# Assignment 1

## Questions

1. Analyze the average quality of wine produced by different countries

You are provided with a dataset winemag-data-130k-v2.csv which contains wine reviews, including the country of origin and wine ratings (points). Your task is to:

Group the dataset by country and calculate the average rating (points) for wines from each country.

Sort the results in descending order to identify the top 10 countries with the highest average rating.

Visualize these top 10 countries using a horizontal bar chart with appropriate title, labels, and layout formatting.

2.Wine Rating Analysis by Country

You are working with a wine review dataset named winemag-data-130k-v2.csv, which includes information such as

wine ratings (in "points") and the country of origin.

Your objective is to analyze which countries produce the highest-rated wines on average.

Group the dataset by country and calculate the average wine rating (points) for each country.

Sort the results in descending order and extract the top 10 countries with the highest average rating.

Create a horizontal bar chart to visualize these top 10 countries.

X-axis should show: Average Rating (Points)

Y-axis should show: Country

Use an appropriate color for the bars (e.g., orchid).

Include a title: "Top 10 Countries by Average Wine Rating"

Rotate labels or adjust layout if needed for clarity.

## Answer

import pandas as pd

import matplotlib.pyplot as plt

df = pd.read\_csv('C:/Users/anass/Documents/HxTraining/DI&DV\_Training/28thJuly/winemag-data-130k-v2.csv')

df\_clean = df.dropna(subset=['country','price'])

avg\_ratings = df\_clean.groupby('country')['price'].mean()

avg\_rating\_sorted = avg\_ratings.sort\_values(ascending=False)

print(avg\_rating\_sorted)

top10\_countries = avg\_rating\_sorted.head(10)

plt.figure(figsize=(10, 6))

top10\_countries.plot(kind='barh', color='orchid')

plt.xlabel('Average Price')

plt.ylabel('Country')

plt.title('Top 10 Countries by Average Wine Pricing')

plt.gca().invert\_yaxis()

plt.tight\_layout()

plt.show()