Assignment 1
Python Libraries - Numpy

Task

You have been tasked with analyzing sales data of a company's products in different countries over time using Numpy. The data is saved in the form of a .npy file, which you can load into a Numpy array using np.load().

1. Load the data from the .npy file and print the array dimensions.

2. Slice the array to extract the sales data for the year 2022.

3. Calculate the total sales amount for each country for the year 2022.

4. Calculate the mean sales amount for each product over the entire period.

5. Extract the total sales amount for each country for the year 2023 and Append it to a separate array.

6. Delete the sales data for Ireland for the year 2021.

7. Find the unique product names and print them sorted alphabetically.

8. Create a 2D array with random values of shape (20, 3) and concatenate it with the sales data array along the second axis.

9. Save the output in modified_sales_data.npy and Explain what happened to the matrix by doing the concatenation above.

Deliverables

- This assignment is to be done **Individually**.

- You are required to submit a zipped file named **ID_FirstName_LastName_Assignment1.zip**, any other naming format will not be accepted and file will be discarded.

- Inside the ZIP file there should be a PDF file that contains the explanation of each step, and the Downloaded Colab Notbook containing the commented code and the output of each task.

- Any copied assignments will be immediately zeroed and other penalties may be applied.

Good Luck