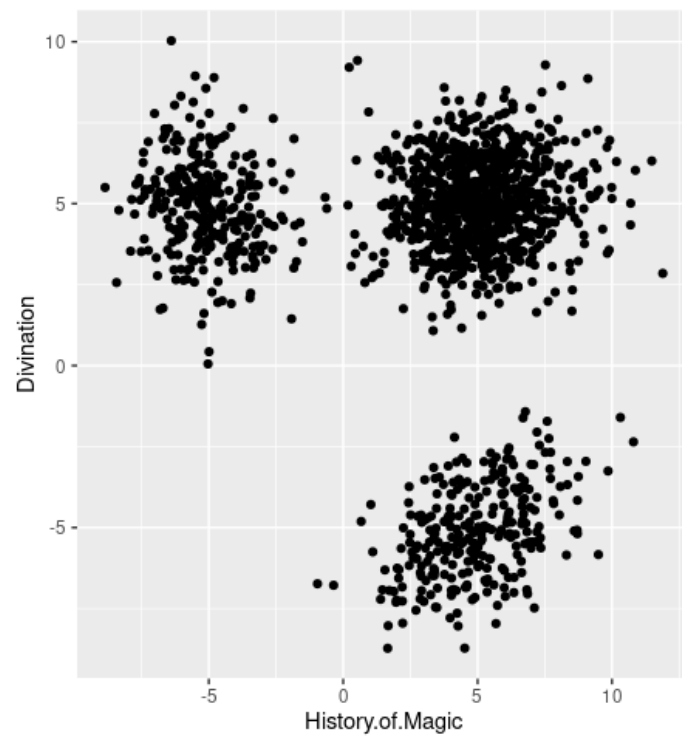
Task 3:

Task 4:

a)

Task 4:

b)