

Homework 4**09.05.2024**

This homework is designed to give you practice with more advanced and specific MATLAB functionality, like advanced data structures, images, and animation. As before, the names of helpful functions are provided in bold where needed. **Homework must be submitted before the start of the next class.**

What to turn in: Copy the text from your scripts and paste it into a document. If a question asks you to plot or display something to the screen, also include the plot and screen output your code generates. Submit either a *.doc or *.pdf file.

Homework must be submitted in Google Classroom by 17:00 on 13.05.2024.

“HW4_NameSurname_Number.zip”.

Question: The text file 'weather_data.txt' contains daily weather data entries. Each line includes the date, humidity percentage, temperature, and weather condition (e.g., "2024-05-01, 50, 22, Sunny"). Read this data from the file and calculate the average temperature for each type of weather condition (such as Sunny, Cloudy, Rainy, Snowy). Also, determine the number of data points available for each weather condition. Visualize the average temperatures and the number of data points using a bar graph in MATLAB. Report the results and the graphs with codes.

The outputs should be presented as follows:

```
Bulutlu için ortalama sıcaklık: 20.05 derece, Veri Noktası Sayısı: 107  
Güneşli için ortalama sıcaklık: 27.48 derece, Veri Noktası Sayısı: 128  
Karlı için ortalama sıcaklık: -0.37 derece, Veri Noktası Sayısı: 118  
Yağmurlu için ortalama sıcaklık: 14.84 derece, Veri Noktası Sayısı: 147
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