Assignment 1

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2025-10-06

```
# Installing necessary package(s)
install.packages("ggplot2")
```

```
## Installing package into '/cloud/lib/x86_64-pc-linux-gnu-library/4.5'
## (as 'lib' is unspecified)
```

```
library(ggplot2)
```

Dataset

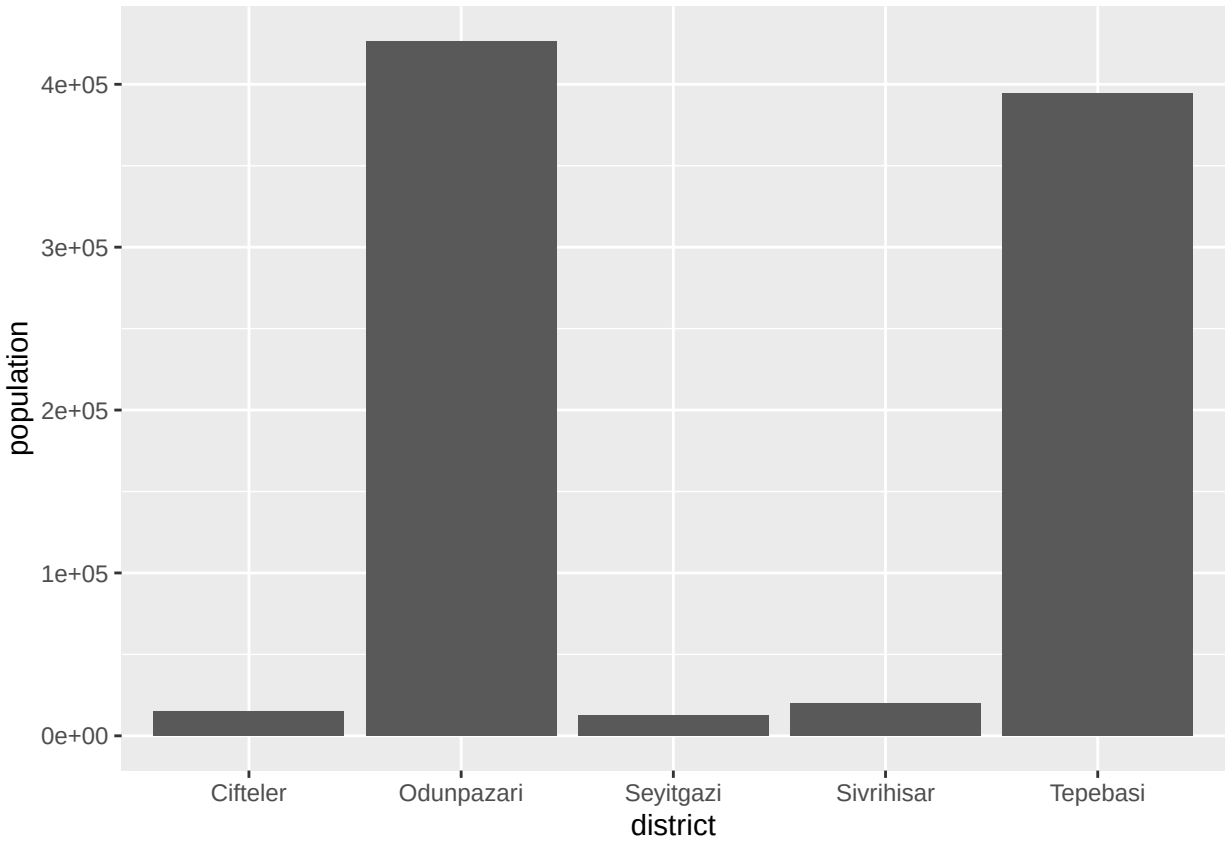
The dataset `eskisehir` contains the total population for the top-5 crowded districts of Eskisehir in 2024.

```
eskisehir <- data.frame(
  district   = c("Odunpazari", "Tepebasi", "Sivrihisar", "Cifteler", "Seyitgazi"),
  population = c(426581, 394734, 20258, 14814, 12878))
```

