```
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
from google.colab import files
import io
import pandas as pd
data = files.upload()
```

```
f = pd.read_csv(io.StringIO(data['collegePlace.csv'].decode('utf-8')))
```

```
f.head
```

```
<bound method NDFrame.head of       Age  Gender                          Stream  Internships  CGPA  Hostel  \
0      22    Male  Electronics And Communication            1     8       1
1      21  Female               Computer Science            0     7       1
2      22  Female         Information Technology            1     6       0
3      21    Male         Information Technology            0     8       0
4      22    Male                     Mechanical            0     8       1
...   ...     ...                            ...          ...   ...     ...
2961   23    Male         Information Technology            0     7       0
2962   23    Male                     Mechanical            1     7       1
2963   22    Male         Information Technology            1     7       0
2964   22    Male               Computer Science            1     7       0
2965   23    Male                          Civil            0     8       0

      HistoryOfBacklogs  PlacedOrNot
0                     1            1
1                     1            1
2                     0            1
3                     1            1
4                     0            1
...                 ...          ...
2961                  0            0
2962                  0            0
2963                  0            0
2964                  0            0
2965                  0            1

[2966 rows x 8 columns]>
```

```
df=pd.DataFrame(f)
f
```

	Age	Gender	Stream	Internships	CGPA	Hostel	HistoryOfBacklogs	PlacedOr
0	22	Male	Electronics And Communication	1	8	1	1	
1	21	Female	Computer Science	0	7	1	1	
2	22	Female	Information Technology	1	6	0	0	
3	21	Male	Information Technology	0	8	0	1	
4	22	Male	Mechanical	0	8	1	0	
...	...	...	...	...	...	...	...	
2961	23	Male	Information Technology	0	7	0	0	
2962	23	Male	Mechanical	1	7	1	0	
2963	22	Male	Information	1	7	0	0	

```
df.loc[0:5,:'CGPA']
```

	Age	Gender	Stream	Internships	CGPA
0	22	Male	Electronics And Communication	1	8
1	21	Female	Computer Science	0	7

```
df.isnull()
```

	Age	Gender	Stream	Internships	CGPA	Hostel	HistoryOfBacklogs	PlacedOrNot
0	False	False	False	False	False	False	False	False
1	False	False	False	False	False	False	False	False
2	False	False	False	False	False	False	False	False
3	False	False	False	False	False	False	False	False
4	False	False	False	False	False	False	False	False
...	...	...	...	...	...	...	...	...
2961	False	False	False	False	False	False	False	False
2962	False	False	False	False	False	False	False	False
2963	False	False	False	False	False	False	False	False
2964	False	False	False	False	False	False	False	False
2965	False	False	False	False	False	False	False	False

2966 rows × 8 columns

```
df.isnull().sum()
```

```
Age                 0
Gender              0
Stream              0
Internships         0
CGPA                0
Hostel              0
HistoryOfBacklogs   0
PlacedOrNot         0
dtype: int64
```

```
df['CGPA'].mean()
```

```
7.073836817262306
```

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 2966 entries, 0 to 2965
Data columns (total 8 columns):
 #   Column             Non-Null Count  Dtype 
---  ------             --------------  ----- 
 0   Age                2966 non-null   int64 
 1   Gender             2966 non-null   object
 2   Stream             2966 non-null   object
 3   Internships        2966 non-null   int64 
 4   CGPA               2966 non-null   int64 
 5   Hostel             2966 non-null   int64 
 6   HistoryOfBacklogs  2966 non-null   int64 
 7   PlacedOrNot        2966 non-null   int64 
dtypes: int64(6), object(2)
memory usage: 185.5+ KB
```

```
df['CGPA']=df['CGPA'].astype('int')
```

```
df['CGPA']
```

```
0       8
1       7
2       6
3       8
4       8
       ..
2961    7
2962    7
2963    7
```

```
2964    7
2965    8
Name: CGPA, Length: 2966, dtype: int64
```

```
x=np.array([1,2,3,4,5,6,7,8,9])
x
```

```
array([1, 2, 3, 4, 5, 6, 7, 8, 9])
```

```
y=np.array([9,8,7,6,5,4,3,2,1])
y
```

```
array([9, 8, 7, 6, 5, 4, 3, 2, 1])
```

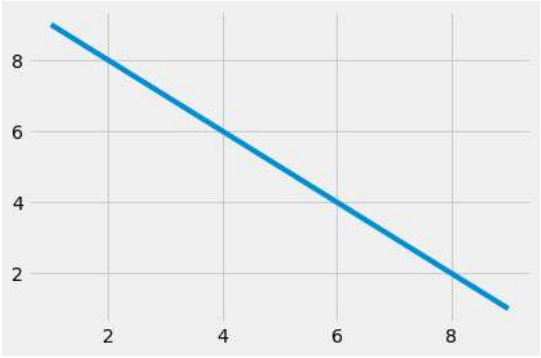
```
plt.style.available
```

