wdmiapiuy

November 18, 2025

[1]:
```
pip install matplotlib
```

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Collecting matplotlib
  Downloading matplotlib-3.10.7-cp314-cp314-win_amd64.whl.metadata (11 kB)
Collecting contourpy>=1.0.1 (from matplotlib)
  Downloading contourpy-1.3.3-cp314-cp314-win_amd64.whl.metadata (5.5 kB)
Collecting cycler>=0.10 (from matplotlib)
  Downloading cycler-0.12.1-py3-none-any.whl.metadata (3.8 kB)
Collecting fonttools>=4.22.0 (from matplotlib)
  Downloading fonttools-4.60.1-cp314-cp314-win_amd64.whl.metadata (114 kB)
Collecting kiwisolver>=1.3.1 (from matplotlib)
  Downloading kiwisolver-1.4.9-cp314-cp314-win_amd64.whl.metadata (6.4 kB)
Requirement already satisfied: numpy>=1.23 in
c:\users\hp\appdata\local\programs\python\python314\lib\site-packages (from
matplotlib) (2.3.4)
Requirement already satisfied: packaging>=20.0 in
c:\users\hp\appdata\roaming\python\python314\site-packages (from matplotlib)
(25.0)
Collecting pillow>=8 (from matplotlib)
  Downloading pillow-12.0.0-cp314-cp314-win_amd64.whl.metadata (9.0 kB)
Collecting pyparsing>=3 (from matplotlib)
  Downloading pyparsing-3.2.5-py3-none-any.whl.metadata (5.0 kB)
Requirement already satisfied: python-dateutil>=2.7 in
c:\users\hp\appdata\roaming\python\python314\site-packages (from matplotlib)
(2.9.0.post0)
Requirement already satisfied: six>=1.5 in
c:\users\hp\appdata\roaming\python\python314\site-packages (from python-
dateutil>=2.7->matplotlib) (1.17.0)
Downloading matplotlib-3.10.7-cp314-cp314-win_amd64.whl (8.3 MB)
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Downloading cycler-0.12.1-py3-none-any.whl (8.3 kB)
Downloading fonttools-4.60.1-cp314-cp314-win_amd64.whl (2.3 MB)
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Downloading kiwisolver-1.4.9-cp314-cp314-win_amd64.whl (75 kB)
Downloading pillow-12.0.0-cp314-cp314-win_amd64.whl (7.1 MB)
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Downloading pyparsing-3.2.5-py3-none-any.whl (113 kB)
Installing collected packages: pyparsing, pillow, kiwisolver, fonttools, cycler,
contourpy, matplotlib

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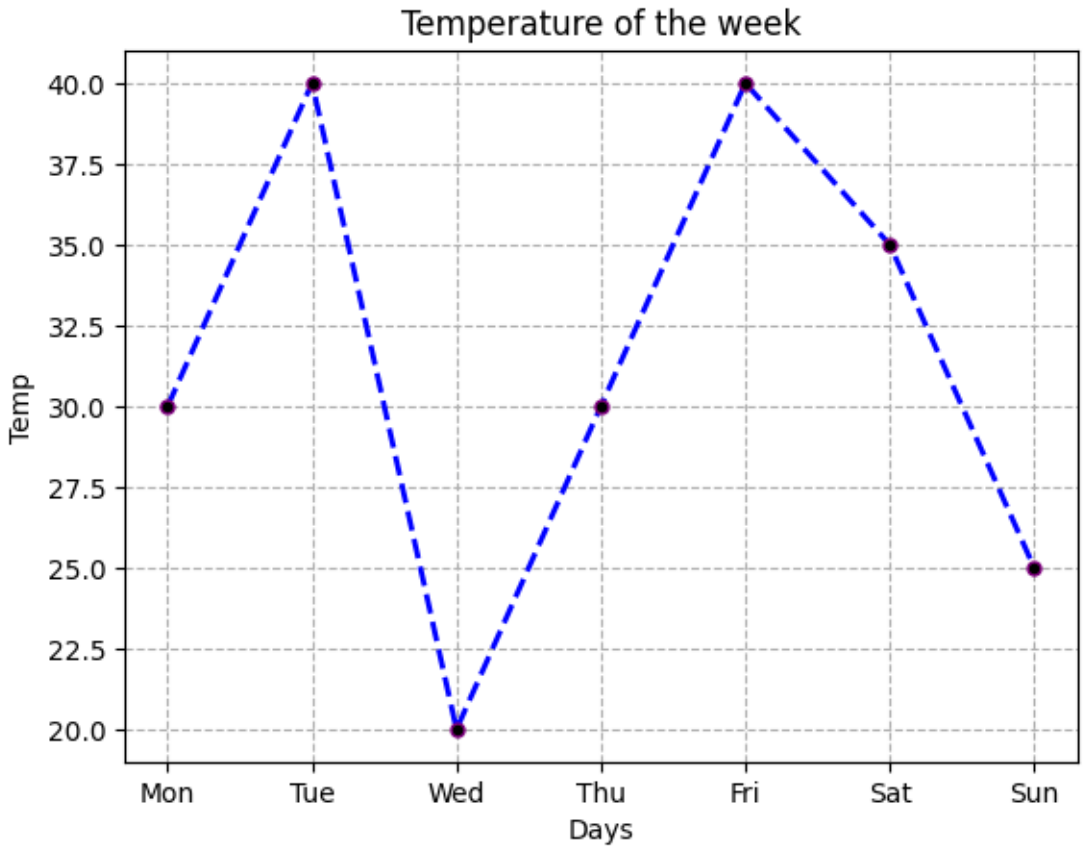
Successfully installed contourpy-1.3.3 cycler-0.12.1 fonttools-4.60.1
kiwisolver-1.4.9 matplotlib-3.10.7 pillow-12.0.0 pyparsing-3.2.5
Note: you may need to restart the kernel to use updated packages.
