Assignment:14

```
import matplotlib.pyplot as plt
#ds
month_number=[1,2,3,4,5,6,7,8,9,10,11,12]
facecream=[2500,2630,2140,3400,3600,2760,2980,3700,3540,1990,2340,2900]
facewash=[1500,1200,1340,1130,1740,1555,1120,1400,1780,1890,2100,1760]
toothpaste=[5200,5100,4550,5870,4560,4890,4780,5860,6100,8300,7300,7400]
bathingsoap=[9200,6100,9550,8870,7760,7490,8980,9960,8100,10300,13300,14400]
shampoo=[1200,2100,3550,1870,1560,1890,1780,2860,2100,2300,2400,1800]
moisturizer=[1500,1200,1340,1130,1740,1555,1120,1400,1780,1890,2100,1760]
total_units=[21100,18330,22470,22270,20960,20140,29550,36140,23400,26670,41280,30020]
total_profit=[211000,183300,224700,222700,209600,201400,295500,361400,234000,266700,412800,300200]

# Que 1
'''plt.plot(month_number,total_profit)
plt.xlabel("Month Number")
plt.ylabel("Total Profit")
plt.show()'''
# Que 2
'''plt.plot(month_number,total_profit,label="total_profit",ls="dotted",color="red",lw=3,marker="o",mec='r',mfc="black")
plt.xlabel("Month Number")
plt.ylabel("Total Profit")
plt.legend()
plt.show()'''

# Que3
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'''
plt.plot(month_number,facecream,label="facecrea
m",lw=3,marker="o")
plt.plot(month_number,facewash,label="facewash"
,lw=3,marker="o")
plt.plot(month_number,toothpaste,label="toothpa
ste",lw=3,marker="o")
plt.plot(month_number,bathingsoap,label="bathin
gsoap",lw=3,marker="o")
plt.plot(month_number,shampoo,label="shampoo",l
w=3,marker="o")
plt.plot(month_number,moisturizer,label="moistu
rizer",lw=3,marker="o")
plt.xlabel("Month Number")
plt.ylabel("Sales uits in number")
plt.legend()
plt.show()'''

# que4
'''plt.scatter(month_number,total_profit,label=
"tooth paste sales data")
plt.xlabel("Month Number")
plt.ylabel("Number of units solds")
plt.grid(ls="--")
plt.legend()
plt.show()'''

# que5
'''import numpy as np
width=0.25
month_number=np.array(month_number)
bar1=plt.bar(month_number-
width/2,facewash,width ,color="blue")
bar2=plt.bar(month_number+width/2,facecream,wid
th ,color="orange")
plt.xlabel("Month Number")
plt.ylabel("Sales units in number")
plt.grid(ls="--")
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plt.legend((bar1,bar2),("Facewash sales
data","facecream sales data"))
plt.show()'''

# Que6
'''bar1=plt.bar(month_number,bathingsoap
,color="blue")

plt.xlabel("Month Number")
plt.ylabel("Sales units in number")
plt.grid(ls="--")
# plt.legend((bar1),("Facewash sales data"))
plt.show()'''

# Que7
'''plt.hist(total_profit,bins=12)
plt.xlabel("Profit range in dolar")
plt.ylabel("Actual profit in Dollar")
plt.grid(ls="--")
# plt.legend((bar1),("Facewash sales data"))
plt.show()'''

# Que 8
'''lst=[sum(facewash),sum(facewash),sum(toothpa
ste),sum(bathingsoap),sum(shampoo),sum(moisturi
zer)]

mylabels=["facewash","toothpaste","toothpaste",
"bathingsoap","shampoo"," moisturizer"]

plt.pie(lst,labels=mylabels,autopct='%1.1f%%',s
hadow=True)
plt.legend()
plt.show()'''
# Que9
'''plt.suptitle("Sales data of  a bathingsoap")
plt.subplot(2,1,1)
plt.plot(month_number,bathingsoap,color="black"
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```
,marker="o")
plt.xlabel("Sales data of a faceswash")
# plt.xlabel("Month Number")
plt.ylabel("Sales units in number")

plt.subplot(2,1,2)
plt.xlabel("Sales data ")
plt.plot(month_number,facewash,color="red",mark
er="o")
plt.xlabel("Month Number")
plt.tight_layout()
plt.show()'''

# Que10
'''plt.plot([],[],label="facewash")
plt.plot([],[],label="facecream")
plt.plot([],[],label="toothpaste")
plt.plot([],[],label="bathinsoap")
plt.plot([],[],label="shampoo")
plt.plot([],[],label="moisturizer")
plt.title("All product sales data using stack
plot")
plt.xlabel("Months Number")
plt.ylabel("Sales units in Number")
plt.stackplot(month_number,facecream,facewash,t
oothpaste,bathingsoap,shampoo,moisturizer)
plt.legend()
plt.show()'''
```