729-assignment-5

July 5, 2023

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

[12]:
```
df=pd.read_csv("sales_data_sample.csv")
df
```

[12]:

	ORDERNUMBER	QUANTITYORDERED	PRICEEACH	ORDERLINENUMBER	SALES	\
0	10107	30	95.70	2	2871.00	
1	10121	34	81.35	5	2765.90	
2	10134	41	94.74	2	3884.34	
3	10145	45	83.26	6	3746.70	
4	10159	49	100.00	14	5205.27	
…	…	…	…	…	…	
2818	10350	20	100.00	15	2244.40	
2819	10373	29	100.00	1	3978.51	
2820	10386	43	100.00	4	5417.57	
2821	10397	34	62.24	1	2116.16	
2822	10414	47	65.52	9	3079.44	

	ORDERDATE	STATUS	QTR_ID	MONTH_ID	YEAR_ID	PRODUCTLINE	MSRP	\
0	2/24/2003 0:00	Shipped	1	2	2003	Motorcycles	95	
1	5/7/2003 0:00	Shipped	2	5	2003	Motorcycles	95	
2	7/1/2003 0:00	Shipped	3	7	2003	Motorcycles	95	
3	8/25/2003 0:00	Shipped	3	8	2003	Motorcycles	95	
4	10/10/2003 0:00	Shipped	4	10	2003	Motorcycles	95	
…	…	…	…	…	…	…	…	
2818	12/2/2004 0:00	Shipped	4	12	2004	Ships	54	
2819	1/31/2005 0:00	Shipped	1	1	2005	Ships	54	
2820	3/1/2005 0:00	Resolved	1	3	2005	Ships	54	
2821	3/28/2005 0:00	Shipped	1	3	2005	Ships	54	
2822	5/6/2005 0:00	On Hold	2	5	2005	Ships	54	

	PRODUCTCODE	CUSTOMERNAME	COUNTRY	DEALSIZE
0	S10_1678	Land of Toys Inc.	USA	Small
1	S10_1678	Reims Collectables	France	Small
2	S10_1678	Lyon Souveniers	France	Medium

```
3       S10_1678         Toys4GrownUps.com      USA    Medium
4       S10_1678  Corporate Gift Ideas Co.      USA    Medium
…          …                          …       …       …
2818    S72_3212     Euro Shopping Channel    Spain    Small
2819    S72_3212   Oulu Toy Supplies, Inc.  Finland    Medium
2820    S72_3212     Euro Shopping Channel    Spain    Medium
2821    S72_3212               Alpha Cognac  France    Small
2822    S72_3212         Gifts4AllAges.com      USA    Medium

[2823 rows x 16 columns]
```

[13]:
```
df.columns
```

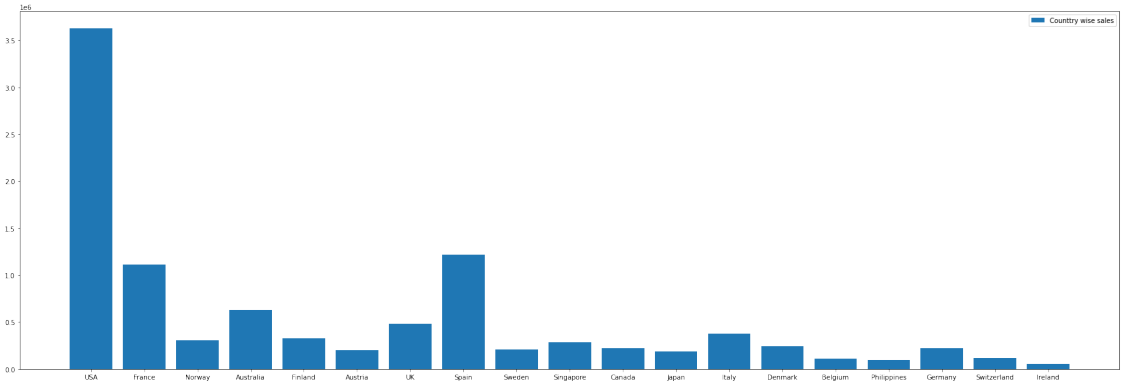
[13]:
```
Index(['ORDERNUMBER', 'QUANTITYORDERED', 'PRICEEACH', 'ORDERLINENUMBER',
       'SALES', 'ORDERDATE', 'STATUS', 'QTR_ID', 'MONTH_ID', 'YEAR_ID',
       'PRODUCTLINE', 'MSRP', 'PRODUCTCODE', 'CUSTOMERNAME', 'COUNTRY',
       'DEALSIZE'],
      dtype='object')
```

[14]:
```
newdf=df.groupby('COUNTRY')
country=df['COUNTRY'].unique()
sales=[]
for cname in country:
    sales.append(sum(newdf.get_group(cname)['SALES']))

f = plt.figure()
f.set_figwidth(30)
f.set_figheight(10)

font1 = {'family':'serif','color':'blue','size':20}
font1 = {'family':'serif','color':'darkred','size':15}
plt.bar(country,sales,label="Counttry wise sales")
plt.legend(loc="best")
```