```

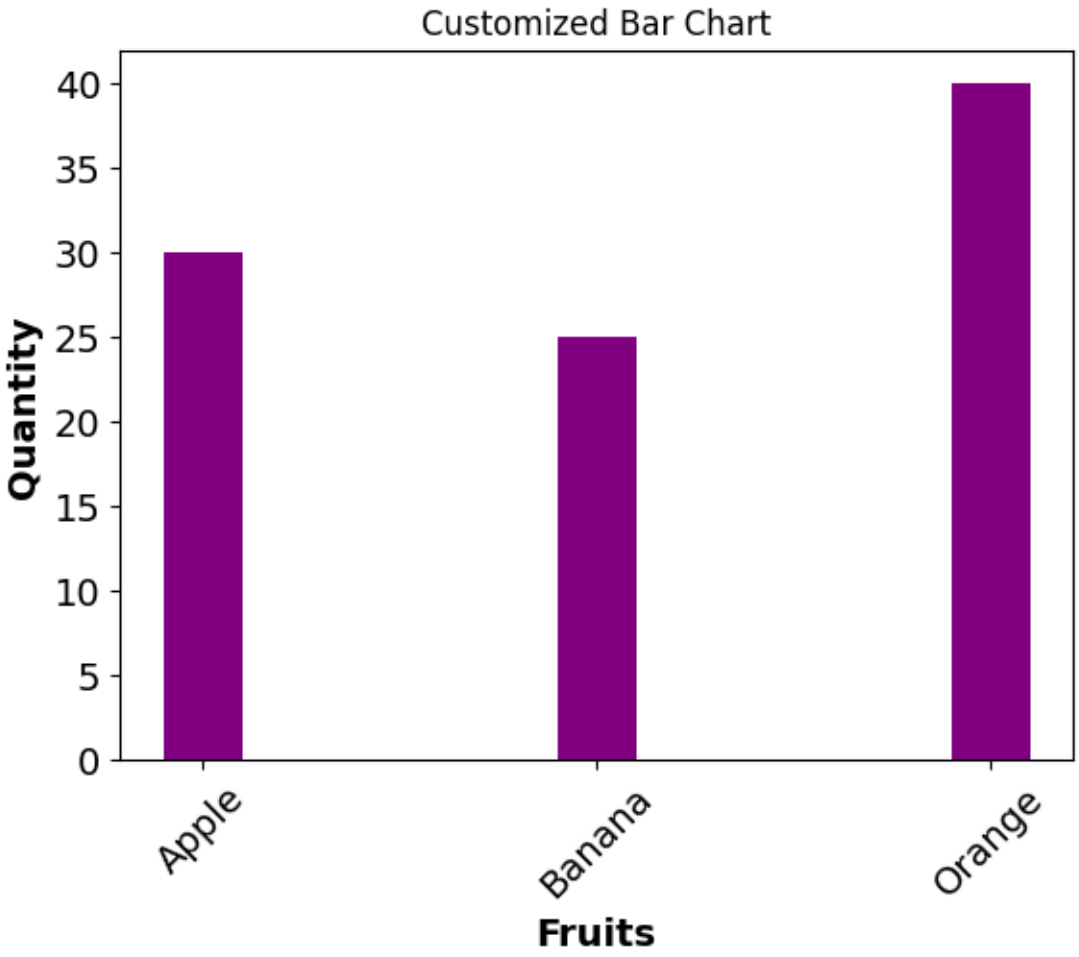
[2]:
```
import matplotlib.pyplot as plt
import numpy as np
import pandas as pd
```

[9]:
```
data={'Temp':[30,40,20,30,40,35,25], 'Days':
 ↪['Mon','Tue','Wed','Thu','Fri','Sat','Sun']}
df=pd.DataFrame(data)
plt.