Drawing a barplot

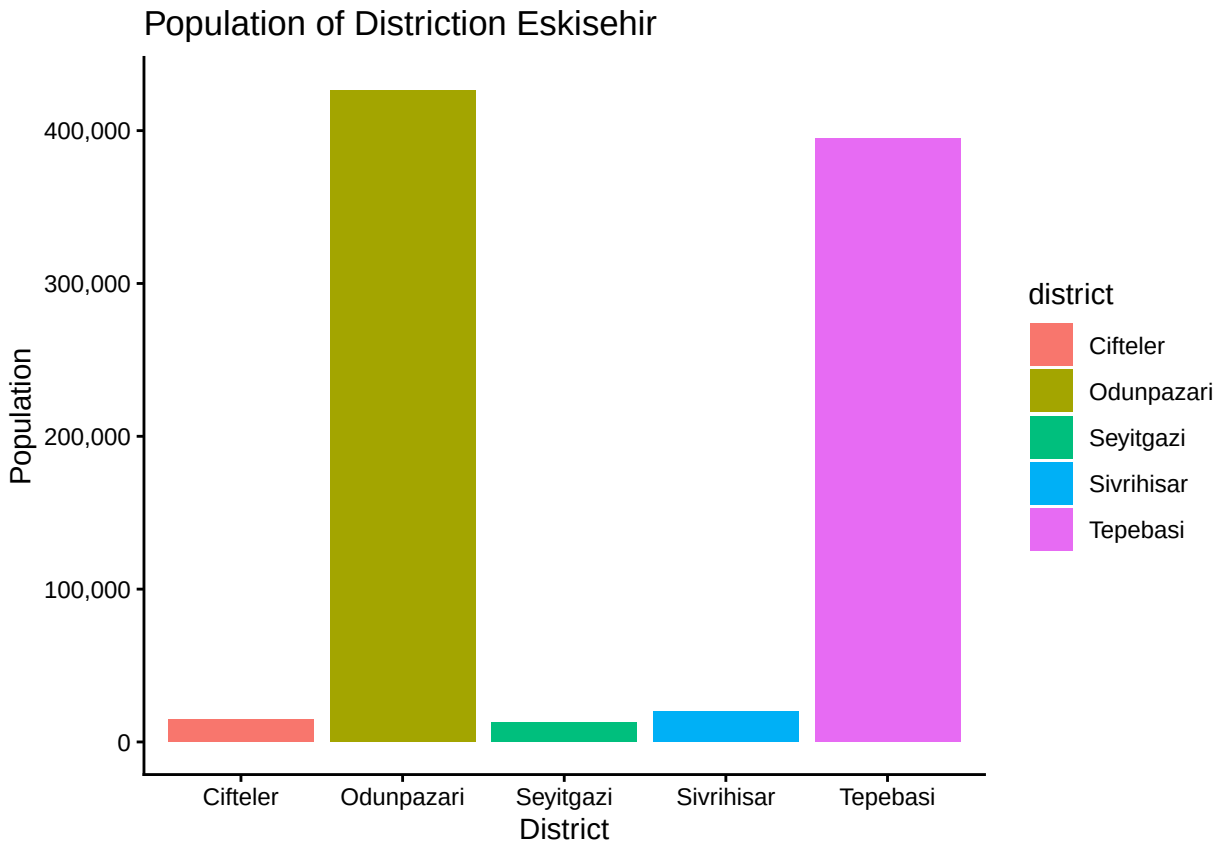
1. Please draw a boxplot to visualize the population of districts (20 pts).

```
ggplot(eskisehir, aes( x = district , y = population )) +
  geom_bar(stat = "identity")
```