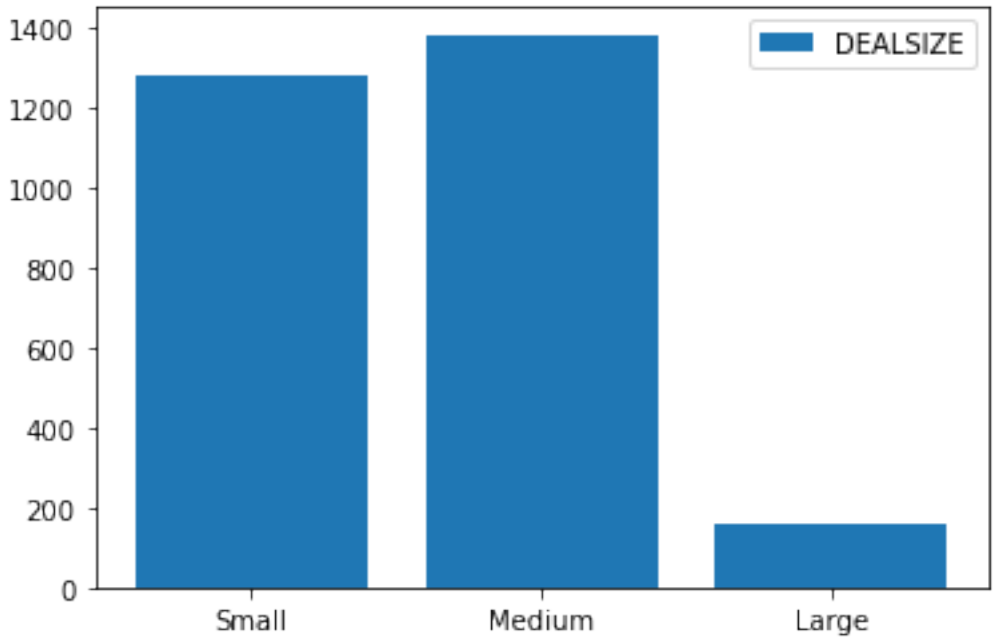
[14]:
```
<matplotlib.legend.Legend at 0x1c4cf454820>
```



[15]:
```
dsize=df['DEALSIZE'].unique()
deal=[]
newdf=df.groupby('DEALSIZE')
for dname in dsize:
    deal.append(newdf.get_group(dname)['DEALSIZE'].count())

plt.bar(df['DEALSIZE'].unique(),deal,label="DEALSIZE")
plt.legend(loc="best")
```

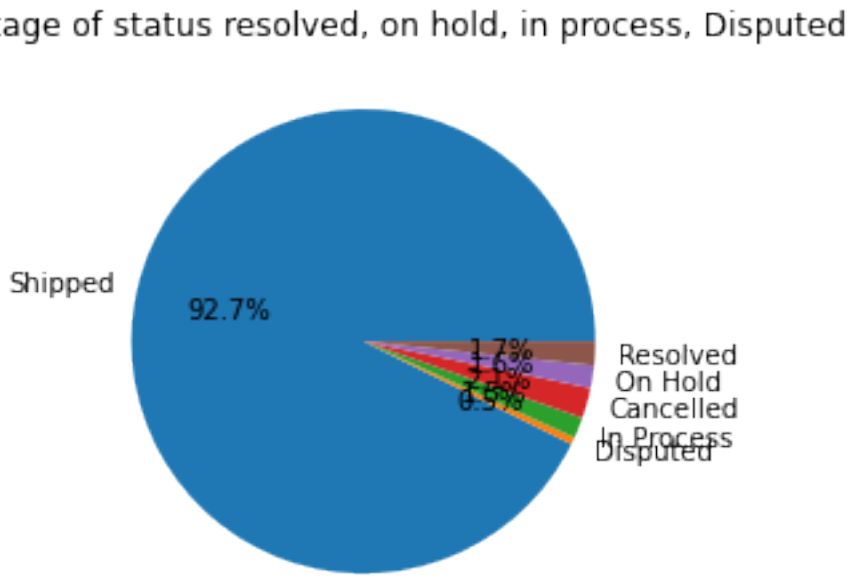
[15]:
```
<matplotlib.legend.Legend at 0x1c4cf6998b0>
```



[16]:
```
newdf=df.groupby('STATUS')
tot=df['STATUS'].count()
status=df['STATUS'].unique()
percent=[]
for sname in status:
    percent.append(newdf.get_group(sname)['STATUS'].count()*100/tot)
```