 ↪plot(data['Days'],data['Temp'],color='blue',linewidth=2,linestyle='--',marker='o',markersiz
plt.xlabel('Days')
plt.ylabel('Temp')
plt.title('Temperature of the week')
plt.grid(True,linestyle='--')
plt.show()
```

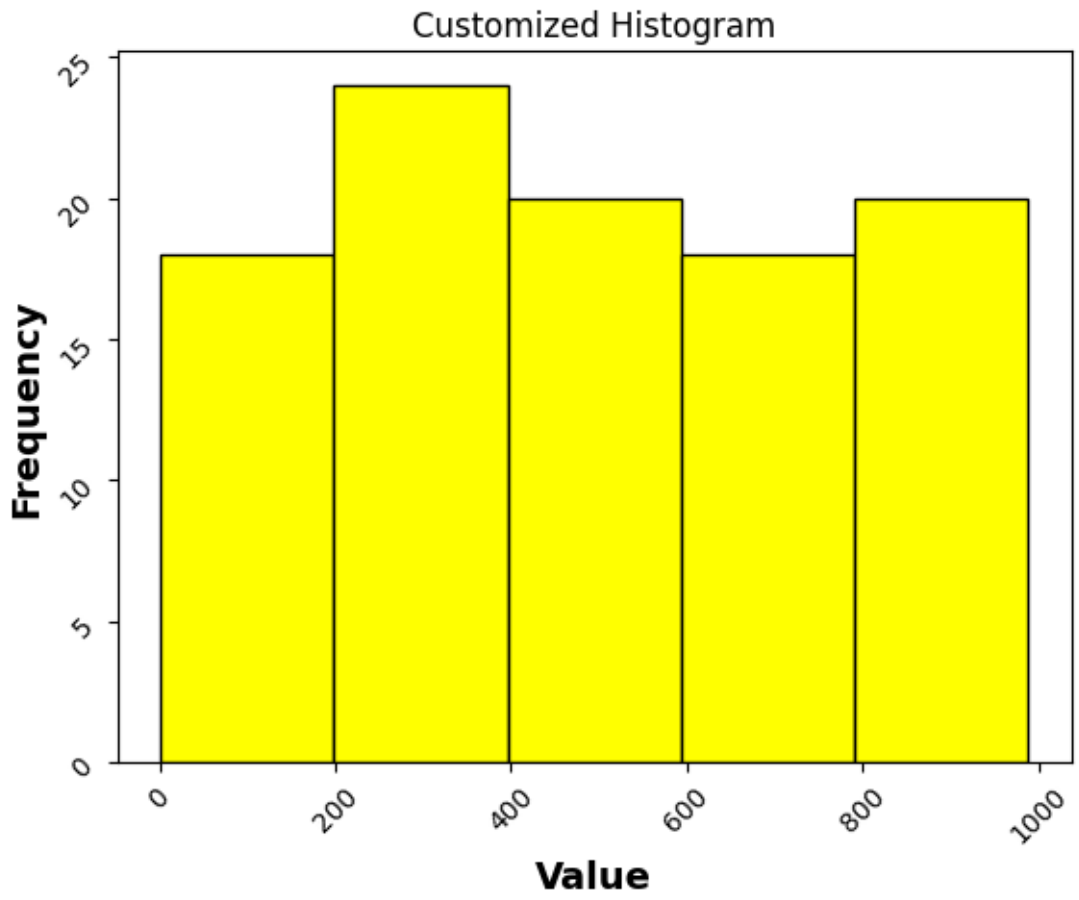


[20]:
```
data={'Apple':30,'Banana':25,'Orange':40}
name=list(data.keys())
values=list(data.values())
plt.bar(name,values,color='purple',width=0.2,alpha=1)
plt.xlabel('Fruits',fontsize=14,fontweight='bold')
