```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt


from google.colab import drive
drive.mount('/content/drive')
#4/1AX4XfWh-ZvI6MDn6nE40xEylYknZvmcMCdxSyNy-o6I0uivbCdFFaTb_NvQ
```

```
Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.m
```

```
data=pd.read_csv('/content/drive/My Drive/ML_DATA/mtcars.csv')
d = pd.crosstab(index=data['cyl'],columns="count",dropna=True)
print(d)
```

```
col_0  count
cyl
4         11
6          7
8         14
```

```
print(data.info())
```

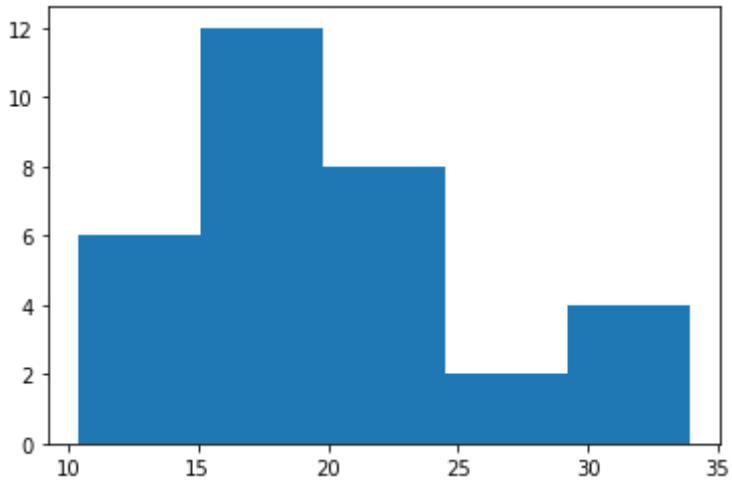
```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 32 entries, 0 to 31
Data columns (total 12 columns):
 #   Column      Non-Null Count  Dtype
---  ------      --------------  -----
 0   Unnamed: 0  32 non-null     object
 1   mpg         32 non-null     float64
 2   cyl         32 non-null     int64
 3   disp        32 non-null     float64
 4   hp          32 non-null     int64
 5   drat        32 non-null     float64
 6   wt          32 non-null     float64
 7   qsec        32 non-null     float64
 8   vs          32 non-null     int64
 9   am          32 non-null     int64
 10  gear        32 non-null     int64
 11  carb        32 non-null     int64
dtypes: float64(5), int64(6), object(1)
memory usage: 3.1+ KB
None
```

```
#count total Null values in each column
print("Total Null Data:",data.isnull().sum())
```

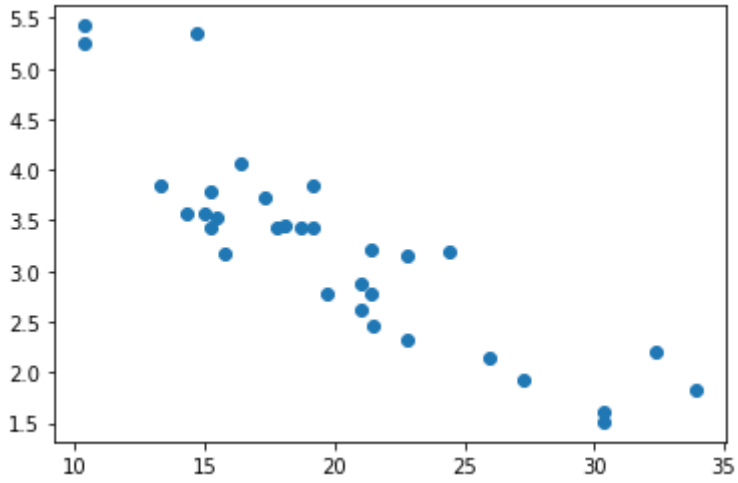
```
Total Null Data: Unnamed: 0    0
mpg           0
cyl           0
disp          0
hp            0
drat          0
wt            0
```

```
qsec          0
vs            0
am            0
gear          0
carb          0
dtype: int64
```

```
#Finding the histogram
#From the given dataset 'mtcars.csv',plot a histogram to check frequency distribution on o
plt.hist(data['mpg'],bins=5)
plt.show()
```