```
['Solarize_Light2',
 '_classic_test_patch',
 '_mpl-gallery',
 '_mpl-gallery-nogrid',
 'bmh',
 'classic',
 'dark_background',
 'fast',
 'fivethirtyeight',
 'ggplot',
 'grayscale',
 'seaborn',
 'seaborn-bright',
 'seaborn-colorblind',
 'seaborn-dark',
 'seaborn-dark-palette',
 'seaborn-darkgrid',
 'seaborn-deep',
 'seaborn-muted',
 'seaborn-notebook',
 'seaborn-paper',
 'seaborn-pastel',
 'seaborn-poster',
 'seaborn-talk',
 'seaborn-ticks',
 'seaborn-white',
 'seaborn-whitegrid',
 'tableau-colorblind10']
```

```
plt.style.use('fivethirtyeight')
```

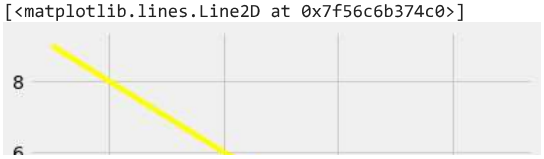
```
plt.plot(x,y)
```

```
[<matplotlib.lines.Line2D at 0x7f56c6af17f0>]
```



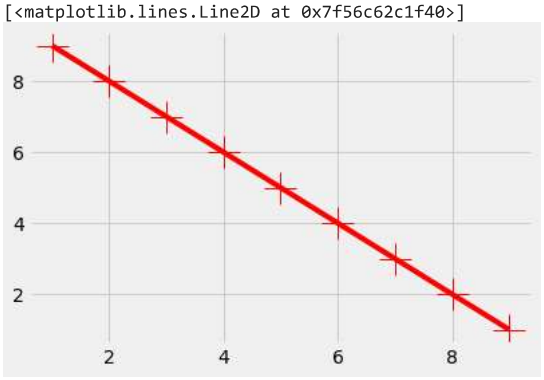

```
plt.plot(x,y,color='yellow')
```

```
[<matplotlib.lines.Line2D at 0x7f56c6b374c0>]
```



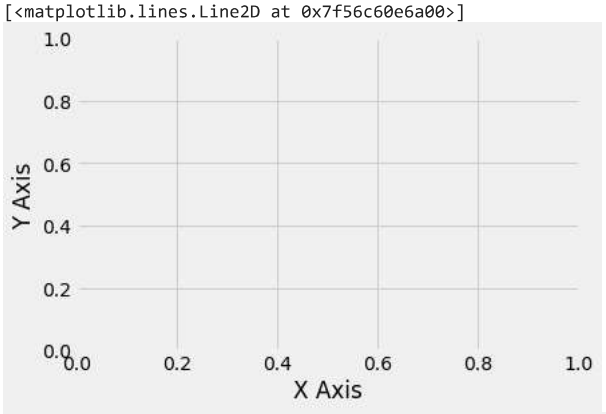

```
plt.plot(x,y,color='r',marker='+',markersize=24)
```

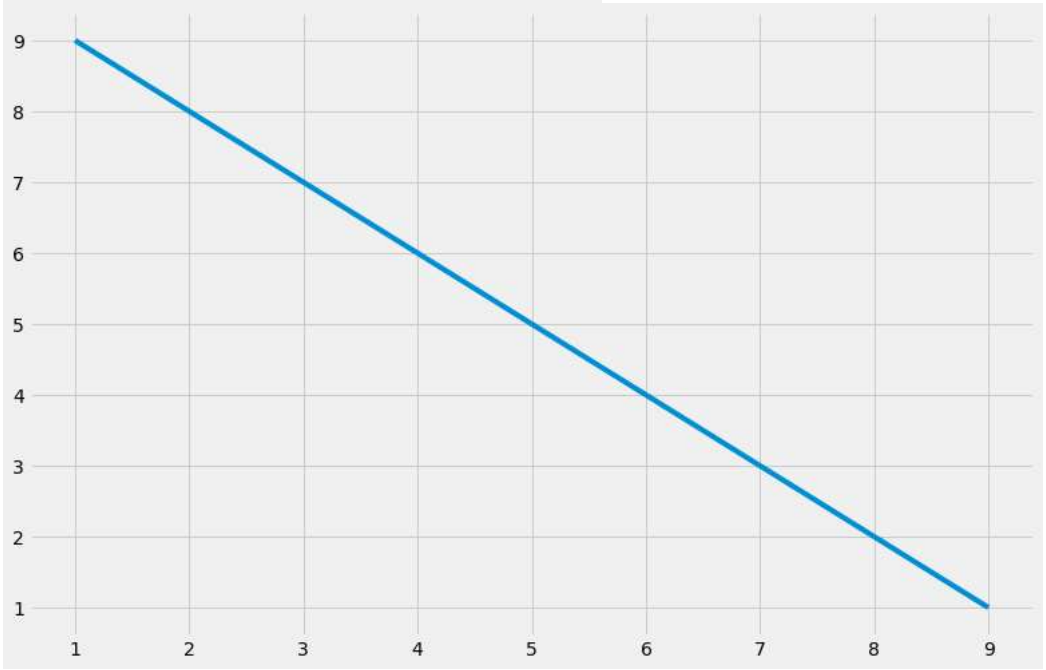
```
[<matplotlib.lines.Line2D at 0x7f56c62c1f40>]
```