```

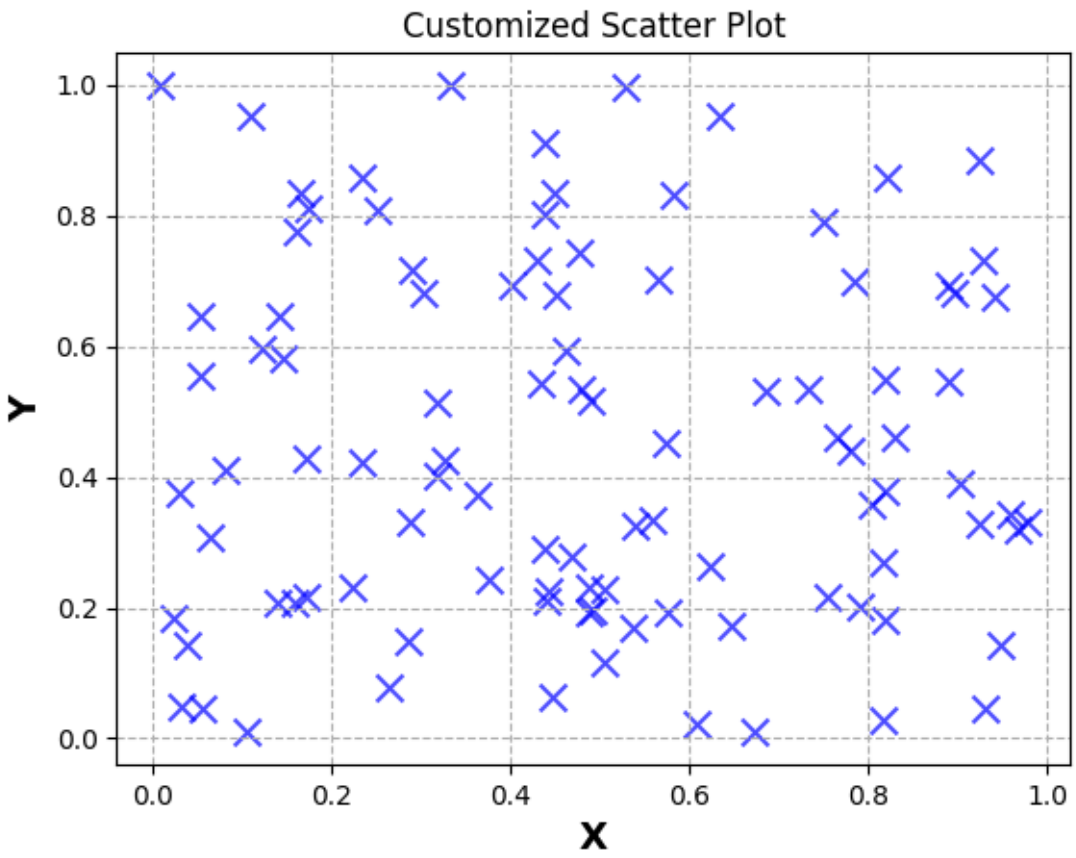
```
plt.ylabel('Quantity',fontsize=14,fontweight='bold')
plt.title('Customized Bar Chart')
plt.xticks(rotation=45)
plt.xticks(fontsize=14)
plt.yticks(fontsize=14)
plt.show()
```



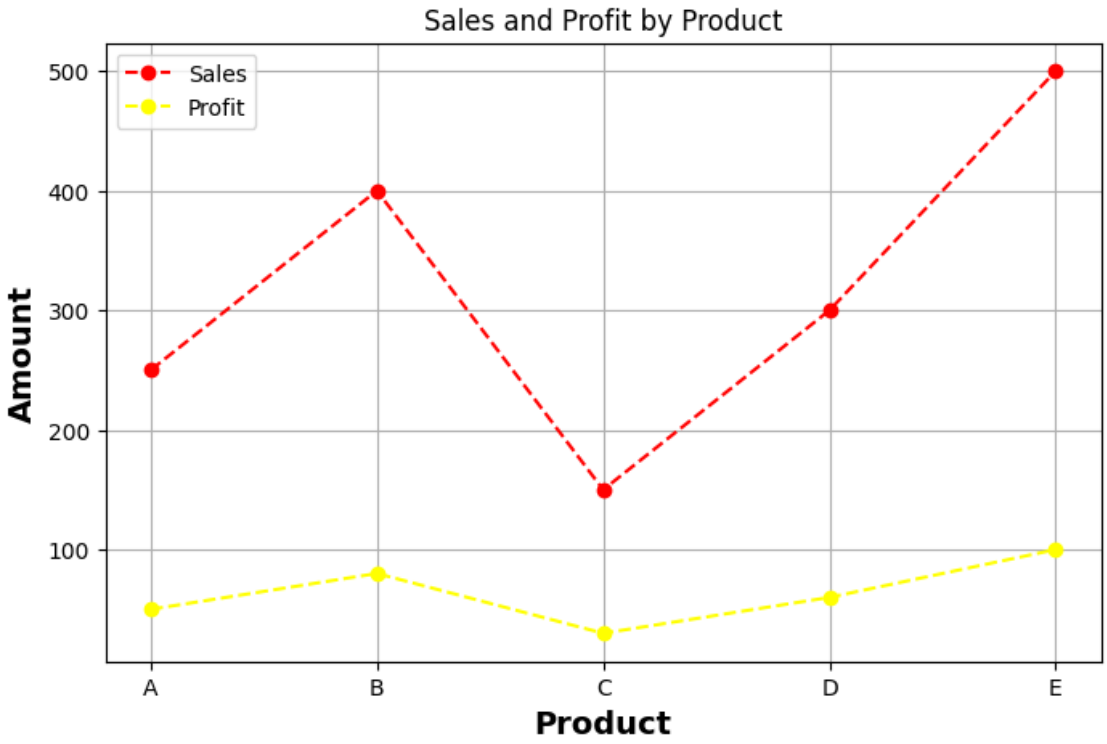
[22]:
```
data=np.random.randint(1,1000,size=100)
plt.hist(data,bins=5,color='yellow',edgecolor='black')
plt.xlabel('Value',fontsize=14,fontweight='bold')