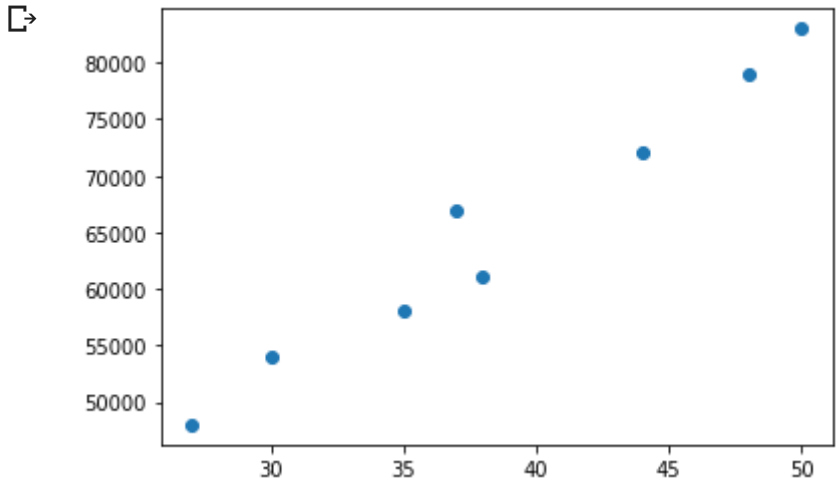

```
#scatter plot of 'mpg' (Miles per gallon) vs 'wt' (weight of car)
plt.scatter(data['mpg'],data['wt'])
plt.show()
```




```
#In the dataframe, under the variable gear count count total records in each value.
df = pd.DataFrame(data,columns=['gear'])
print("Count How many values:\n",df['gear'].value_counts())
```

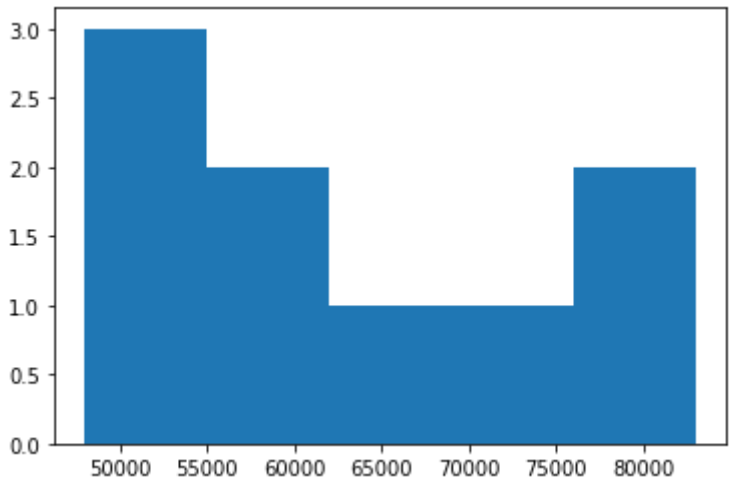
```
Count How many values:
 3    15
4    12
5     5
Name: gear, dtype: int64
```

```
#Exercise Question
#1. Draw a scatter plot between age and salary for "Data_for_Transformation.csv" file
data2 = pd.read_csv('/content/drive/My Drive/ML_DATA/Data_for_Transformation.csv')
plt.scatter(data2['Age'],data2['Salary'])
plt.show()
```

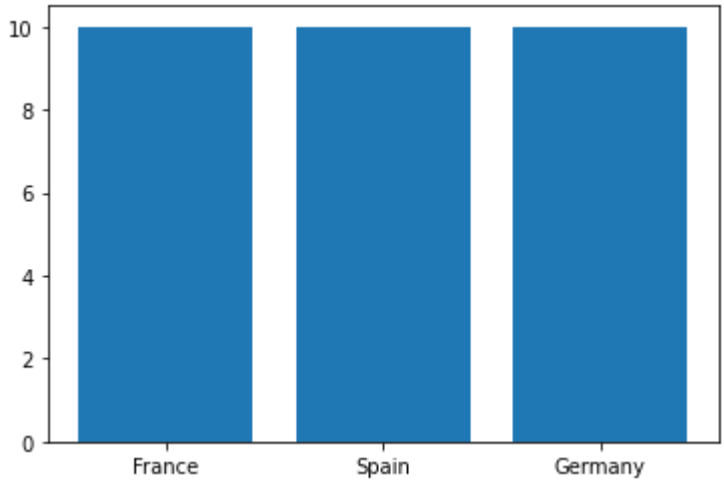


+ Code + Text

```
#2. Draw a histogram of salary
plt.hist(data2['Salary'],bins=5)
plt.show()
```




```
plt.bar(data2['Country'],align='center',height=10.0)
plt.show()
```



✓ 0s completed at 14:07