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In [1]: import pandas as pd

In [2]: df=pd.read_csv("D:/desktop/PBA25-26/Data.csv")

In [ ]: df.rename()

In [ ]: cal_mean=df["Calories"].median()

In [ ]: df.rename(columns={"marital": "marital_status", "age" : "Age"})

In [ ]: df_grouped = df.groupby(["Product_Category", "Gender"])["Total_Sales"].sum().sort_
        colors=["Green" ,"pink"]
        df_grouped.plot(kind="bar" ,color=colors, figsize=(8, 5))
        plt.title("Total Sales by Product Category and Gender")
        plt.xlabel("Product Category")
        plt.ylabel("Total Sales")
        plt.xticks(rotation=45)
        plt.show()

In [ ]: df1=df["Gender"].value_counts()

In [ ]: df.groupby('Industry_Tag')['Close'].mean().sort_values(ascending=False)

In [ ]: plt.bar(df["Product_Category"], df['Total_Sales'])
        plt.xticks(rotation=0,ha='center')
        plt.title("Category wise Sales")
        plt.xlabel("Product Category")
        plt.ylabel("Total Sales")
        plt.show()

In [ ]: df.isnull().sum()

In [6]: df["Date"]=pd.to_datetime(df["Date"], format="mixed", dayfirst=True)

In [ ]: sum_cat=df.groupby("Product_Category")["Total_Sales"].sum()
        sum_cat.plot(kind="pie", autopct="%1.2f%", figsize=(5, 6))
        plt.title("Sales in differenet categories")
        plt.ylabel("")
        plt.show()

In [7]: df["Date"].fillna(pd.Timestamp("2023-01-01"), inplace=True)

In [ ]: colors=["Blue" ,"pink" ,"purple"]
        plt.bar(["Male", "Female", "Total Medals"], [male_medal, female_medal,total_medals]
        plt.xlabel("Gender")
        plt.ylabel("Number of Medals Won")
        plt.title("Gender-wise Medals Distribution")
        plt.show()

In [ ]: df.iloc[0:5,1:6].sort_values(by="Total_Sales",ascending=False)

In [ ]: x = data1["Calories"].mean()
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In [ ]: df.describe()
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In [ ]: plt.figure(figsize=(8,5))
plt.scatter(df["QuantitySold"], df["Total_Sales"], color="blue" , alpha=0.7, edgec
plt.title("Relation between Quantity sold and Total sales")
plt.xlabel("Quantity Sold")
plt.ylabel("Total Sales")
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In [ ]: df["Age"]=df["Age"].fillna(df["Age"].mean()).round(2)
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In [ ]: plt.figure(figsize=(12,6))
apple_stock.plot(kind="line", x="Date", y="Close", linestyle="-", figsize=(12,6))
plt.xticks(rotation=45)
plt.title("Apple Stock Price Over Time")
plt.xlabel("Date")
plt.ylabel("Closing Price")
plt.grid()
plt.show()
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In [ ]: df_sort_price= df.sort_values(by="price",ascending=False).head(10)
print(df_sort_price)
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In [ ]: df.plot(kind="line" , x="Day", y="Total_Sales")
plt.xlabel("Time")
plt.ylabel("Total Sales")
plt.xticks(rotation=0)
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