plt.ylabel('Frequency',fontsize=14,fontweight='bold')
plt.title('Customized Histogram')
plt.xticks(rotation=45)
plt.yticks(rotation=45)
plt.show()
```



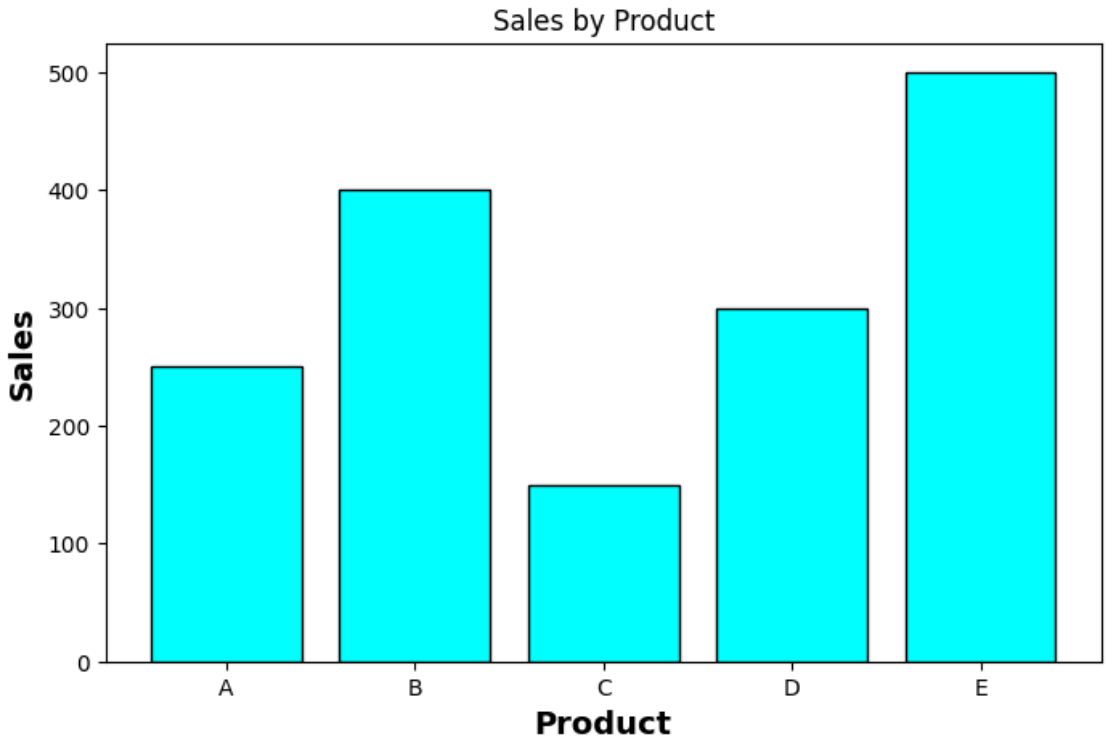
[28]:
```
x=np.random.rand(100)
y=np.random.rand(100)
plt.scatter(x,y,color='blue',s=100,alpha=0.7,marker='x')
plt.xlabel('X',fontsize=14,fontweight='bold')
plt.ylabel('Y',fontsize=14,fontweight='bold')
plt.title('Customized Scatter Plot')
plt.grid(True,linestyle='--')