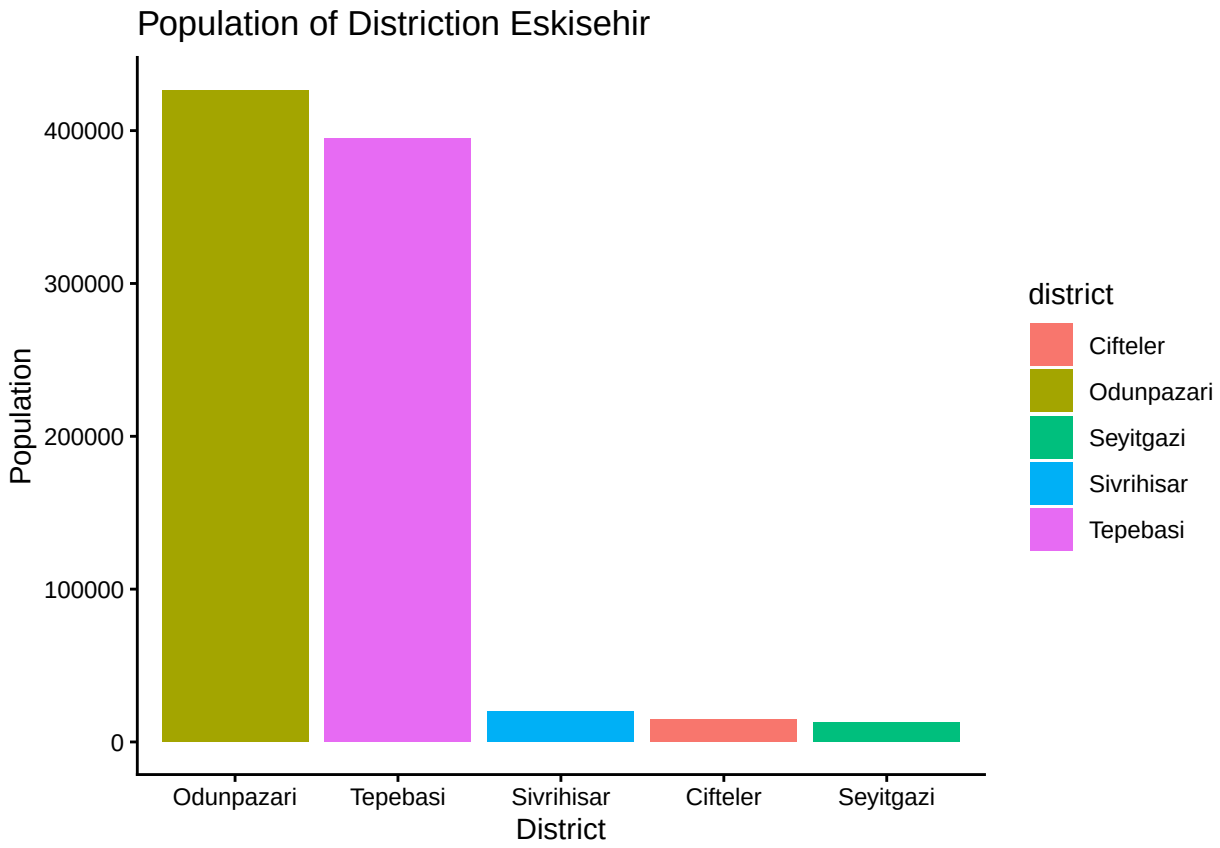
2. Please solve the problems in the plot to make it better (20 pts).

```
ggplot(eskisehir, aes( x = district , y = population ,fill = district)) +
  geom_bar(stat = "identity") + theme_classic() + labs(
    title = "Population of Districtions Eskisehir",
    x = "District",
    y = "Population"
  ) +
  scale_y_continuous(labels = scales::comma)
```

