5️⃣ Week 5: Data Visualization (Visual Report)

This code creates the required Bar, Scatter, and Line plots for a visual performance report.

```
# Week 5 Assignment – Visual Basketball Report


import pandas as pd

import matplotlib.pyplot as plt

import seaborn as sns

import numpy as np


# Set seaborn style

sns.set(style="darkgrid")


# --- 1️⃣ Create Data ---

data = {

   "Player": ["Player A", "Player B", "Player C", "Player D", "Player E"],

   "PTS": [22, 19, 25, 15, 10],

   "REB": [7, 9, 5, 11, 4],

   "AST": [6, 3, 7, 2, 4]

}

df = pd.DataFrame(data)


# --- 2️⃣ Bar Chart – Points per Player ---

plt.figure(figsize=(8,5))

sns.barplot(x="Player", y="PTS", data=df, palette="viridis")

plt.title("Player Scoring Comparison")
```

```
plt.ylabel("Points")
plt.xticks(rotation=15)
plt.show()

# --- 3️⃣ Scatter Plot – Rebounds vs Assists ---
plt.figure(figsize=(6,5))
sns.scatterplot(x="REB", y="AST", data=df, s=100, color="crimson")
plt.title("Rebounds vs Assists")
plt.xlabel("Rebounds")
plt.ylabel("Assists")
plt.show()

# --- 4️⃣ Line Chart – Example Player Trend ---
games = ["G1", "G2", "G3", "G4", "G5"]
points = [15, 20, 25, 18, 27]

plt.figure(figsize=(7,4))
plt.plot(games, points, marker="o", color="blue")
plt.title("Player A – Points Over 5 Games")
plt.xlabel("Game")
plt.ylabel("Points")
plt.show()
```