plt.show()
```



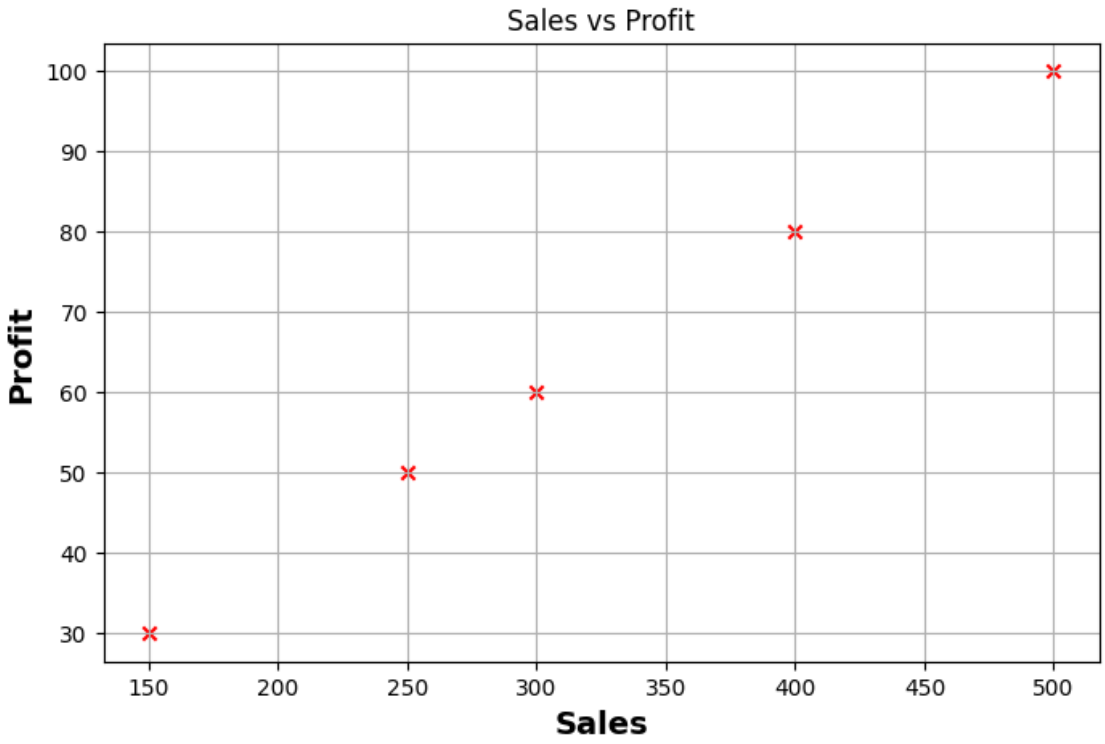
[37]:
```
data={'Product':['A','B','C','D','E'],
      'Sales':[250,400,150,300,500],
      'Profit':[50,80,30,60,100],
      'Region':['North','South','East','West','North'],
      'Quantity Sold':[20,35,15,30,50]
      }
df2=pd.DataFrame(data)
df2
plt.figure(figsize=(8,5))
plt.
  ↪plot(df2['Product'],df2['Sales'],marker='o',label='Sales',color='red',linestyle='--')
plt.