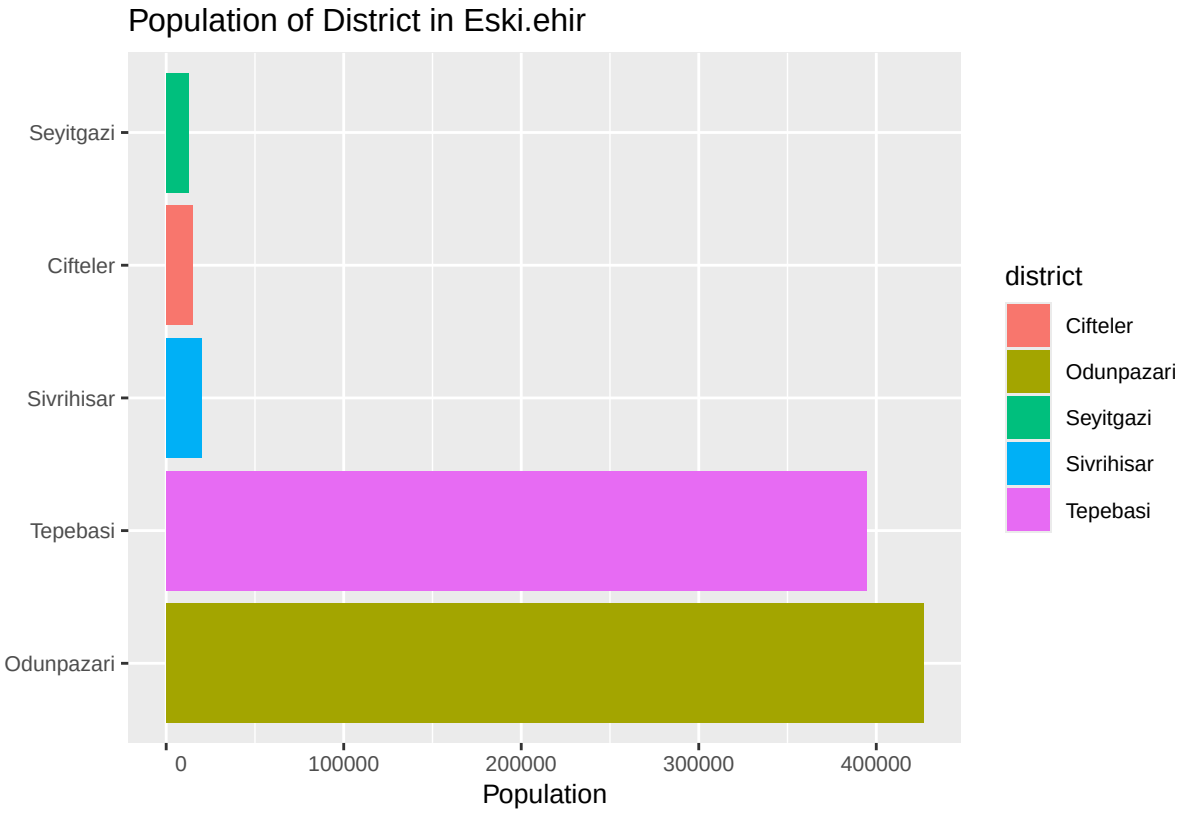


3. Then configure the plot to present it in a better way (40 pts). You can use the tricks that you learned in the lecture.

```
ggplot(eskisehir, aes( x =reorder (district, -population) , y = population , fill = district)) +
  geom_bar(stat = "identity") + theme_classic() + labs(
    title = "Population of Distriction Eskisehir",
    x = "District",
    y = "Population"
  ) +
  scale_y_continuous(labels = function(x) format(x, scientific = FALSE))
```




```
ggplot(eskisehir, aes(x = reorder(district, -population), y = population, fill = district)) +
  geom_bar(stat = "identity") +
  scale_y_continuous(labels = function(x) format(x, scientific = FALSE)) +
  labs(x       = "",
       y       = "Population",
       title   = "Population of District in Eskişehir",
       caption = "") +
  coord_flip() +
  theme(text = element_text(size = 10))
```



4. Interpret the plot (20 pts). It must be about the information of the district populations not the technical part of the plot.

The most populous district of Eskişehir is Odunpazarı.a right-skewed graph. There seems to be an imbalance in We see a right-skewed graph. There seems to be an imbalance in district formation. ...