```
plt.xlabel('X Axis')
plt.ylabel('Y Axis')
plt.figure(figsize=(12,8))
plt.plot(x,y)
```

```
[<matplotlib.lines.Line2D at 0x7f56c60e6a00>]
```

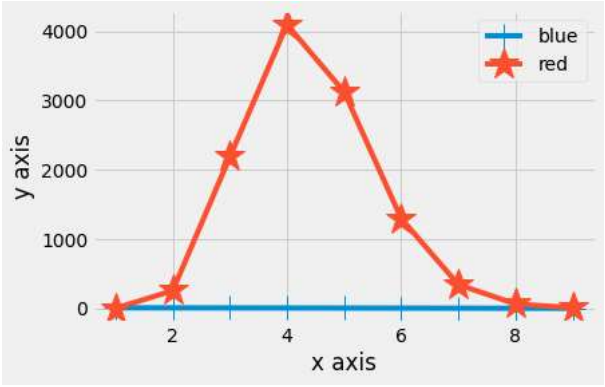





```
y1=np.power(x,y)
```

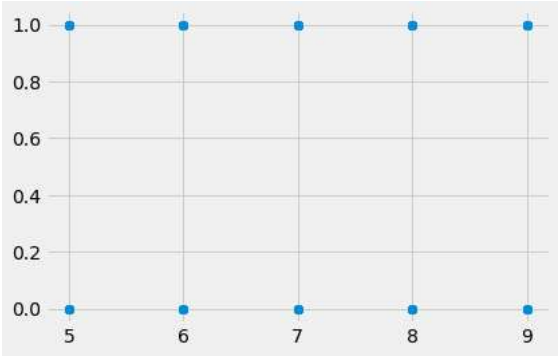
```
plt.plot(x,y,label='blue',marker='+',markersize=18)
plt.plot(x,y1,label='red',marker='*',markersize=24)
plt.xlabel('x axis')
plt.ylabel('y axis')
plt.legend()
```

```
<matplotlib.legend.Legend at 0x7f56c55b7e20>
```



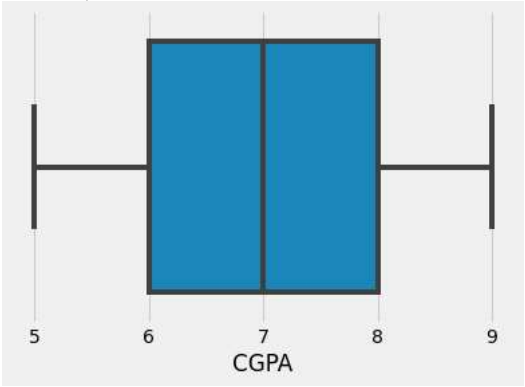

```
plt.scatter(df['CGPA'],df['Hostel'])
```

```
<matplotlib.collections.PathCollection at 0x7f56c5894700>
```




```
sns.boxplot(df['CGPA'])
```

```
/usr/local/lib/python3.9/dist-packages/seaborn/_decorators.py:36: FutureWarning: Pass th
  warnings.warn(
<AxesSubplot:xlabel='CGPA'>
```




```
sns.distplot(df['CGPA'])
```

```
/usr/local/lib/python3.9/dist-packages/seaborn/distributions.py:2619: FutureWarning: `di
  warnings.warn(msg, FutureWarning)
<AxesSubplot:xlabel='CGPA', ylabel='Density'>
```


```
sns.countplot(df['CGPA'])
```

```
/usr/local/lib/python3.9/dist-packages/seaborn/_decorators.py:36: FutureWarning: Pass th
  warnings.warn(
<AxesSubplot:xlabel='CGPA', ylabel='count'>
```