  ↪plot(df2['Product'],df2['Profit'],marker='o',label='Profit',color='yellow',linestyle='--')
plt.title('Sales and Profit by Product')
plt.xlabel('Product',fontsize=14,fontweight='bold')
plt.ylabel('Amount',fontsize=14,fontweight='bold')
plt.legend()
plt.grid(True)
plt.show()
```



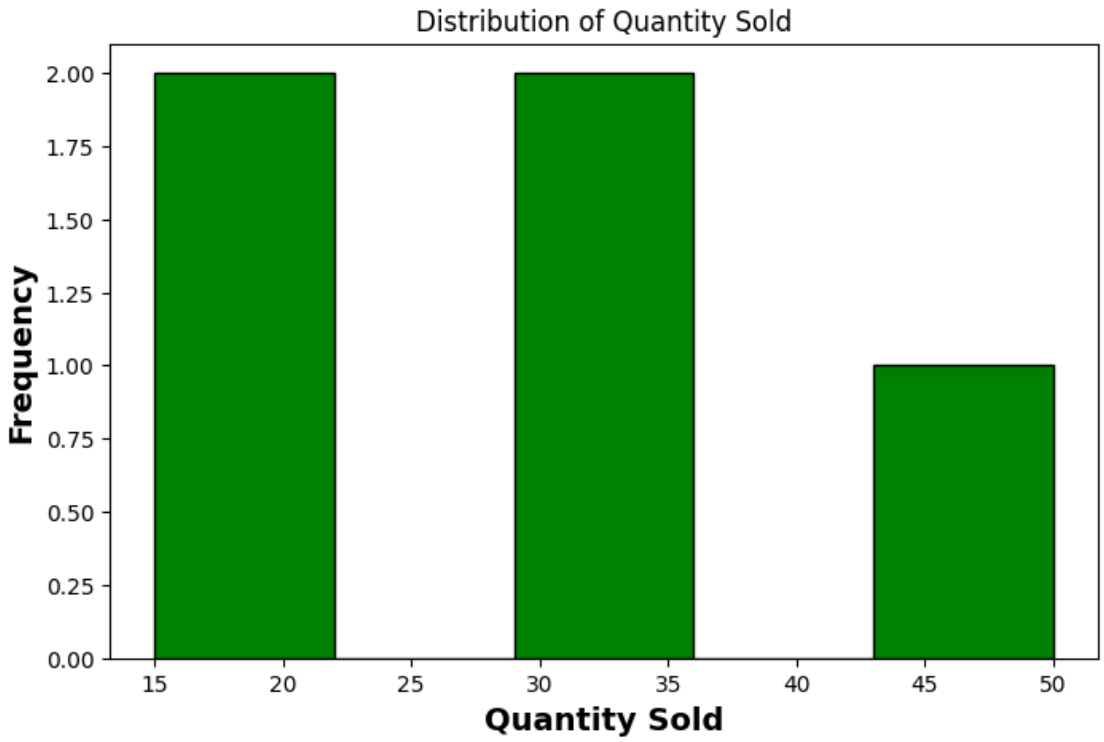
[38]:
```
plt.figure(figsize=(8,5))
plt.bar(df2['Product'],df2['Sales'],color='cyan',edgecolor='black')
plt.title('Sales by Product')
plt.xlabel('Product',fontsize=14,fontweight='bold')
plt.ylabel('Sales',fontsize=14,fontweight='bold')
plt.show()
```



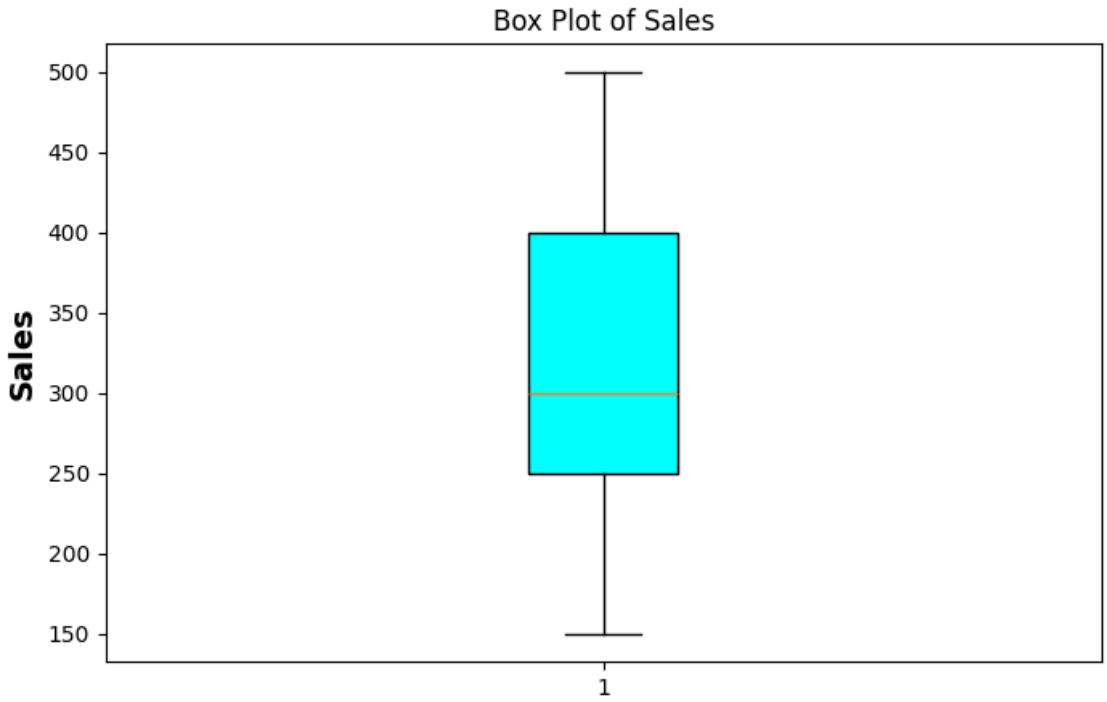
[39]:
```
plt.figure(figsize=(8,5))
plt.scatter(df2['Sales'],df2['Profit'],color='red',marker='x')
plt.title('Sales vs Profit')
plt.xlabel('Sales',fontsize=14,fontweight='bold')
plt.ylabel('Profit',fontsize=14,fontweight='bold')
plt.grid(True)
plt.show()
```



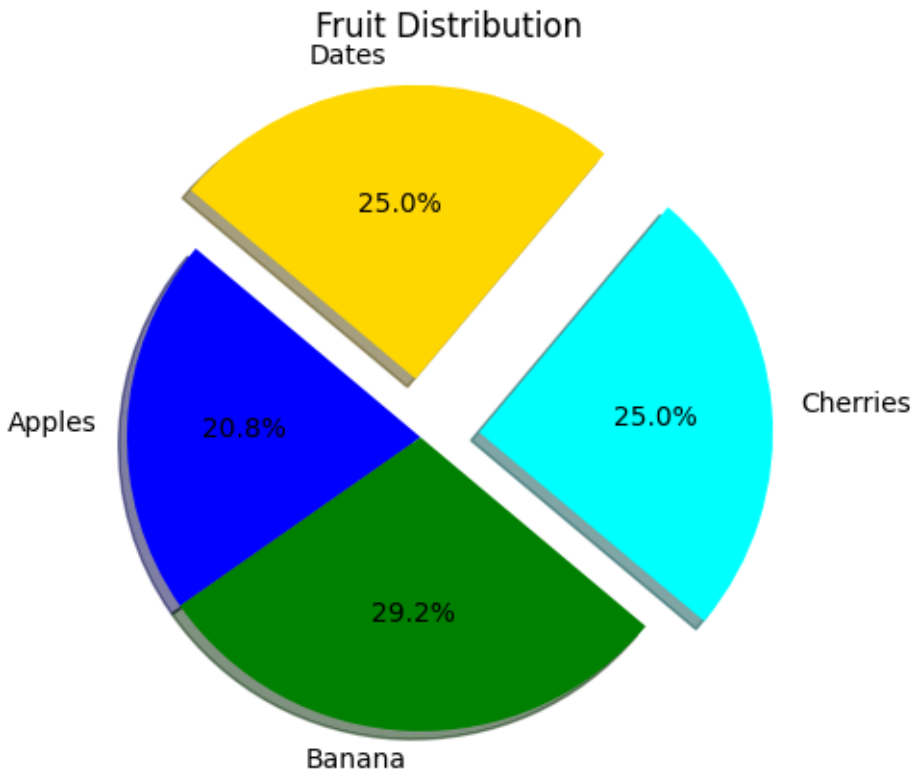
[40]:
```
plt.figure(figsize=(8,5))
plt.hist(df2['Quantity Sold'],bins=5,color='green',edgecolor='black')
plt.title('Distribution of Quantity Sold')