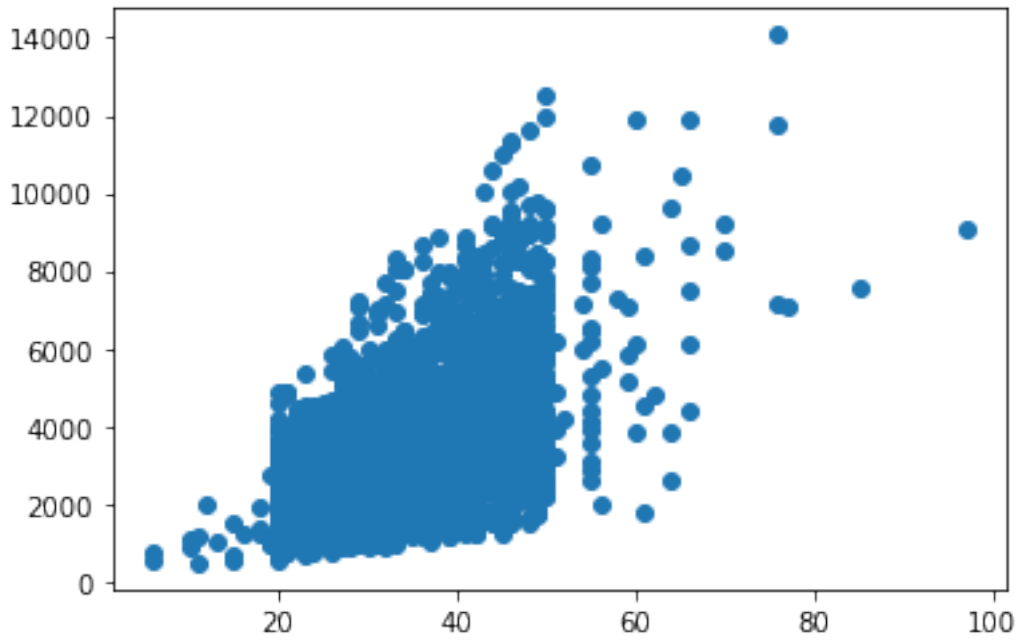
[17]:
```
plt.pie(percent,labels=status, autopct='%1.1f%%')
plt.title('percentage of status resolved, on hold, in process, Disputed')
```

[17]:
```
Text(0.5, 1.0, 'percentage of status resolved, on hold, in process, Disputed')
```



[18]:
```
plt.scatter(df['QUANTITYORDERED'],df['SALES'])
```

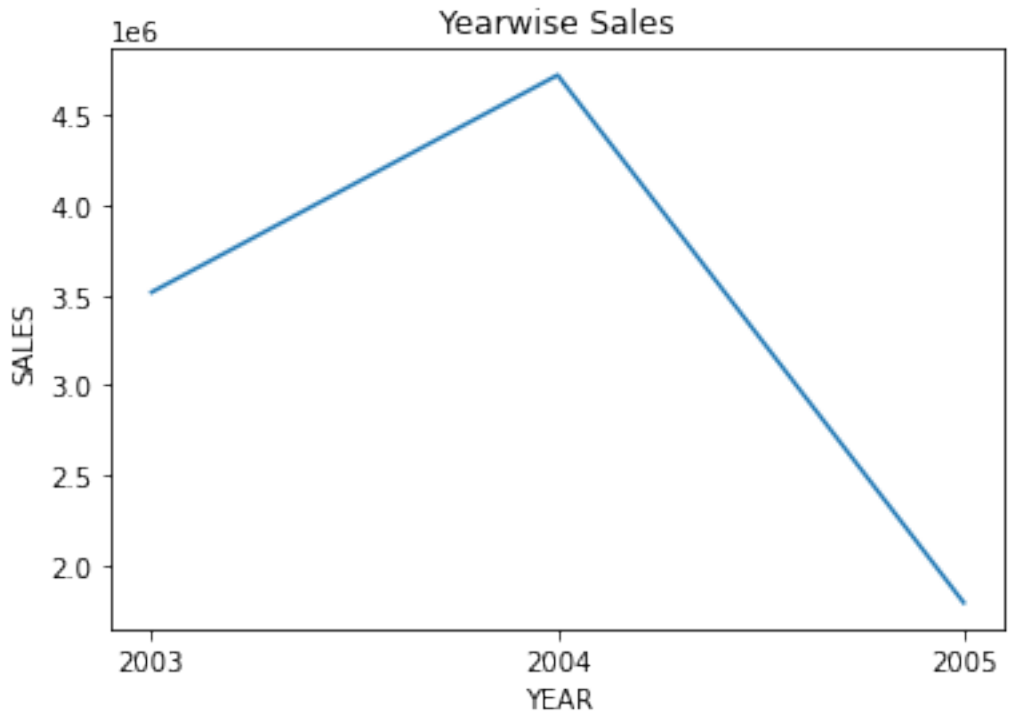
[18]: <matplotlib.collections.PathCollection at 0x1c4cf988310>



[20]:
```
newdf=df.groupby('YEAR_ID')
year=df['YEAR_ID'].unique()
sales=[]
for yr in year:
    sales.append(sum(newdf.get_group(yr)['SALES']))

plt.plot(year.astype(str),sales)
plt.xlabel('YEAR')
plt.ylabel('SALES')
plt.title('Yearwise Sales')
```

[20]:
```
Text(0.5, 1.0, 'Yearwise Sales')
```



[ ]:
```

```