plt.xlabel('Quantity Sold',fontsize=14,fontweight='bold')
plt.ylabel('Frequency',fontsize=14,fontweight='bold')
plt.show()
```



[41]:
```
plt.figure(figsize=(8,5))
plt.boxplot(df2['Sales'],patch_artist=True,boxprops=dict(facecolor='cyan'))
plt.title('Box Plot of Sales')
plt.ylabel('Sales',fontsize=14,fontweight='bold')
plt.show()
```



[51]:
```
label=['Apples','Banana','Cherries','Dates']
size=[25,35,30,30]
color=['blue','green','cyan','gold']
explode=[0,0,0.2,0.2]
plt.pie(size,explode=explode,labels=label,colors=color,autopct='%1.
  ↪1f%%',shadow=True,startangle=140)
plt.title('Fruit Distribution')
plt.axis('equal')
plt.show()
```



[58]:
```
activities=['Sleeping','Eating','Working','Exercising','Relaxing']
time_spent=[8,2,9,1,4]
color=['cyan','blue','green','purple','gold']
explode=[0,0,0.1,0,0]
plt.pie(time_spent,labels=activities,colors=color,explode=explode,autopct='%1.
  ↪f%%',shadow=True,startangle=90)
plt.title('Time Spent on Daily Activities')
plt.axis('equal')
plt.show()
```


Time Spent on Daily Activities
Relaxing
17%
Exercising
4%
Working
38%
Eating
8%
Sleeping
33%